

Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE SECRETARY

Bonifacio Drive, Port Area Manila



MAY 0 9 2025

DEPARTMENT ORDER)	SUBJECT:	Standardization	of	Materials
No	*-	Testing Forms		

In order to ensure compliance and align with the updated DPWH, ASTM and AASHTO Standards, these Revised Standard Forms are hereby issued to be utilized by all DPWH Implementing Offices in the preparation of Sample Cards, Worksheets, and Official Test Reports. Test reports using the prescribed formats shall be computer-generated.

These standard forms can be downloaded from the DPWH Intranet (http:dpwhnet) under Sample Card, Worksheet and Test Report Forms. Attached are the guidelines for filling out Materials Testing Forms to ensure uniformity and consistency.

This Order supersedes Department Order No. 22, Series of 2025 (Standardization of Materials Testing Forms) and shall take effect immediately.



Encl: (1) Annex: Standardization of Materials Testing Forms

(2) Guidelines in the Filling-Out of Materials Testing Forms

14.1.3 JDV/AGC

DEPARTMENT ORDER NO. <u>θ</u> SERIES OF 2025

ANNEX

Document Title	Document Code
Sample Card	DPWH-QMSP-14-40-Rev01
Test Report for DPWH/Other Government Project	DPWH-QMSP-14-41-Rev01
Test Report for Informational/Research	DPWH-QMSP-14-42-Rev01
WORKSHEETS FOR SOIL&SOIL AGGREGATES, ASPHALT AGGREGATES	CONCRETE AND
Worksheet for Liquid Limit and Plastic Limit Tests	DPWH-QMSP-14-43-Rev01
Worksheet for Moisture Content Determination	DPWH-QMSP-14-44-Rev01
Worksheet for Shrinkage Limit of Soil	DPWH-QMSP-14-45-Rev01
Worksheet for Moisture Density Relations Test of Soils	DPWH-QMSP-14-46-Rev01
Worksheet for California Bearing Ratio	DPWH-QMSP-14-47-Rev01
Worksheet for Hydrometer Analysis	DPWH-QMSP-14-48-Rev01
Worksheet for Field Density Test	DPWH-QMSP-14-49-Rev01
Worksheet for Specific Gravity of Fine-Grained Soil	DPWH-QMSP-14-50-Rev01
Worksheet for Soundness Test	DPWH-QMSP-14-51-Rev01
Worksheet for Organic Impurities and Mortar Strength Test	DPWH-QMSP-14-52-Rev01
Worksheet for Unit Weight (Fine and Coarse Aggregates)	DPWH-QMSP-14-53-Rev01
Worksheet for Specific Gravity and Absorption of Aggregates	DPWH-QMSP-14-54-Rev01

DEPARTMENT ORDER NO. <u>β</u> SERIES OF 2025

ANNEX

N N N N N N N N N N N N N N N N N N N	
Document Title	Document Code
Worksheet for Sieve Analysis	DPWH-QMSP-14-55-Rev01
Worksheet for Abrasion Test	DPWH-QMSP-14-56-Rev01
WORKSHEETS FOR CEMENT	
Worksheet for Physical Test of Portland Cement - Fineness	DPWH-QMSP-14-57-Rev01
Worksheet for Physical Test of Cement - Normal Consistency, Time of Setting, Autoclave Expansion	DPWH-QMSP-14-58-Rev01
Worksheet for Mortar Strength Test of Cement	DPWH-QMSP-14-59-Rev01
Worksheet for Physical Test of Portland Cement – Air Content	DPWH-QMSP-14-60-Rev01
Worksheet for Specific Gravity of Cement	DPWH-QMSP-14-61-Rev01
Worksheet for Chemical Tests of Cement (by Wet Analysis)	DPWH-QMSP-14-62-Rev01
Worksheet for Chemical Tests of Cement (by XRF Method)	DPWH-QMSP-14-63-Rev01
WORKSHEETS FOR ASPHALTIC MATE	RIALS
Worksheet for Testing of Asphalt Cement (Penetration-Graded)	DPWH-QMSP-14-64-Rev01
Worksheet for Testing of Asphalt Cement (Viscosity-Graded)	DPWH-QMSP-14-65-Rev01
Worksheet for Testing of Emulsified Asphalt	DPWH-QMSP-14-66-Rev01
Worksheet for Testing of Cutback Asphalt	DPWH-QMSP-14-67-Rev01
Worksheet for Testing of Concrete Joint Sealer	DPWH-QMSP-14-68-Rev01

DEPARTMENT ORDER NO. <u>86</u> SERIES OF 2025

ANNEX

Document Code
DPWH-QMSP-14-69-Rev01
DPWH-QMSP-14-70-Rev01
DPWH-QMSP-14-71-Rev01
DPWH-QMSP-14-72-Rev01
DPWH-QMSP-14-73-Rev01
DPWH-QMSP-14-74-Rev01
ATERIALS
DPWH-QMSP-14-75-Rev01
DPWH-QMSP-14-76-Rev01
DPWH-QMSP-14-77-Rev01
DPWH-QMSP-14-78-Rev01
DPWH-QMSP-14-79-Rev01
DPWH-QMSP-14-80-Rev01
DPWH-QMSP-14-81-Rev01
DPWH-QMSP-14-82-Rev01
DPWH-QMSP-14-83-Rev01

DEPARTMENT ORDER NO. <u>β</u> SERIES OF 2025

ANNEX

Document Title	Document Code
Worksheet for Testing of Alkyd-Based Flat-Wall Enamel Paint	DPWH-QMSP-14-84-Rev01
Worksheet for Testing of Alkyd-Based Metal Primer	DPWH-QMSP-14-85-Rev01
Worksheet for Testing of Epoxy Metal Primer	DPWH-QMSP-14-86-Rev01
Worksheet for Testing of Water-Based Gloss Roof Paint	DPWH-QMSP-14-87-Rev01
Worksheet for Testing of Elastomeric Wall Coating	DPWH-QMSP-14-88-Rev01
Worksheet for Testing of Thermoplastic Traffic Paints (White and Yellow)	DPWH-QMSP-14-89-Rev01
Worksheet for Testing of Reflectorized Traffic Paints	DPWH-QMSP-14-90-Rev01
Worksheet for Testing of Galvanized Sheet	DPWH-QMSP-14-91-Rev01
Worksheet for Testing of Galvanized Iron Pipe	DPWH-QMSP-14-92-Rev01
Worksheet for Testing of Guard Rail	DPWH-QMSP-14-93-Rev01
Worksheet for Testing of Gabion & Mattress Wires	DPWH-QMSP-14-94-Rev01
Worksheet for Testing of Tie Wire	DPWH-QMSP-14-95-Rev01
Worksheet for Testing of High Tensile Wire	DPWH-QMSP-14-96-Rev01
Worksheet for Testing of Wire	DPWH-QMSP-14-97-Rev01
Worksheet for Testing of Wire Rope	DPWH-QMSP-14-98-Rev01
Worksheet for Testing of Steel Plate	DPWH-QMSP-14-99-Rev01

DEPARTMENT ORDER NO. <u>β</u> SERIES OF 2025

ANNEX

Document Title	Document Code
Worksheet for Testing of Soil Nail	DPWH-QMSP-14-100-Rev01
Worksheet for Testing of Reinforcing Steel Bars	DPWH-QMSP-14-101-Rev01
Worksheet for Phosphorus Content Determination of Steel Bars	DPWH-QMSP-14-102-Rev01
Worksheet for Phosphorus Content Determination of Steel Bars (by Spectrometer)	DPWH-QMSP-14-103-Rev01
Worksheet for Testing of Miscellaneous Steel Products	DPWH-QMSP-14-104-Rev01
Worksheet for Testing of Concrete Masonry Unit	DPWH-QMSP-14-105-Rev01
Worksheet for Testing of Concrete Pipe	DPWH-QMSP-14-106-Rev01
Worksheet for Compressive Strength Test of Concrete Cylinders (Molded and Cored Specimens)	DPWH-QMSP-14-107-Rev01
Worksheet for Flexural Strength Test of Concrete Beam	DPWH-QMSP-14-108-Rev01
Worksheet for Concrete Core Thickness Determination	DPWH-QMSP-14-109-Rev01
Worksheet for Testing of Water for Concreting	DPWH-QMSP-14-110-Rev01
Worksheet for Testing of Curing Compound	DPWH-QMSP-14-111-Rev01
Worksheet for Testing of Mineral Filler	DPWH-QMSP-14-112-Rev01
Worksheet for Testing of Hydrated Lime	DPWH-QMSP-14-113-Rev01
Worksheet for Testing of Fly Ash	DPWH-QMSP-14-114-Rev01
Worksheet for Testing of Reflective Sheeting	DPWH-QMSP-14-115-Rev01

DEPARTMENT ORDER NO. <u>\$\Quad \chi \chi \chi\$</u> SERIES OF 2025

ANNEX

Document Title	Document Code
Worksheet for Testing of Ceramic and Glass Tiles	DPWH-QMSP-14-116-Rev01
Worksheet for Testing of Geotextiles	DPWH-QMSP-14-117-Rev01
Worksheet for Testing of Seven Wire Strand	DPWH-QMSP-14-118-Rev01
Worksheet for Testing of Carbon Fiber Sheet/Plate	DPWH-QMSP-14-119-Rev01
Worksheet for Testing of Hydraulic Cement Grout	DPWH-QMSP-14-120-Rev01
Worksheet for Testing of Erosion Mat	DPWH-QMSP-14-121-Rev01
Worksheet for Testing of Epoxy Resin	DPWH-QMSP-14-122-Rev01
Worksheet for Testing of Shotcrete	DPWH-QMSP-14-123-Rev01
Worksheet for Pigments - Integrally Colored Concrete	DPWH-QMSP-14-124-Rev01
Worksheet for Tensile Strength of Plastics	DPWH-QMSP-14-125-Rev01
Worksheet for Flexural Strength of Plastics	DPWH-QMSP-14-126-Rev01
Worksheet for Accelerated Weathering	DPWH-QMSP-14-127-Rev01

SAMPLE CARD

(Use Paper Size: 8.5" x 13")

- 1. The **DPWH Materials In-Charge** (*i.e., DPWH Project Engineer, Materials Engineer, or Provisional Materials Engineer*) and the **Supplier's/Contractor's Authorized Representative** (*e.g. Contractor's Materials Engineer*) shall legibly, completely and accurately accomplish the <u>Requesting Office</u>, <u>Sample Information</u> and <u>Test Information fields</u> of the Sample Cards and both of them shall affix their signatures as well as the date of sampling (under Test Information).
- 2. The **Materials Testing Section/Unit Head** (i.e., Engineer IV for MTD, Engineer III for QAHD or Engineer II for QAS) shall check the information provided by the DPWH Materials In-Charge and the Contractor's/Supplier's Authorized Representative as to completeness and accuracy thereof. The Sample Card shall then be submitted to the MTD/QAHD/QAS Chief for review.
- 3. The Sample Card shall be neat, legible and without any erasures/alterations. If there are any erasures/alterations, the Sample Card shall be returned to the DPWH Materials In-Charge to be filled out anew.
- 4. If there are no more corrections on the Sample Card, the **Materials Testing Section/Unit Head** shall fill out the 'Checked by/Date'.
- 5. Issuance of Order of Payment (OP). Proceed to payment.
- 6. After payment, the materials sample together with the OR shall be received by a non-technical personnel who is not involved in testing of the materials sample. He shall fill out the following data:
 - Received by/Date:
 - O.R. No./Amount/Date:
 - Lab. No.

[NOTE: The assigned Lab. No. shall also be indicated on the actual sample submitted]

- 7. The Sample Card shall be returned to **Materials Testing Section/Unit Head** to fill out the 'Target Date of Release'. He shall then detach the Claim Stub before submitting the Sample Card to the **MTD/QAHD/QAS Chief**.
- 8. The MTD/QAHD/QAS Chief shall affix his signature and date of signing on the space provided (under 'Recommending Approval') then submit for approval by the **Head of Office**.
- 9. The **Head of Office** shall affix his signature and the date of signing on the space provided (under 'Approved by'). After signing, the Sample Card shall be returned to the MTD/QAHD/QAS Chief.

WORKSHEET

- The Laboratory Technician/Engineer (or Chemists if chemical tests are performed) who performed the test shall immediately record (handwritten) the raw data obtained from the tests conducted on the material sample(s) and shall affix his signature and date of signing on the space provided (under 'Tested by/Date'). They shall also affix their signature and date of signing after computation of the results (under 'Computed by/Date').
- 2. For Chemical Tests, the **Chemist** shall certify the same by affixing his signature, date of signing and PRC License No. on the space provided.
- 3. The **Materials Testing Section/Unit Head** shall check and review the worksheet. The Materials Testing Section/Unit Head shall affix his/her signature and date of signing on the space provided (under 'Checked and Reviewed by").
- 4. The Worksheet shall then be forwarded to the **Designated Personnel** for the preparation of the Test Report.

TEST REPORT

- 1. The **designated personnel** (*i.e.*, personnel not directly involved in the testing of material samples) shall prepare draft of the Test Report by filling out the Test Report information obtained from the Sample Card.
 - **NOTE:** a. Format of Test Report depends on the materials tested and the required data.
 - b. Fixed data for columns must include 'Date Tested', 'Test Method', 'Requirement' and 'Results' and other data deemed necessary and applicable.
- 2. The **Registered Chemist** shall certify the Test Report if chemical tests are involved by affixing his signature and his PRC License Number on the space provided.

NOTE: If the materials tested do not involve chemical testing, the space to be certified by the Chemist may be deleted.

- 3. The **Materials Testing Section/Unit Head** shall evaluate the Test Report. It shall be neat, legible and without any erasures/alterations. The Test Report shall then be submitted to the **MTD/QAHD/QAS** Chief for review. If there are any corrections, the Test Report shall be returned to the designated personnel for correction.
- 4. If there are no more corrections on the Test Report, the same shall be finalized and assigned with a serial Laboratory Report Number by the **designated personnel**.
- 5. The Materials Testing Section/Unit Head shall affix his initial on the duplicate copy (not on the original Test Report)* under the name of the MTD/QAHD/QAS Chief. The MTD/QAHD/QAS Chief shall then affix his signature and date of signing under 'Checked by'.
- 6. The **Head of Office** shall affix his signature together with the date of signing under 'Attested by'.

^{*} Pursuant to Section 9, Item d of R.A. No. 11032 (Anti-Red Tape Act) and Memorandum Circular No. 2024-05, Series of 2024 from ARTA, requiring that any principal document shall have a **maximum of three (3) signatories**. As such, the initials of those who conducted the tests, as well as the Materials Testing Section/Unit Head, shall only be reflected on the duplicate copy and NOT on the original Test Report.



Department of Public Works and Highways

Construction Materials Testing **SAMPLE CARD**

DPWH OFFICE:				
REQUESTING OFFICE:	!			
To be filled out by the DPW Supplier's/Contractor's Au	/H Materials In-Charge and thorized Representative	To be filled out	by the Authorized R	epresentative
For DPWH/other Govern	nment Project:	For Informati	ional/Research:	
Project Name :		Company/Requ	esting Entity:	
		Supplier/Addre	nec !	
Contract I.D. :		Supplier/Addre		
Implementing Office :				
Contractor / Address :				
C		Bill Charge To	:	
Supplier / Address :		Address:		
Bill Charge To :		Address		
Address :				
		TIN :		
TIN:		Contact No/s. :		
Contact No/s :				
SAMPLE INFORMATION	DN:	1		
IC I CM I I I		_		
Camania d at/ Addusas			Represented :	
M C I / A I I				
Manufacturing Date :_	Batch Identification No. :			
TEST INFORMATION: Test Desired : _ Proposed Use : _ Governing Spec's. : _ Sampled by : _	/ (DPWH Materials In Supplier's/Contractor's Auth	-Charge and		/ (Signature)
_		Supplier's/Contractor's Authorized Representative) / /		
Submitted by : _	(Designat	tion)	(Office)	(Date) /
Submitted by	(DPWH Materials Ir Supplier's/Contractor's Autho		e)	(Signature)
-		tion)	/ (Office)	
Remarks : _		•	, ,	
To be filled out by a Non-To	echnical Personnel			esting Section/Unit Head
Received by/Date :		(i.e. Engineer IV	tor MTD, Engineer III for	· QAHD or Engineer II for QAS
OR No./Amount/Date : _		Checked by/Da		
Laboratory No. : _		Target Date of	Release:	
Recommending Approval	:	•	Approved by	/:
Chief of MTD/QAHD/QA	S / Date		Hea	d of Office / Date
Lab. No. and OR No. : Target Date of Release:	(Office's Contact Nos.)			

Lab. Report No. :



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

TEST REPORT FOR DPWH/OTHER GOVERNMENT PROJECT

			Issued Date
TEST REPORT ON			
Name of the Laboratory	:		
Address of the Laboratory Project Name/ID/Contract No.	:		
Implementing Office	•		
Kind of Material/s	•		
Original Source	•		
Sampled at/Address	•		
Sample Identification	•		
Type/Grade/Class	•		
Quantity Represented	•		
Brand			
Supplier/Address	:		
Contractor/Address	:		
Proposed Use	:		
Governing Specification	:		
Sampled by	:	/	
· · · · · · · · · · · · · · · · · · ·	-	(DPWH Materials In-Charge and	
		Supplier/Contractor's Authorized Representative)	
	: /	/	
	Designation	(Office)	(Date Sampled)
Submitted by	:	/	
		(DPWH Materials In-Charge and	
	-	Supplier/Contractor's Authorized Representative)	
	: / Designation	(Office)	(Date Received)
Lab. No. :(Paid under		(onice)	(Date Received)
REMARKS: 1. The results relate only to 2.	the sample tested.		
Tested by:		Checked by:	
		MTD / QAHD / QAS	Chief
		עוויו / עוויו (עאַר / עוויו	Cinci
		Attested by:	
		,	
Chemical Test/s Certified by:			
(if applicable)	Chemist		
(ii applicable)	PRC Lic. No.:	Head of Office	
		1	

Lab. Report No. :



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

TEST REPORT FOR INFORMATIONAL/RESEARCH

			Issued Date
TEST REPORT ON			
Name of the Laboratory Address of the Laboratory Requesting Entity/Address Kind of Material/s Original Source Sampled at/Address Sample Identification Type/Grade/Class Brand			
Manufactured by/Address : Manufacturing Date : Batch Identification No. : Supplier/Address : Proposed Use : Governing Specification :			
Sampled by :	/ (Name / Designation)	(Office)	(Date Sampled)
Submitted by :	/ (Name / Designation)	(Office)	(Date Received)
Lab. No. :(Paid und	der OR #)		
REMARKS: 1. The results relate onl 2. This report cannot be 3.	y to the sample tested. e used as basis for payment for DPWH pr	rojects.	
Tested by:		Checked by:	
		MTD / QAHD / Attested by:	QAS Chief
Chemical Test/s Certified by: (if applicable)	Chemist PRC Lic. No.:	Head of C	Office

WORKSHEET FOR LIQUID LIMIT AND PLASTIC LIMIT TESTSAASHTO T89, T90 & M145

	L	IQUID LIM	[T	PLAST	IC LIMIT
Trial Number 1. Container ID 2. Container, g 3. Container + Wet Soil, g 4. Container + Dry Soil, g 5. Moisture, g, (3) – (4) 6. Dry Soil, g, (4) – (2) 7. Moisture Content, %, (5) / (6) x 100	1 (25-35)	2 (20-30)	3 (15-25)	1	2
8. Number of Shocks				Average :	
M O I I S T U U R E E C C O N T T E N N T T E N N T T E N N T T E N N T T T T	20 25 30 cks		9. Liquid Lii 10. Plastic Li 11. Plasticity	mit Index older lab No: 0. 10 0. 40 0. 200 oldex, GI	
Tested by / Date		Computed	by / Date		

WORKSHEET FOR MOISTURE CONTENT DETERMINATIONAASHTO T265

Lab. No. :	
Sample Identification :	
1. Container + Wet soil, g	=
2. Container + Oven-dried soil, g	=
3. Water, g, [(1) – (2)]	=
4. Container, g	=
5. Dry soil, g, [(2) – (4)]	=
6. Moisture Content, %, [(3) / (5) x 100]	=
Tested by / Date	Computed by / Date
Checked and Reviewed by / Date :	
(Head of Materials Testing Section/Unit)

WORKSHEET FOR SHRINKAGE LIMIT OF SOIL

.ab. No. :		
Sample Identification:		
1. Mass of dish + wet soil, g	Trial 1	Trial 2
2. Mass of empty dish, g		
3. Mass of initial wet soil, g, (1) – (2)		
4. Mass of dish + dry soil, g		
5. Mass of dry soil, g, (4) – (2)		
6. Initial water content of soil (percentage		
of dry mass), %, $\left[\frac{(3)-(5)}{(5)}\right] x \ 100$		
7. Volume of wet soil, cm ³		
8. Volume of dry soil, cm ³		
9. Density of water, g/cm ³		
10. Shrinkage Limit,		
$\left\{ (6) - \frac{[(7) - (8)] x (9)}{(5)} \right\} x 100$		
_		
Tested by / Date :	Computed by / Date :	
Checked and Reviewed by / Date :	(Head of Materials Testing	

WORKSHEET FOR MOISTURE DENSITY RELATIONS OF SOILSAASHTO T99 & T180

Frial Number	1	2	3	4	5
Total Water added in mL					
1. Volume of Mold, m ³					
2. Mold, kg					
3. Mold + wet soil, kg					
4. Wet soil, kg, (3) - (2)					
5. Wet Density, kg/m³, (4) / (1)					
Moisture Content Determination	on	- 1			
6. Container ID					
7. Container, g					
8. Container + wet soil, g					
9. Container + dry soil, g					
10. Moisture, g, (8) - (9)					
11. Dry Soil, g, (9) - (7)					
12. MOISTURE CONTENT, %					
(10) / (11) x 100					
13. DRY DENSITY, kg/m ³					
(5) / [1 + (12)/100]					
Method Used	. Δ () B()	C()	D()
AASHTO Standard	. ^(T99 ())	T180 ()
Rammer, kg	•	2.5 ()		4.54 ()
Number of Layers	•	3 ()		5 ()
No. of Blows/Layer	!	25 ()		56 ()
Diameter of Mold, mm	· •	101.6 ()		152.4 ()
·		()		•	,
Maximum Dry Density	:				
(MDD), kg/m³					
Optimum Moisture Content	•				
(OMC), %					
Tested by / Date		Compute	ed by / Date	e	
		23	,, 540	-	

WORKSHEET FOR MOISTURE DENSITY RELATIONS TEST OF SOILS

AASHTO T99 & T180

Lab. No.	:
Sample Identification	;

kg/m³

D R Υ

D Ε Ν S Ι Т

MOISTURE CONTENT, %

Lab. No.	:	
Sample Identification	:	

		PR	EPARATIO	N OF SPECIMENS					
Moistu	ıre Content Det	ermination		Density Determination					
Number of Blows	10	30	65		10	30	65		
Container ID				9. Mold, kg					
1. Container, g				10. Mold + Sample, kg					
2. Wet Sample +				11. Sample					
Container, g				(10) - (9), kg					
3. Oven Dry Sample				12. Volume of Mold, m ³					
+ Container, g				·					
4. Dry Soil				13. Wet Unit Weight					
(3) - (1) , g				(11) / (12), kg/m ³					
5. Moisture				14. Dry Unit Weight					
(2) - (3) , g				[(13) / 1 + (7)/100]					
6. Moisture Content					•		•		
(5) / (4) x 100, %									
7. Average MC, %	-	•							
8. MC after		_							
penetration, %									

_		_	SC	DAKED COMP	PACTED VAL	UES			•
Calibration Fa	actor:	Mixing	Water, kg:		Calibration Fa	actor:	M	lixing Water, kg:	
Penetration	No. of Blo	WS	10 BI	lows	Penetration	No. of Blows	5	30	Blows
	Date & Tin	ne Molded:			1	Date & Time	Molded:		
mm	Date & Tin	ne Tested:			Date & Time Tested:		Tested:		
			Load					Load	
	Dial	Total, kg	kg/sq.cm	Corrected		Dial	Total, I	kg kg/sq.cm	Corrected
	Reading	Total, Ky	kg/sq.cm	kg/sq.cm		Reading	Total, I	ky ky/sy.ciii	kg/sq.cm
0.64					0.64				
1.27					1.27				
1.91					1.91				
2.54					2.54				
3.81					3.81				
5.08					5.08				
7.62					7.62				
10.16					10.16				
12.7					12.7				

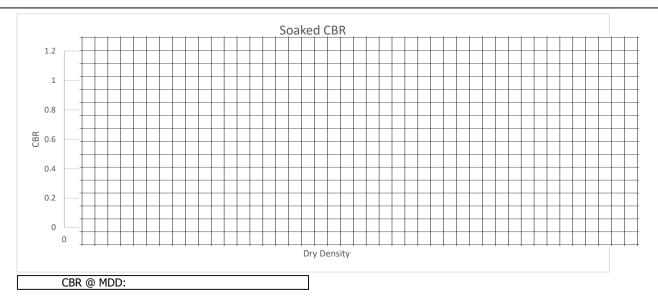
	CBR Value at 10 Blows					R Value at 30 Blows
CBR at 2.54	=	Corrected kg/sq.cm 70.36 x 100	0 =	CBR at 2.54	=	$\frac{\text{Corrected kg/sq.cm}}{70.36} \times 100 =$
CBR at 5.08	=	Corrected kg/sq.cm x 100	0 =	CBR at 5.08	=	$\frac{\text{Corrected kg/sq.cm}}{105.03} \times 100 =$

AASHTO T193

	SOAKED C	OMPACTED VAI	CBR Value at 65 Blows			
Calibration Factor:		Mixing Wate		•		
	No. of Blows		65 Blo	ws	CBR at 2.54 = Corrected kg/sq.cm x 100 =	
Penetration, mm	Date & Time Molde	ed:			CBR at 2.54 = $\frac{\text{Corrected kg/sq.cm}}{70.36}$ x 100 =	
,	Date & Time Teste	ed:				
		Loa	d		Corrected kg/sq.cm	
	Dial Reading	Total, kg	kg/sq.cm	Corrected kg/sq.cm	200.00	
0.64					`	
1.27					Moisture Density Relations of Soils	
1.91					Under Laboratory No. =	
2.54					Maximum Dry Density, kg/cu.m =	
3.81					Optimum Moisture Content, % =	
5.08					Note :Allowable variation from optimum is plus or minus 0	50% If
7.62					variation exceeds allowable, discard specimen and mold a	
10.16					· · · · · · · · · · · · · · · · · · ·	louier to
12.7					meet requirements.	
<u> </u>	<u> </u>	<u> </u>		ELL VALUES		
			Dial Rea	adina mm (96	6 h)	

		<u> </u>							
Dial Reading, mm (96 h)									
No. of Blows	Initial	Day 1	Day 2	Day 3	Day 4	Swell, %			
10									
30									
65									
	-				· · · · · · · · · · · · · · · · · · ·	·			

% Swell = Change in Length in mm during soaking x 100 =



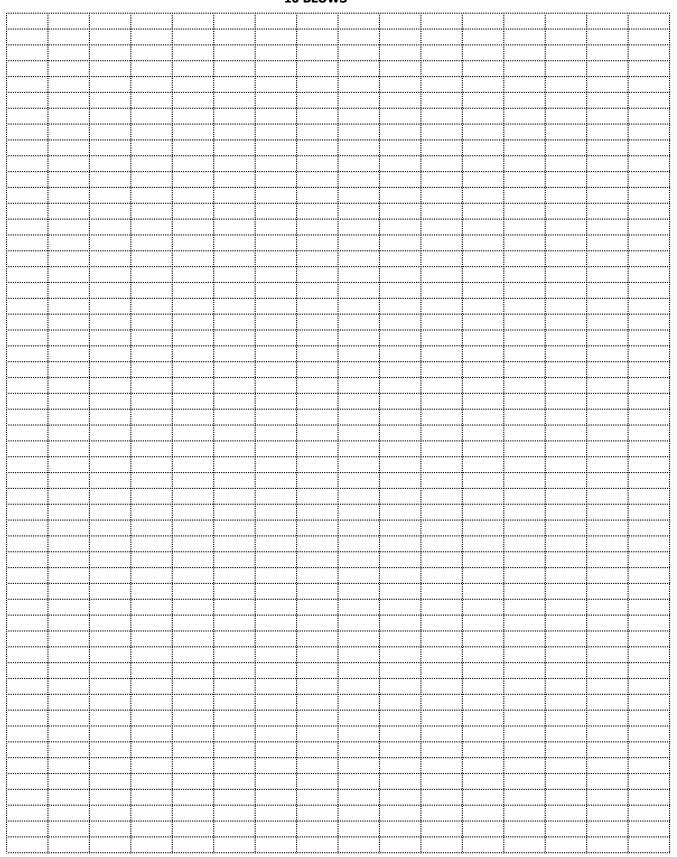
Tested by / Date :		Computed by / Date :
	· ·	

Checked and Reviewed by / Date

(Head of Materials Testing Section/Unit)

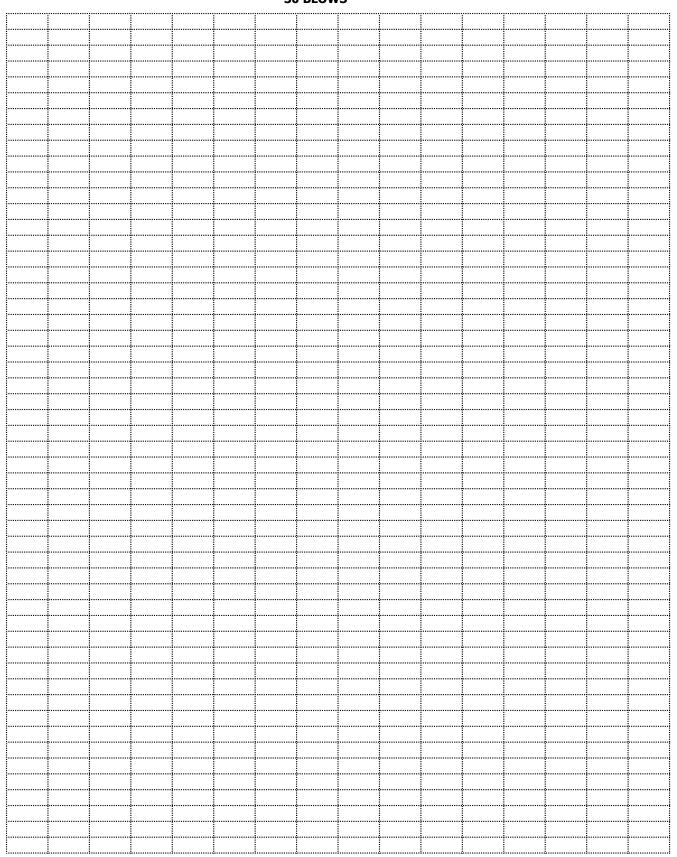
AASHTO T193

10 BLOWS



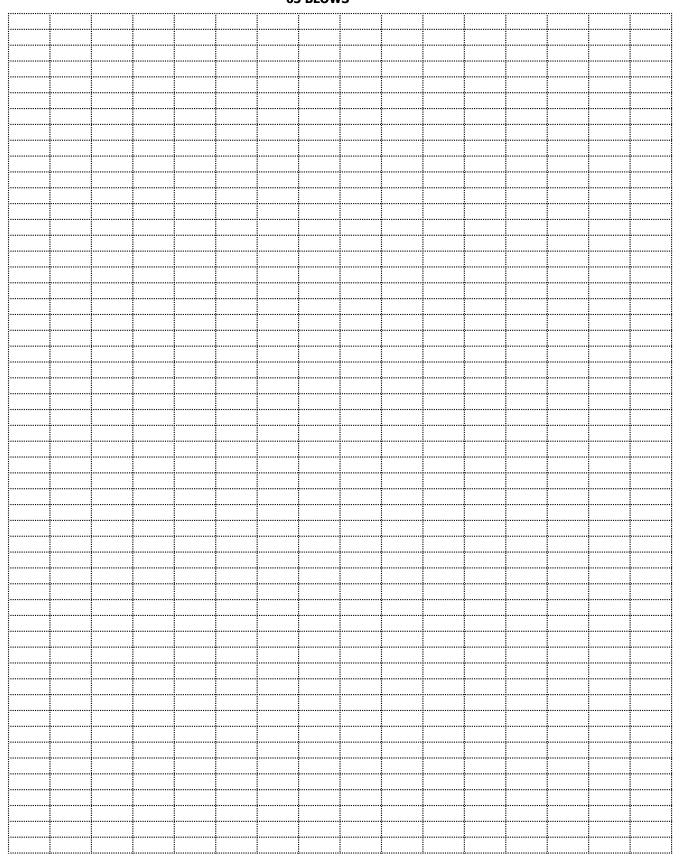
AASHTO T193

30 BLOWS



AASHTO T193

65 BLOWS



WORKSHEET FOR HYDROMETER ANALYSIS

Lab. N	No.		:									
Samp	le Ident	ificatio	n :									
Hygro Dry sa Dry w	y sampl scopic I ample d ashed s rsing ag	Moistur isperse ample,	e, % d, g g				Defloccu Specific (Constant Original Hydrome	gravity t, a <u>1</u> / time		nl		
A	В	С	D	E	F	G	н	K _L	I K _G	K _N	J	K
C - D - E - F - Grave Sand, Silt, (Elaps Hydr Temp Corre I, (+) 2 (-) 2 m	sed Timometer peratur	ne (min.) Reading e (°C) e Corre lydromet +) 0.075 to (+) 0.	ction ter Rea		H I J	As - Di A/ - Co	Passin ax. Gra ssumed ia. Corre ASHTO orrected orrected	g, P' in Dia., Conditi ection F T88)	d' (mm ons actor (F	Refer to	
1. a G 2. d 3. P	= 5	'x K∟ 'x %	1.00 5 gravity x K _G Passing	of the x K _N		materi	al Compute	ed by /	Date			
Checke	ed and f	Review	ed by / [Date	:	/L	lead of M	Antorin!	Tostin	a Coatia	n/I lni+\	

WORKSHEET FOR FIELD DENSITY TEST

Lab. No.	:				
Test Hole Depth	:				
Location	:	(Station and	Reference to Center Line)	· · · · · · · · · · · · · · · · · · ·	
Representing	:(Layer No.)	(Depth)	(Station to Station)	(W	/idth)
!	Cone Correction		<u>Calibration c</u>	of Sand	
 Mass of Jar + S Mass of Jar + S (After Pouring) Cone Correction (1) - (2) 	Sand , kg	9. Ma (At 10. M fi (8 11. U	ss of Jar + Sand, kg ss of Jar + Sand fter Pouring), kg ass of Sand to Il the container, kg) - (9) - (3) nit Weight of Sand, kg/m ³		
<u>Vo</u>	lume of Container		<u>In-situ Moistur</u>	<u>e Content</u>	i
 4. Mass of Contain 5. Mass of Contain + Water, kg 6. Mass of Water, 7. Volume of Cont (6)/Density of V (Based on Table) 	kg (5) – (4) rainer, m ³ Water	13. Co 14. Co 15. M 16. Co 17. D 18. Ir	ontainer ID ontainer + wet soil, g ontainer + dry soil, g oisture, g ontainer, g ry Soil, g n-situ Moisture Content, % 15) / (17) x 100 verage In-situ Moisture Con	Trial I	Trial II

^{*}Note: In-situ Moisture Content samples shall be taken after the weight of all the material taken from hole has been recorded. Additional trial for In-situ Moisture Content Determination may be conducted.

WORKSHEET FOR FIELD DENSITY TEST

		<u>Field D</u>	<u>ensity</u>		
al material taken from hole	e, kg			y unit weight, kg/m³	
ss of Jar + Sand, kg			(2	5) / [1 + ((19) / 100)]	
Mass of Jar + Sand (after pouring), kg Sand to fill hole, kg (21) – (22) – (3)				action Test Laboratory	No
olume of hole, m ³ , (23) / (11)				b. compaction test dat	
et unit weight, kg/m³, (20) /				Maximum dry density,	
	(= .)			Optimum moisture cor	
				egree of compaction, %	
			(26) / (27a) X 100	
		Tabl	_ 1		
		Table	2 1		
	Tempe				
	$^{\circ}\mathrm{C}$	°F	kg/m ³	lb/ft ³	
			000.04		
	15.6	60 65	999.01	62.366	
	18.3	65	998.54	62.336	
	18.3 21.1	65 70	998.54 997.97	62.336 62.301	
	18.3	65	998.54	62.336	
	18.3 21.1 (23.0)	65 70 (73.4)	998.54 997.97 (997.54)	62.336 62.301 (62.274)	
	18.3 21.1 (23.0) 23.9	65 70 (73.4) 75	998.54 997.97 (997.54) 997.32	62.336 62.301 (62.274) 62.261	
	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59	62.336 62.301 (62.274) 62.261 62.216	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216 62.166	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216 62.166	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216 62.166	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216 62.166	
Tested by / Date	18.3 21.1 (23.0) 23.9 26.7	65 70 (73.4) 75 80	998.54 997.97 (997.54) 997.32 996.59 995.83	62.336 62.301 (62.274) 62.261 62.216 62.166	

WORKSHEET FOR SPECIFIC GRAVITY OF FINE-GRAINED SOIL

AASHTO T100

Lab. No.	: .	
Sample Identification		
Sample Identification	٠.	

STANDARDIZATION OF PYCNOMETER

1. Pycnometer + water at Temperature T _x , W _a , g	
2. Pycnometer + water at Temperature T _i , W _i , g	
3. Pycnometer, W _f , g	
4. Relative density of water at Temperature T _i , D _i	
5. Relative density of water at Temperature T _x , D _x	
6. Observed Temperature of water, T _{i,} °C	
7. Temperature of water after boiling, T _{x,} °C	

Computation:

$$W_{a} = \left[\left(\frac{D_{x}}{D_{i}} \right) (W_{i} - W_{f}) \right] + W_{f}$$

SPECIFIC GRAVITY OF SOIL

	Trial 1	Trial 2
1. Container Identification		
2. Container, g		
3. Container + Dry soil, g		
4. Dry soil (3) – (2), W _o , g		
5. Pycnometer + Water at Temperature T _x , W _a , g		
6. Pycnometer + Soil + Water at Temperature T_x , W_b , g		
9. Specific Gravity of Soil, S _x		
Average		

Computation:

$$S_x = \frac{W_o}{W_o + (W_a - W_b)}$$

WORKSHEET FOR SPECIFIC GRAVITY OF FINE-GRAINED SOIL AASHTO T100

Temperatures, °C	Relative Density of Water
18	0.9986244
19	0.9984347
20	0.9982343
21	0.9980233
22	0.9978019
23	0.9975702
24	0.9973286
25	0.9970770
26	0.9968156
27	0.9965451
28	0.9962652
29	0.9959761
30	0.9956780
Tested by / Date :	Computed by / Date :

(Head of Materials Testing Section/Unit)

WORKSHEET FOR SOUNDNESS TEST

			FINE A	AGGREGATI	<u>ES</u>		
Sieve s	size, mm	(1) Grading of original	(2) Mass of test	(3) Mass of test	(4) Loss in Mass, g	(5) % passing sieve after	(6) Mass average
Passing on	Retained on	sample, % Retained	fraction before test, g	fraction after test, g	[(2)-(3)]	test (actual & loss) [(4)/(2)x100]	(corrected & loss) [(5)x(1)]
0.150	-						
0.300	0.15						
0.600	0.300						
1.18	0.600						
2.36	1.18						
4.75	2.36						
9.5	4.75						
Te	otal						
	ted :	:	-				
.ab. No.	ted :	: on :	COARSI	E AGGREGA	TES		
Date Tes ab. No. Sample I				E AGGREGA			
.ab. No. Sample I		(1) Grading of original	(2) Mass of test	(3) Mass of test	TES (4) Loss in Mass, g	(5) % passing sieve after	(6) Mass average
.ab. No. Sample I	dentificatio	(1) Grading of	(2) Mass of	(3) Mass of	(4) Loss in	% passing sieve after test (actual & loss)	Mass average (corrected & loss)
Sieve s	dentificationsize, mm Retained on	(1) Grading of original sample, %	(2) Mass of test fraction before	(3) Mass of test fraction after	(4) Loss in Mass, g	% passing sieve after test (actual &	Mass average (corrected
Sieve s	dentificationsize, mm	(1) Grading of original sample, %	(2) Mass of test fraction before	(3) Mass of test fraction after	(4) Loss in Mass, g	% passing sieve after test (actual & loss)	Mass average (corrected & loss)
Sieve s Passing on 63.0	dentificationsize, mm Retained on 37.5	(1) Grading of original sample, %	(2) Mass of test fraction before	(3) Mass of test fraction after	(4) Loss in Mass, g	% passing sieve after test (actual & loss)	Mass average (corrected & loss)
Sieve s Passing on 63.0 37.5	dentificationsize, mm Retained on 37.5 19.0	(1) Grading of original sample, %	(2) Mass of test fraction before	(3) Mass of test fraction after	(4) Loss in Mass, g	% passing sieve after test (actual & loss)	Mass average (corrected & loss)
Sieve s Passing on 63.0 37.5 19.0 9.5	dentificationsize, mm Retained on 37.5 19.0 9.5	(1) Grading of original sample, %	(2) Mass of test fraction before	(3) Mass of test fraction after	(4) Loss in Mass, g	% passing sieve after test (actual & loss)	Mass average (corrected & loss)
Sieve s Passing on 63.0 37.5 19.0 9.5 To	dentificationsize, mm Retained on 37.5 19.0 9.5 4.75	(1) Grading of original sample, % Retained	(2) Mass of test fraction before	(3) Mass of test fraction after test, g	(4) Loss in Mass, g	% passing sieve after test (actual & loss) [(4)/(2)x100]	Mass average (corrected & loss)
Sieve s Passing on 63.0 37.5 19.0 9.5 To	dentification size, mm Retained on 37.5 19.0 9.5 4.75 otal	(1) Grading of original sample, % Retained	(2) Mass of test fraction before	(3) Mass of test fraction after test, g	(4) Loss in Mass, g [(2)-(3)]	% passing sieve after test (actual & loss) [(4)/(2)x100]	Mass average (corrected & loss)

WORKSHEET FOR ORGANIC IMPURITIES AND MORTAR STRENGTH TEST AASHTO T21, AASHTO T71

	ORGAI	NIC IMPURITI AASHTO	ES (PRELIMINA I O T21	RY)	
Mass of water, g Mass of NaOH So Color Level after	24 hrs <i>(indicate</i> darker, or equal co	lor			
		MORTAR STR			
Mass of cement Mass of sand (S Volume of water Flow, % Cross-sectional	SD), g r used, ml		Unwashed	 	<u>Washed</u>
Sample ID	Age in days		ine Aggregate FA)		ne Aggregate FA)
		Load	Strength	Load	Strength
	7				
	7				
	7 28				
	28				
	28				
 Average Average Average Relative 	Strength for Unwas Strength for Washe Strength for Unwas Strength for Washe Strength (7 Days), Strength (28 Days)	ed FA (7 Days) shed FA (28 Day ed FA (28 Days) %, (1) / (2) x 10	= s) = = 00 =		_
Tested by / Date	e		Computed by /	Date	

WORKSHEET FOR UNIT WEIGHT (COARSE & FINE AGGREGATES)AASHTO T19

Lab. No.	:		
Sample I	dentification :		
	Coarse Aggregates	Loose	Rodded
	1. Container + sample, kg 2. Container, kg 3. Sample, kg, (1) - (2) 4. Vol. of Container, m ³ 5. Unit weight, kg/m ³ , (3) / (4)		
	Date Tested :		
Lab. No.	:		
Sample I	dentification :		
	Fine Aggregates 1. Container + sample, kg	Loose	Rodded
	 Container, kg Sample, kg, (1) - (2) 		
	4. Vol. of Container, m ³ 5. Unit weight, kg/m ³ , (3) / (4)		
	Date Tested :		
Tested by	y / Date	Computed by / Date	
Checked	and Reviewed by / Date :		
		(Head of Materials Testing S	Section/Unit)

WORKSHEET FOR SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

AASHTO T85, AASHTO T84

Lab. No. :	
Sample Identification :	
COARSE AGGREGATES	S (AASHTO T85)
Saturated Surface Dry (SSD) Sample, g	=
2. Oven-dried soil Sample, g	=
3. Sample in Water, g	=
4. Absorption, $\% = \left[\frac{(1)-(2)}{(2)}\right] \times 100$	=
5. Bulk Specific Gravity (SSD) = (1) / [(1) - (3)]	=
Date Tested:	
Lab. No. :	
Sample Identification :	
FINE AGGREGATES	(AASHTO T84)
1. Saturated Surface Dry Sample (SSD), g	=
2. Oven-dried soil Sample, g	=
3. Pycnometer filled with water, g	=
4. Pycnometer + water + sample, g	=
5. Absorption, $\% = \left[\frac{(1)-(2)}{(2)}\right] \times 100$	=
6. Bulk Specific Gravity (SSD) = $(1) / [(1) + (3) - (4)]$	=
Date Tested:	
Tested by / Date	Computed by / Date
Checked and Reviewed by / Date :(Head of M	Naterials Testing Section/Unit)
(ricad of r	iacanaia reading according office

WORKSHEET FOR SIEVE ANALYSISAASHTO T11, T27 & T311

		745	1110 111, 12	.7 & 1511			
Lab. No.	:						
Sample Identificati	on :						
Weight of samples 1. Original 2. Oven Dry 3. Wash Oven Dry 4. Wash Loss, g, ((2) - (3)						
5. Fineness Modu	lus						
Oiarra aiaa		18/4	Cu	ımulat	i v e	Governing	
Sieve size mm.	(in)	Wt retained	Wt passing	% passing	% retained	Specs: % passing:	Remarks
75.00	(3")						
63.00	(2 1/2")						
50.00	(2")						
37.50	(1 1/2")						
25.00	(1")						
19.00	(3/4")						
12.50	(1/2")						
9.50	(3/8")						
6.30	(1/4")						
4.75	(No. 4)						
2.36	(No. 8)						
2.00	(No. 10)						
1.18	(No. 16)						
0.60	(No. 30)						
0.425	(No. 40)						
0.300	(No. 50)						
0.150	(No. 100)						
0.075	(No. 200)						
F	Pan						
Wash passing No	. 0.075 (Wash Loss)						
Tested by / Date :				Compu	ited by / Date	:	
Checked and Revie	ewed by / Date :						

(Head of Materials Testing Section/Unit)

WORKSHEET FOR LOS ANGELES ABRASION TESTAASHTO T96 / ASTM C131

Lab. No.	:				
Sample Identification	:				
·	-				
1. Washed Oven-dried san	nple, g.		=		
2. Washed Oven-dried sar (after Abrasion Test), g		mm sieve	=		
3. Percent Wear, % = _	(1) - (2) (1) x 100		=		
Tested by / Date :		Computed	l by / Date :		
Checked and Reviewed by /	Date :				
		Head of Mater	ials Testing	Section/Unit)	_

WORKSHEET FOR FINENESS TEST OF CEMENT

ASTM C204, ASTM C184, ASTM C430

Lab.	. No.	:					
Sam	nple Identification	:					
Тур	e	:					
	m Temp. (°C) = ust be 23 ± 4 °C)					(%) = e less than 50%	
I.	FINENESS: Air-	Permeability Met	hod (ASTM	C204)			
	a. Density of te Cement Test)	est sample (from	Density of	-			
	b. Specific Surface cm²/g (S _s) (from the cm²/g (S _s) (from the cm²/g)	ce of SRM No. 1: om CoA)	14 or 46h,	-			
			Cell No.				
		of manometer drop ((Ts) (from calibration					
	d. Bulk volume of calibration)	of bed of cement,	cm³ (from				
		eight of sample, g - ϵ); ϵ = desired bed (0.500±0.005)					
	f. Actual weight	of sample, g		<u>-</u>			
	g. Time Interval sample, s (T)	of manometer dr	op for test				
	h. Specific Surface sample, S (cm²,		$\frac{b\sqrt{g}}{\sqrt{c}}$	-			
	Average Specific	c Surface of test	sample, S	-			
	Tested by /	/ Date			Col	mputed by / Da	te
II.		the 75-µm (No. 2	00) Sieve (ASTM C	184)		
	a. Weight of sb. Weight of s	sample, g sample retained, g	-				
	Fineness of Cer	nent , % Passing o	n No. 200 Si	eve = 1	$00 - \left(\frac{b}{a} \right)$	x 100 =	
	Tested by	/ Date			C	omputed by / D	ate

WORKSHEET FOR FINENESS TEST OF CEMENT

ASTM C204, ASTM C184, ASTM C430

Sample Identification: Type::::::::::::::::::::::::::::::::::::	Lab.	No.	:					
III. FINENESS: by the 45-µm (No. 325) Sieve (ASTM C430) a. Sieve ID/Serial No. b. Sieve Correction Factor (from calibration) = Residue: Residu	Samp	ole Ide	entification :					
a. Sieve ID/Serial No. b. Sieve Correction Factor (from calibration) = Residue_1-g_SRM - Residue_Sieve being Calibrated Residue_Sieve being Calibrated c. Weight of sample, g d. Weight of sample retained at the Sieve, g e. Corrected Residue, % = d/c × (100 ± b) AVE: Fineness = 100 - e_AVE Tested by / Date Checked and Reviewed by / Date:	Type :		:					
a. Sieve ID/Serial No. b. Sieve Correction Factor (from calibration) = Residue_1-g_SRM - Residue_Sieve being Calibrated Residue_Sieve being Calibrated c. Weight of sample, g d. Weight of sample retained at the Sieve, g e. Corrected Residue, % = d/c × (100 ± b) AVE: Fineness = 100 - e_AVE Tested by / Date Checked and Reviewed by / Date:								
a. Sieve ID/Serial No. b. Sieve Correction Factor (from calibration) = Residue_1-g SRM - Residue_Sieve being Calibrated Residue_Sieve being Calibrated c. Weight of sample, g d. Weight of sample retained at the Sieve, g e. Corrected Residue, % =d × (100 ± b) AVE: Fineness = 100 - e_AVE Tested by / Date Computed by / Date Checked and Reviewed by / Date:	III.	FIN	ENESS: by the 45-μm (No.	. 325) Sieve (ASTM	C430)			
b. Sieve Correction Factor (from calibration) = Residue _{1-q SRM} — Residue _{Sieve being Calibrated} Residue _{Sieve being Calibrated} c. Weight of sample, g d. Weight of sample retained at the Sieve, g e. Corrected Residue, % = d/c × (100 ± b) Fineness = 100 - e _{AVE} Tested by / Date Computed by / Date Checked and Reviewed by / Date:						Trial 1	Trial 2	
= Residue _{1-g SRM} — Residue _{Sieve being Calibrated} Residue _{Sieve being Calibrated} c. Weight of sample, g d. Weight of sample retained at the Sieve, g e. Corrected Residue, % = d/c × (100 ± b) C AVE: Fineness = 100 - e _{AVE} Tested by / Date Computed by / Date Checked and Reviewed by / Date:		a.	Sieve ID/Serial No.		-			
d. Weight of sample retained at the Sieve, g e. Corrected Residue, % $= $		b.	= <u>Residue_{1-g SRM}</u> – Residue	Sieve being Calibrated	-			
e. Corrected Residue, % $= \frac{d}{c} \times (100 \pm b)$ Fineness = $100 - e_{AVE}$ Tested by / Date Computed by / Date Checked and Reviewed by / Date:		C.	Weight of sample, g		-			
= × (100 ± b)		d.	Weight of sample retained a	at the Sieve, g	-			
Fineness = 100 - e AVE Tested by / Date Computed by / Date Checked and Reviewed by / Date:		e.	$= \underline{d} \times (100 \pm b)$		-			
Tested by / Date Computed by / Date Checked and Reviewed by / Date:			•					
Checked and Reviewed by / Date:			Fineness = $100 - e_{AVE}$					
Checked and Reviewed by / Date:		Tested by / Date			Сотри		ited by / Date	
• •		_						
• •								
	Chec	ked a	and Reviewed by / Date: _	(Hoad of Ma	torials To	cting Caction // /	nit)	

WORKSHEET FOR NORMAL CONSISTENCY, TIME OF SETTING, AUTOCLAVE EXPANSION TESTS OF CEMENT

ASTM C187, C191, C266 & C151

Lab. I	No. :		
Samp	le Identification:		
Гуре	:		
I.	NORMAL CONSISTENCY	: (ASTM C187)	
		Temp, ⁰ C =	RH, % =
	a. Mass of sample, g		
	b. Vol. H ₂ O used, ml		
	% Normal Consisten	cy = (b/a x 100)	<u> </u>
	Tested by / Date		Computed by / Date
		_	
II.	TIME OF SETTING:		
	a. Vicat Needle: (ASTM C	C191)	
		Temp, ⁰ C =	RH, % =
a.	Time made		
b.	Initial set (@ 25 mm) -		
c.	Final Set		
	Tested by / Date		Computed by / Date
		_	

WORKSHEET FOR NORMAL CONSISTENCY, TIME OF SETTING, AUTOCLAVE EXPANSION TESTS OF CEMENT

ASTM C187, C191, C266 & C151 Lab. No. Sample Identification: Type **b. Gillmore Needle:** (ASTM C266) Temp, °C = _____ RH, % = ____ Time made - - - -Initial set Final Set Tested by / Date Computed by / Date **III. AUTOCLAVE EXPANSION : (ASTM C151)** Temp, °C = _____ RH, % = _____ 1. Length comparator reading of specimen before Autoclaving, mm 2. Length comparator reading of specimen after Autoclaving, mm -----3. Gauge length, mm $\frac{2-1}{3}$ X 100 = Autoclave Expansion, % =

Tested by / Date	Computed by / Date

Checked/ Reviewed by/Date: ____ (Head of Materials Testing Section/Unit)

WORKSHEET FOR MORTAR STRENGTH TEST OF CEMENT

ASTM C109

Lab. No. Sample Iden						
Туре						
		nt, g :		nd, g :	Water :	
Specimen A	rea, sq. m:			W/C:	Flow, %:	
Date Molded	l:	_ Temp., ºC	::	(for Portland Cement,		(for Blended Cement)
Sample I.D.	Age in Days	Temp., °C	RH, %	Date	Cor	mpressive Strength, MPa
verage						
	sted by / Date				Computed	by / Date
Sample I.D.	Age in Days	Temp., ⁰C	RH, %	Date	Cor	npressive Strength, MPa
verage						
Tes	eted by / Date				Computed	by / Date

WORKSHEET FOR MORTAR STRENGTH TEST OF CEMENTASTM C109

Sample I.D.	Age in Days	Temp., ⁰C	RH, %	Date	Compressive Strength, MPa
Average					

Tested by / Date		Computed by / Date
	- - -	
Checked/Reviewed by/Date:	(Head of Materials Testing Section/Unit)	<u> </u>

WORKSHEET FOR AIR CONTENT TEST OF CEMENT

ASTM C185

.au	. No. :		
San	nple Identification :		
- yp	e :		
IR	CONTENT	Temp, ⁰ C =	DU 0/. —
	M 6 1	Tellip, C =	RH, % =
a.	Mass of sand, g		
b.	Mass of cement, g		
C.	Volume of water, ml		
d.	Volume of container, ml		
e.	Mass of container empty, g		
f.	Mass of container + mortar, g		
g. b	Mass of mortar (W), g		
h.	Specific Gravity of cement, C _G		2.65
i.	Specific Gravity of sand. S _G		
COI	MPUTATION:		
1.	Wa – Actual Mass per unit volume		
	Wa = $\frac{g}{d}$ =		
	d		
2.	P – Percent of Mixing Water Based of	n Mass of Cement	
	Volume of water _ C	X 100 =	
	$P = \frac{\text{Volume of water}}{\text{Mass of cement}} = \frac{C}{b}$	X 100 =	
3.	W_T – Theoretical mass per unit, volur	me	
	$W_T = $ 350 + 1400 + (350 x P x 0	0.01) =	
	350 1400 350 x F	7 x 0.01	
	C_{G} + C_{G} + C_{G}	1	
1.	Air Content, volume per cent = 100 [[1 − (Wa/W _T)]	
If S _l	pecific Gravity of Cement = 3.15		
5.	Air Content, volume per cent =		
	100 - W[(182.7 + P)/(2000+4P)]		
	Tested by / Date		Computed by / Date
hec	ked/Reviewed by/Date:		

WORKSHEET FOR SPECIFIC GRAVITY OF CEMENT ASTM C188

Lab.	No.	:		
Samp	ole Identification	:		
Type		1		
	n Temp. (°C) = st be 23 ± 4 °C)			n R.H. (%) = I not be less than 50%)
SPE	CIFIC GRAVIT	Y :		
a.	Weight of Le Cl	natelier Flask & Kerosene, g	-	
b.	Initial volume r	eading, mL	-	
c.	Bath Temperat	ure at initial volume recording, °C	-	
d.	Weight of Le Ch	atelier Flask, Kerosene & sample, g	-	
e.	Final volume re	ading, mL	-	
f.		ure at final volume recording, °C n with $c \le 0.2$ °C)	-	
Sp	ecific Gravity = __	<u>d - a</u> <u>e - b</u>	-	
	Tested	by / Date	С	omputed by / Date
	(Chemist/Chemist)	n. Tech. / PRC Lic. No.)		
Chen	nical Test/s Certific		mist / Pl	RC Lic. No.)
Chec	ked and Reviewed		aterials :	Testing Section/Unit)

WORKSHEET FOR CHEMICAL TESTS OF CEMENT (by Wet Analysis)

ASTM C114

Lab	o. No. :				
Sar	mple Identification :				
Тур					
Sar	mpling Ambient Temp. ($^{\circ}$ C) = $_{\cdot}$		Samplir	ng Ambient R.H. (%) =	
I.	LOSS ON IGNITION (L	OI)		Trial 1	Trial 2
a.	Mass of empty crucible, g		-		
b. c. d. e.	Average of <i>a</i> comprising the of Mass of sample, g Mass of crucible and sample of Mass of crucible and sample	before ignition, g	-		
f. g.	Average of <i>e</i> comprising the 6 % LOI = $\left(\frac{d-f}{c}\right)$ x 100	constant weight,	g - -		
	Average	e% LOI	-		
	Tested by / Date			Computed by / Da	te
	(Chemist/Chem. Tech. / I	PRC Lic. No.)			
II.	INSOLUBLE RESIDUE	(IR)	Trial 1	Trial 2	Blank
a.	Mass of empty crucible, g	- - -			
C.	Average of <i>a</i> comprising the constant weight, g Mass of sample, g Mass of ignited crucible and	- - -			
	residue, g Mass of ignited residue, g				
f.	$= d - b$ % IR = $e \times 100$	 			
g.	Corrected % IR = $f - $ % Bla	nk			
	Average % IR	-			

WORKSHEET FOR CHEMICAL TESTS OF CEMENT (by Wet Analysis)

ASTM C114

Lab.	No. :				
Sam	ple Identification :				
Тур	:				
Sam	pling Ambient Temp. (°C) =		Samplir	ng Ambient R.H. (%) =	
III.	SULFUR TRIOXIDE (SO ₃)		Trial 1	Trial 2	Blank
a.	Mass of empty crucible, g	-			
	, ,				
				<u> </u>	
b.	Average of <i>a</i> comprising the				
	constant weight, g	-			
	Mass of sample, g	-			
	Mass of ignited crucible and				
	residue, g Mass of ignited residue, g	-			
	= d - b	_			
f.	$% SO_3 = e \times 34.3$	-			
g.	Corrected $\%$ SO ₃ = $f - \%$ Blank	-			
	Average % SO₃	_			
	Aveluge 70 503				
	Tested by / Date			Computed by / Da	ate
	(Chemist/Chem. Tech. / PRC L	ic. No.)			
IV.	MAGNESIUM OXIDE (MgO))			
			Trial 1	Trial 2	Blank
.	Mass of empty crucible, g	-			
				<u> </u>	
).	Average of <i>a</i> comprising the				
	constant weight, g	-			
	Mass of sample, g	-		_	
	Mass of ignited crucible and residue, g	_			
	Mass of ignited residue, g				
	=d-b	-			
	$% MgO = e \times 72.4$	-			
J .	Corrected % MgO = $f - $ % Blank	-		-	
	Average % MgO	-			
	Tested by / Date			Computed by / Da	ate
		lic No 1			
	(Chemist/Chem. Tech. / PRC L	.ic. 140.)			
Che	mical Test/s Certified by	:	(Cham	ist / PRC Lic. No.)	
			(Спеті	ISL / PKC LIC. IVO.)	
Che	cked and Reviewed by / Date	:	<i>(1)</i>	.,,	
			(Head of Mate	erials Testing Section/U	nit)

WORKSHEET FOR CHEMICAL TESTS OF CEMENT (using X-Ray Fluorescence Spectrometer/XRF) ASTM C114

	Lab. No.	:				
	Sample Identification					
	Туре	:				
	Sampling Ambient Temp	p. (°C) = _		Sampling Ambier	nt R.H. (%) =	
	Sample Preparation:	Fusion	/Fused Bead Me	ethod Pressec	d Pellet Method	
				OXIDE (MgO)	SULFUR TRI	
			Trial 1	Trial 2	Trial 1	Trial 2
а.	Mass of sample, g	-				
b.	Mass of flux (if used), g	-				
С.	Instrument Readout, %	-				
d.	Blank, %	-				
е.	Composition, $\% = (c - 1)^{-1}$	·d) -				
	Average % Composit	tion -				
f.	Quality Control, CRM ID	-				
g.	Quality Control, CRM Instrument Readout, %	-				
ո.	Quality Control, CRM Certified Value, %	-				
	Quality Control, CRM Accuracy, % = <u>g</u> x 100	-				
	Tested b	oy / Date		Сотр	outed by / Date	
	(Chemist/Chem	n. Tech. / Pl	RC Lic. No.)			•
	Chemical Test/s Certifie	d by	:	(Chemist / PRC L	Lic. No.)	
	Checked and Reviewed	by / Date	:	Head of Materials Test	ting Section/Unit)	

WORKSHEET FOR TESTING OF ASPHALT CEMENT (PENETRATION-GRADED)

AASHTO T44/ASTM D2042, AASHTO T48/ASTM D92, AASHTO T49/ASTM D5, AASHTO T51/ASTM D113
AASHTO T102, AASHTO T179/ASTM D1754, AASHTO T228/ASTM D70, ASTM D36

Sa	o. No mple ade	o. :e Identification : :			<u> </u>
1.		Specific Gravity (AASHTO T228/ASTM D2	70)		
	b. c.	Mass of pycnometer, empty, g Mass of pycnometer filled with water, g Mass of pycnometer $\frac{3}{4}$ filled w/ sample, g Mass of pycnometer + sample + water, g $c - a$			
		Specific Gravity = ${(b-a)-(d-c)}$	=		_
		Tested by / Date		Computed by / Date	
			_		
2.		Thin-Film Oven Test (AASHTO T179/AST	M D1754)		
	b. c. d.	Mass of container empty, g Mass of sample, g Mass of container + sample, g Mass of container + sample after heating, g Mass Loss or Mass Gain (+ or -), g	 AVERAGE	#1	#2
		Mass Loss or Mass Gain, $\% = \frac{e}{b} \times 100$	AVERAGE	=	
		Tested by / Date		Computed by / Date	
3.		Solubility and Ash Content (AASHTO T44	/ASTM D204	12)	
	b.	Mass of sample, g Mass of crucible + filter paper, g Mass of crucible + filter paper + residue, g			_ _ _
		% Solubility = $100 - \left[\left(\frac{c - b}{a} \right) \right] \times$	100 =		_
		Tested by / Date		Computed by / Date	
		(Chemist/Chem. Tech. / PRC Lic. No.)			
4.		Spot Test (AASHTO T102) Spot Test =			
		Tested by / Date		Computed by / Date	
		(Chemist/Chem. Tech. / PRC Lic. No.)			

WORKSHEET FOR TESTING OF ASPHALT CEMENT (PENETRATION-GRADED)

AASHTO T44/ASTM D2042, AASHTO T48/ASTM D92, AASHTO T49/ASTM D5, AASHTO T51/ASTM D113
AASHTO T102, AASHTO T179/ASTM D1754, AASHTO T228/ASTM D70, ASTM D36

	nple Identification :						
5.	Penetration (AASHTO T49/AST	M D5)					
a. b.	Penetration (Original), 25 °C, 100g, 5s Penetration (After Oven Test), 25 °C, 10			2	3		Average
	Penetration, % of Original =	$\frac{b_{\text{ave.}}}{a_{\text{ave.}}} \times 1$.00	=			_
	Tested by / Date				oy / Date		
6.	Ductility (AASHTO T51/ASTM D	113)					
	a. Ductility (Original) 25°C, 5 cm/min., b. Ductility (After Oven Test) 25°C, 5 cm		1		2	3 	Average
	Tested by / Date			Computed	l by / Date		
7.	Flash Point (AASHTO T48/ASTN	1 D92)					
	Flash Point, ^o	PC =					
	Tested by / Date			Computed	l by/ Date		
8.	Softening Point (ASTM D36)						
		1		2			Average, °C
	Tested by / Date			Computed	l by/ Date		
	Chemical Test/s Certified by	:		(Chemist / P	PRC Lic. No	o.)	
	Checked and Reviewed by / Date	:	(Неа	nd of Materials	Testing Se	ection/U	Init)

WORKSHEET FOR ASPHALT CEMENT (VISCOSITY-GRADED)

AASHTO T44/ASTM D2042, AASHTO T47/ASTM D6, AASHTO T48/ASTM D92, AASHTO T51/ASTM D113, AASHTO T102, AASHTO T202/ASTM D2171, AASHTO T228/ASTM D70, ASTM D36

Lab San Gra	nple	o. : _ e Identification : _ : _					
1.		Specific Gravity	(AASHTO T228/ASTM D7	' 0)			
	a. b. c. d.	Mass of pycnometer Mass of pycnometer	er filled with water, g er $\frac{3}{4}$ filled w/ sample, g er + sample + water, g C - a	=			
		Tested by / D	, , , ,	- - -	Computed by / Date		
2.		Thin-Film Oven	Test (AASHTO T179/ASTI	M D1754)			=
3.	b. c. d. e. a. b.	Mass Loss or Mass Mass Loss or Mass Tested by / E Solubility and As Mass of sample, g Mass of crucible +	F sample, g F sample after heating, g Gain (+ or -), g F Gain , % = $\frac{e}{b}$ \times 100 Date Sh Content (AASHTO T44)	AVERAGE AVERAGE AVERAGE AVERAGE	#1	#2 	
		% Solubility =	$100 - \left[\left(\frac{c - b}{a} \right) \right] \times 1$	100 =			
		Tested by	/ Date		Computed by / Date		
		(Chemist/Chem. To	ech. / PRC Lic. No.)	_			
4.		Spot Test (AASH	TO T102)				—
			Spot Test =				
		Tested by	/ Date		Computed by / Date		
		(Chemist/Chem. To	ech. / PRC Lic. No.)				

WORKSHEET FOR ASPHALT CEMENT (VISCOSITY-GRADED)

AASHTO T44/ASTM D2042, AASHTO T47/ASTM D6, AASHTO T48/ASTM D92, AASHTO T51/ASTM D113, AASHTO T102, AASHTO T202/ASTM D2171, AASHTO T228/ASTM D70, ASTM D36

Sample Identification :						- - -
5. Viscosity (AASHTO T202/A	STM D2171)					
a. Viscosity (Original), Pa • s	Temperature, ⁰ C	Fac	Calibration ctor, Pa•s/s	Flow Tim	ne,	Viscosity, Pa • s
b. Viscosity (After Oven Test), Pa •	S					
Tested by / Date				by / Date		
 Ductility (AASHTO T51/ASTM I a. Ductility (Original) 25°C, 5 cm/n b. Ductility (After Oven Test) 25°C 	nin., cm	1		2	3	Average
Tested by / Date	- - -		Computed	by / Date		
7. Flash Point (AASHTO T48/AST Flash Po	-					
8. Softening Point (ASTM D36)						
	1		2		_	Average, °C
Tested by / Date			Computed	by/ Date		
Chemical Test/s Certified by	: :		(Chemist / P	PRC Lic. No.)		
Checked and Reviewed by / Da	ate :	(Hea	d of Materials	-		t)

WORKSHEET FOR TESTING OF EMULSIFIED ASPHALT

AASHTO T49/ASTM D5, AASHTO T51/ASTMD113, AASHTO T59, AASHTO T72, AASHTO T111

Lab. No Sample Grade	o. e Identification					
1.	Specific Gravi	ty (AASHTO T	59)			
	a. Mass of pycrb. Mass of pycrc. Mass of pycr	nometer filled w	ith water, g			
	Specifi	c Gravity =	$\frac{c-a}{b-a}$	— =		
	Tested by	/ Date		_	Computed by / Date	2
2.	Storage Stabil	lity (AASHTO 1	[59]		Тор	Bottom
	a. Mass of bealb. Mass of bealc. Mass of beak	ker + sample, g ker + residue, g		·		
	% Residue =	<i>c − a</i> <i>b − a</i> idue воттом −		 p =		
	Tested by ,		70 Residue 10	r –	Computed by / Date	_
				_	computed by / Dute	
				_		
3.	Sieve Test (AA	ASHTO T59)				
	a. Mass of samb. Mass of sieve	e + pan, g				
	c. Mass of sieve	idue =	ue, g - <i>b</i> x 100	=		
	Tested by		•	_	Computed by / Date	
				_		
4.	Viscosity (AAS	SHTO T72)				
	Vi	scosity (Saybo	olt-Furol), sec	=		_
	Tested by	/ / Date		_	Computed by / Date	

WORKSHEET FOR TESTING OF EMULSIFIED ASPHALT

AASHTO T49/ASTM D5, AASHTO T51/ASTMD113, AASHTO T59, AASHTO T72, AASHTO T111

Lab. No Sample Grade	o. e Identification	: :				
5.	a. Mass of Iron b. Mass of samp c. Mass of Iron	Still, g	 iting, g			
	% Resi	due =	x 100	=		
	Tested by /	Date		Computed	by / Date	_
6.	a. Mass of sieve	g (AASHTO T59) e + pan, g e + pan + residue, g Cement Mixing =	 (b - a)	=		
	Tested by /	Date		Computed	by / Date	_ _
7.	Tests on Resid	ue:				
1.	Penetration at 2: (AASHTO T49/A: Tested by			2 ———— Computed		AVE:
2.		, 5 cm/min, cm	1	2	3	AVE:
	(AASHTO T51/AS Tested by			Compute	d by / Date	
3.	a. Mass ofb. Mass ofc. Mass ofd. Mass ofe. Mass of	r Ash (AASHTO T111) crucible, g sample, g crucible + sample, g crucible + ash, g ash, g sh Content = e		=		_
	·	py / Date		Computed	d by / Date	_
	(Chemist/Chem.	Tech. / PRC Lic. No.)				
	Chemical Test/s	Certified by	:	(Chemist / PF	RC Lic. No.)	
	Checked and Re	viewed by / Date	:	ad of Materials T	estina Section/	<u>(Unit)</u>

WORKSHEET FOR TESTING OF CUTBACK ASPHALT

AASHTO T44, AASHTO T78, AASHTO T79, AASHTO T201, ASTM D5, ASTM D70, ASTM D113, ASTM D2170

Lab. N Samp Grade	le Identification :				
	Viscosity (AASI a. Time Elapsed, b. Glass Capillary Viscosity (Kir	sec Constant, cSt/	sec o°C, cSt = a x b	 =	
	Tested by /	Date		Computed by / Date	
2.	Flash Point (A <i>l</i> Flash Po	ASHTO T79) pint (Tag Ope	en Cup), °C =		
	Tested by /	Date		Computed by / Date	
3.	specific Gravity (a. Mass of pycno b. Mass of pycno c. Mass of pycno Specific	ometer, g ometer filled w	ith water, g th sample, g c – a	=	
	Tested by /	Date	b – a	Computed by / Date	
4.	Distillation (AAS Volume of Sampl	le = <u>200 m</u>	L Specific Gravity x V	(aluma of Sampla (ml.)	
	Tempe		Volume of Distillates	% by Volume = <u>volun</u>	∩edistillate @ temp X 100
	190 °C (3 225 °C (4 260 °C (9 315 °C (6 360 °C (6	374 °F) 437 °F) 500 °F) 500 °F)		-	nedistillate @ 360 C
Resid	lue, % by Volume	e = volume	e _{sample} – volume _{distillate @} volume _{sample}	<u>o 360 c</u> x 100 =	
	Tested by /	Date	Gample	Computed by / Date	

WORKSHEET FOR TESTING OF CUTBACK ASPHALT

AASHTO T44, AASHTO T78, AASHTO T79, AASHTO T201, ASTM D5, ASTM D70, ASTM D113, ASTM D2170

	•	o. Identification	: : :						
5.	T	ests on Resid	ue:		1		2	3	
	1.	Penetration at (AASHTO T49/	25℃, 100 g, 5 s ASTM D5)						AVE:
		Tested b	y / Date				Computed	by / Date	_
	2.	Ductility at 25° (AASHTO T51/	C, 5 cm/min, cm ASTM D113)		1		2	3	AVE:
		Tested b	y / Date				Compute	d by / Date	_
	3.	a. Mass o b. Mass o c. Mass o	/ASTM D2042) If sample, g If crucible, empty, g If crucible + Residue,		 - b) x 100	ה			
			ubility = 100 - by / Date		a		Computed	d by / Date	
		(Chemist/Chem	n. Tech. / PRC Lic. No	.)					_
	4.	Spot Test (AAS	SHTO T102) Spot Test		=				
		Tested	by / Date				Computed	d by / Date	
		(Chemist/Chem	n. Tech. / PRC Lic. No	.)					_
		Chemical Test/	s Certified by		:		(Chemist / PR	RC Lic. No.)	
		Checked and R	eviewed by / Date		:	leac	d of Materials T	esting Section	 'Unit)

WORKSHEET FOR TESTING OF CONCRETE JOINT SEALER

ASTM D5329

.ab. No. :		
Sample Identification:		
1. Safe Heating Temperature, °C		
Tested by / Date		Computed by / Date
2. Pour Point Temperature, °C		
Tested by / Date		Computed by / Date
3. Flow at 60°C, mm		
	AVERAGE	=
Tested by / Date		Computed by / Date
4. Cone Penetration @ 25°C, 150 gm	ı, 5 sec	
	AVERAGE	=
Tested by / Date		Computed by / Date
Checked and Reviewed by / Date	:(Hond of Ma	terials Testing Section/Unit)

WORKSHEET FOR TESTING OF ELASTOMERIC BINDER (THORMAJOINT)ASTM D36, ASTM D5329

1. Safe	Heating Temperature, °C		
	Tested by / Date	_	Computed by / Date
2. Pour	Point Temperature, °C		
	Tested by / Date		Computed by / Date
3. Flow	at 60°C, mm		
		AVERAGE =	
	Tested by / Date		Computed by / Date
4. Pene	etration @ 25°C, 150 gm, 5 s	ec	
		AVERAGE =	
	Tested by / Date		Computed by / Date
5. Softe	ening Point, °C	Trial 1 Tr	rial 2 AVERAG
	Tested by / Date		Computed by / Date

WORKSHEET FOR TESTING OF PREFORMED EXPANSION JOINT FILLER

AASHTO T42 / ASTM D545

		0 1 71				
1.	ΑВ	SORPTION:				
	a.	Thickness of sample, mm			#1 #2	#3
	a.	mediess of sample, min				
			Ave:			
	L	Mana of annuals before immediate			AVERAGE:	
	b. c.	Mass of sample before immersion, g Mass of sample after immersion, g				
	d.	Absorption, % by volume				
					AVERAGE:	
		Computation:		c - b		
		Absorption, % by volume	= -	10.4 <i>a</i>	X 100	
		Tested by / Date			Computed by / Date	
2.	DE	NSITY				
	a.	Thickness of sample before drying, mm				
			Ave.			
					AVERAGE:	
	b.	Thickness of sample after drying, mm				
						
			A. 10			
			Ave.			
	c.	Mass of sample before drying, g			AVERAGE:	
	d.	Mass of sample after drying, g				
	e.	Density, kg/m ³				
					AVERAGE:	
		Computation: Density, kg/m ³		96.117 <i>d</i>		
		Density, rg/iii	_	Ь		
		Tested by / Date			Computed by / Date	

WORKSHEET FOR TESTING OF PREFORMED EXPANSION JOINT FILLER

AASHTO T42 / ASTM D545

Lab. No. Sample Identif Thickness					
COMPRESSION	ON AND RECOVERY:				
a. Thickness	of sample before compres	ssion, mm	-		
			-		
		Ave	-		
				AVERAGE:	
	a ave	_]	-		
	_	_			
b. Thickness	of sample after compressi	on, mm	-		
			-		
		Ave	-		
				AVERAGE:	
c. Compress	ion (Machine reading), to	nnes	-		
				AVERAGE:	
•	ion, kN/m²		-	· · · · · · · · · · · · · · · · · · ·	
Comp	outation:	<i>c</i> x 9.807			
	Compression, kN/m ² =	0.01033			
e. Recovery,	%				
Comp	outation:	$oldsymbol{b}$ ave			
	Recovery, % =	<i>D</i> ave	X 100		
	Tested by / Date			Computed by / Date	е
			-		
Checked and	Reviewed by / Date	:		rials Testina Section/Unio	

WORKSHEET FOR TESTING OF POLYMER MODIFIED BITUMEN (PMB)
AASHTO T44/ASTM D2042, AASHTO T48/ASTM D92, AASHTO T49/ASTM D5, AASHTO T51/ASTM D113, ASTM D36

o. No.	:			
mple Identification	on :			
rade	:			
Penetration @	25 °C, 100 g, 5 s (A	ASHTO T49/AS 2	TM D5)	AVERAGE
_	Tested by / Date			Computed by / Date
Flash Point, °C	C (AASHTO T48/AST Tested by / Date	M D92)		Computed by / Date
Softening Poin		Trial 1	Trial 2	AVERAGE
	Tested by / Date			Computed by / Date
Tested by / Date Computed by / D		AVERAGE		
	Tested by / Date			Computed by / Date
a. Mass of s b. Mass of s c. Mass of s	sample, g crucible + filter paper, crucible + filter paper	g - + residue, g -		
Tes	Tested by / Date sh Point, °C (AASHTO T48/ASTM D9 Tested by / Date Shility in Trichloroethylene (AASHTO a. Mass of sample, g b. Mass of crucible + filter paper, g c. Mass of crucible + filter paper + resi % Solubility = 100 - \[\big(\frac{c - b}{a} \] \] Tested by / Date Tested by / Date		Compu	ited by / Date
(Chemist/C	Chem. Tech. / PRC Lic.	No.)		
Chemical T	est/s Certified by	:	(Chemist /	PRC Lic. No.)
Checked ar	nd Reviewed by / Date	:	(Head of Materia	ls Testing Section/Unit)

WORKSHEET FOR TESTING OF HOT MIX ASPHALT

ASTM D1074, ASTM D2726/AASHTO T166, ASTM D2172/AASHTO T164, ASTM D5444/ AASHTO T30

ab. No. : Sample Identification : Gradation :							
A. BITUMEN CONTENT	(ASTM D2172/AAS	5. l		ed oven-drie	ed sample,g	= =	
1. Orig. mass of sample			Sieve Size	Mass Retained	, g Passing		% ssing
2. Mass of sample after extr	action						
3. Bitumen Extracted, g (1) – (2)						
4. Bitumen Content, % by	mass of						
agg. 3 x 100							
mix <u>3</u> x 100							
Tested by / Da	ate				Computed by	y / Date	
BULK SPECIFIC GRA	NVITY (ASTM D27	726/AASHTO T16	6)				
	Specimen	1	2	3	4	5	6
. Mass in air, g							
. Mass in SSD, g							
. Mass in water, g							
Specific Gravity 1							
(2 – 3)		Average =	=				
Tested by / Da	ate				Computed by	y / Date	

WORKSHEET FOR TESTING OF HOT MIX ASPHALT

ASTM D1074, ASTM D2726/AASHTO T166, ASTM D2172/AASHTO T164, ASTM D5444/ AASHTO T30

Lab. No. Sample Identification Gradation	:				
D. FOR HOT MIX:					
COMPRESSIVE S Cross-sectional ar	-				
1. Dry Specimen:		Specimen			Average
Unit Load (Dry), Compressive Str					
2. Immersed Speci Unit Load (Wet) Compressive Str), N	Specimen			Average
Index of Retaine	ed Strength (IR	2S), % , <u>2</u> x 100			
Tested by	/ / Date			Computed by	/ / Date
		<u> </u>			
Checked/ Review	wed by/Date:	(Head of Materials Te	esting Section/Unit\		

WORKSHEET FOR TESTING OF COLD MIX ASPHALT

ASTM D2172/AASHTO T164, ASTM D5444/AASHTO T30, ASTM D2726/AASHTO T166, MS-14

Lab. No. : Gample Identification : Gradation :						
A. BITUMEN CONTENT	(ASTM D2172/AASI	5. N	lass of was		ed sample,g =	
1. Orig. mass of sample			Sieve Size	Mass Retained, g	Mass Passing, g	% Passing
2. Mass of sample after ext	raction					
3. Bitumen Extracted, g (1	.) – (2)					
4. Bitumen Content, % by	mass of					
agg. <u>3</u> x 100						
mix <u>3</u> x 100						
Tested by / Dat	re				Computed by / [Date
. BULK SPECIFIC GRA	-	26/AASHTO T166 1	-	3	4 5	6
. Mass in air, g						
. Mass in SSD, g						
. Mass in water, g						
. Specific Gravity <u>1</u> (2 –	3)					
ζ-	,	Average =				
Tested by / Dat	re				Computed by / [Date

WORKSHEET FOR TESTING OF COLD MIX ASPHALT

ASTM D2172/AASHTO T164, ASTM D5444/AASHTO T30, ASTM D2726/AASHTO T166, MS-14

•	e Identification :					
Grada [·] D.1.	FOR COLD MIX USING STABILITY (MARSHALI		ASPHALT:			
G	roup 1. (Dry Specimen)					
		Specimen No.				Average
	Stability, lbs.					
b.	Height of Specimen, mm					
C.	Correlation Ratio					
	(refers to Asphalt Cold Mix Manual)		Table F-2)			
	Corrected Stability, lbs.					
e.	Corrected Stability, N = lbs. x 4.448			<u> </u>		
G	roup 2. (Samples Subjec	cted in Vacuun	n Saturatio	n and Imm	ersion)	
		Specimen No.				Average
f.	Stability, lbs. (After VSI)					
g.	Height of Specimen, mm					
h.						
	(refers to Asphalt Cold Mix Manual)		Table F-2)			
i. j.	Corrected Stability, lbs. Corrected Stability, N					
٦.	= lbs. x 4.448					
	Stability Loss After Vacuur		<u>e – j</u>	_ x 100		
	Saturation and Immersion	, %	е			
	Tested by / Date				Compute	d by / Date
						
D.2.	FOR COLD MIX USING		HALT:			
	STABILITY (MARSHALI	-): (MS-14)				
G	roup1. (Dry Specimen)					
		Specimen No.				Average
a.	Stability, lbs.		-			/// // // // // // // // // // // /
b.	Height of Specimen, mm					
c.	Correlation Ratio					
	(refers to Asphalt Cold Mix Manual)	Appendix F Page 119	Table F-2)			
d.	Corrected Stability, lbs.					
e.	Corrected Stability, N					
	= lbs. x 4.448					

WORKSHEET FOR TESTING OF COLD MIX ASPHALT

ASTM D2172/AASHTO T164, ASTM D5444/AASHTO T30, ASTM D2726/AASHTO T166, MS-14

Lab. No. Sample Identification Gradation	<u>:</u>					
Group 2. (Sam	-	ed in water fo pecimen No.	-	-		Average
 f. Stability, lbs. (in water @ 25 g. Height of Spectors. h. Correlation Ray (refers to Asphalt Corrected Stall). j. Corrected Stall j. Lbs. x 4.4 	^o C) cimen, mm itio <i>Cold Mix Manual App</i> cility, lbs cility, N	_				
Stability Reter 4 days in Wa Tested by	ter @ 25 ºC, %	=	<u>j</u> e	x 100	Computed b	y / Date
Checked/Review	ved by/Date: _		iterials Tes	tina Section/	(Unit)	

WORKSHEET FOR TESTING OF BITUMINOUS CONCRETE CORE

ASTM D3549, ASTM D2726

Lab. No. Sample Ide		: :									_
				Th	nickness (A	STM D3549)	Bulk 9	Specific Gra	vity (ASTI	1 D2726)
Lab. Nos.	I.D.	Station			m	m		Wt. in	Wt. in	Wt.	Bulk Sp.
			1	2	3	4	Ave.	Air, g (a)	Water, g (b)	SSD, g (c)	Gravity (a/(c-b))
	_	Tested by / Date					Compute	d by / Da	te		
	_										
Ch	ecked/Revi	ewed by/ Date :(Hea	d of Mater	rials Testin	g Section/	Unit)					

WORKSHEET FOR TESTING OF FLAT LATEX PAINT

Lab. N	_ab. No.: Sample Identific			Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), % =d × 100	Trial 1	Trial 2	Trial 3
	Total Solids _{average} , %)		
	Tested by / Date		Computed b	oy / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date	Trial 1	Computed Trial 2	by / Date
	e. Absolute Density of Water at specified temperature (see Standard Table)			
	f. Volume of density cup, mL $f = \underline{c}$ e			
		AVER	AGE _{vol.} of density cup, mL:	
	 g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h/f 	Trial 1	Trial 2	Trial 3
			AVERAGE _{density} , kg/L:	
	Tested by / Date		Computed by	/ Date

WORKSHEET FOR TESTING OF FLAT LATEX PAINT

Lab. N	No.:	Sample Identifica	ntion:	Color:
V.	<u>Viscosi</u>	ity (ASTM D562)		
	a. b.	Temperature of the sample, °C Viscosity, KU		
		Tested by / Date		Computed by / Date
'.		ss of Grind (ASTM D1210)		
	a. b.	Tapered Gage used Cleanliness (texture) method		
		(not applicable for Two Parallel Paths)		
	C.	Cleanliness (texture) rating, A (0 to 8 specks),		
		B (9 to 15 specks), and		
		C (16 or more specks)		
	d.	(<i>not applicable</i> for Two Parallel Paths) Scanning Direction of the Tapered Gage		
	u.	Tapered Gage		
			Trial 1	Trial 2 AVERAGE
	e.	Fineness of Grind, Hegman reading		
		Tested by / Date		Computed by / Date
ī.	Wet Ed	lge Time (ASTM D7488)		
	a.	Time Elapsed when the edges of the first coa	at	
		become visible (wet edge time), min.		
	b.	Time Elapsed when the X-marks		
		become visible, min.		
		Tested by / Date		Computed by / Date
II.	<u>Volatil</u>	e Organic Compounds (ASTM D3960)		Date Tested:
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
		Weight of Exempt Volatile Compound, %		
	d. e.			
	f.	Density of Exempt Volatile Compound at 25%	C, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
	VOC =	(a-b-c)(d)		
		$\frac{(a-b-c)(d)}{100\%-(b)(d/e)-(c)(d/f)}$		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
III.	Lead C	ontent (ASTM E1613 / ASTM F2853)		Date Tested:
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemic	cal Test/s Certified by :		
	Cha-l	ed and Davioused by / Date	(Chem	nist / PRC Lic. No.)
	CHECKE	ed and Reviewed by / Date :	(Head of Mate	erials Testing Section // Init)
			(Head of Mate	erials Testing Section/Unit)

WORKSHEET FOR TESTING OF SEMI-GLOSS LATEX PAINT

Lab. N	lo.: Sample Ider	ntification:	· · · · · · · · · · · · · · · · · · ·	Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), % =d × 100	Trial 1	Trial 2	Trial 3
	Total Solids _{average} , %			
	Tested by / Date		Computed b	y / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Standard Table) f. Volume of density cup, mL f = _C_	Trial 1	Computed b	Trial 3
	e	AVERA	AGE _{vol. of density cup} , mL:	
	g. Mass of density cup filled with sample, g	Trial 1	Trial 2	Trial 3
	h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$			
			AVERAGE _{density} , kg/L:	
	Tested by / Date		Computed b	oy / Date

WORKSHEET FOR TESTING OF SEMI-GLOSS LATEX PAINT

Lab. N	۱o.:	Sample Identifi	cation:		Color:
IV.	Viscos	ity (ASTM D562)			
	a. b.	Temperature of the sample, °C Viscosity, KU			
		Tested by / Date		Compute	ed by / Date
V.	<u>Finene</u>	ess of Grind (ASTM D1210)			
	a.	Tapered Gage used			
	b.	Cleanliness (texture) method (not applicable for Two Parallel Paths)			
	c.				
		A (0 to 8 specks),			
		B (9 to 15 specks), and			
		C (16 or more specks) (not applicable for Two Parallel Paths)			
	d.	Scanning Direction of the Tapered Gage Tapered Gage			
	e.	Fineness of Grind, Hegman reading	Trial 1	Trial 2	AVERAGE
		Tested by / Date		Compute	ed by / Date
VI.	Wet Ed	dge Time (ASTM D7488)			
		The Flores declared the advance of the Cost			
	a.	Time Elapsed when the edges of the first of become visible (wet edge time), min.	coat		
	b.	Time Elapsed when the X-marks			
		become visible, min.			
		Tested by / Date		Compute	ed by / Date
VII.	Drying	Time (ASTM D1640)			
	a. b.	Set-to-Touch, minutes Recoat Time, minutes			
		Tested by / Date		Compute	ed by / Date
VIII.	<u>Levelli</u>	ing (ASTM D4062)			
	Leve	elling of Test Paint (from 0 to 10)			
		Tested by / Date		Compute	ed by / Date
IX.	<u>Contra</u>	st Ratio (PNS ISO 6504)			
	CONT	RAST RATIO, %, min 75 μm, 24 hours dry			
		Tested by / Date		Compute	ed by / Date
X.	<u>Specul</u>	ar Gloss (PNS ISO 2813)			
	SPECU	JLAR GLOSS 60° , 75 μ m, 24 hours dry, GU r	min		
		Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF SEMI-GLOSS LATEX PAINT

Lab. N	۱o.:	Sample Identific	cation:	Color:
XI.	Wet A	brasion (ASTM D2486)		
	a.	Test Method used		
	b.	Reference Paint used		
	c.			
	d.	•		
		WET ABRASION, cycles, min. 7 days dry		
		Tested by / Date		Computed by / Date
II.	<u>Adhes</u>	ion by Tape Test (ASTM D3359)		
	a.	Test Method Used		
	b.	Substrate Employed		
	c.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
	٠.	Mean		
		Range		
	f.		Tano	
		Adhesion Strength of the Pressure-Sensitiv	e rape	
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
		Lot Number		
	h.	Estimate of the Interface at which the		
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
III.	<u>Volatil</u>	e Organic Compounds (ASTM D3960)		
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
				
	C.	Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e. f.	Density of Water at 25°C, g/L Density of Exempt Volatile Compound at 25°C	5ºC, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = $\frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	d/f)	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
IV.	Lead C	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :		
	Checke	ed and Reviewed by / Date :	(Chem	ist / PRC Lic. No.)
			(Head of Mat	erials Testing Section/Unit)
			(

WORKSHEET FOR TESTING OF GLOSS LATEX PAINT

Lab. N	lo.: Sample Iden	tification:		Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \underline{d} \times 100$ Total Solids _{average} , $\%$	Trial 1	Trial 2	Trial 3
	Tested by / Date		Computed b	y / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Table 1) f. Volume of density cup, mL f =C	Trial 1	Computed b	y / Date Trial 3
	e	۸\/ED ۸	GE _{vol. of density cup} , mL:	
		AVERA	Levol. of density cup , IIIL.	
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3
		ı	AVERAGE _{density} , kg/L:	
	Tested by / Date		Computed b	y / Date

WORKSHEET FOR TESTING OF GLOSS LATEX PAINT

a. Temperature of the sample, 'C b. Viscosity, KU Tested by / Date Computed by / Date	_ab.	No.:	Sample Identifi	cation:		Color:
a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Computed by / Date Computed by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanlines (texture) method (not applicable for Two Parallel Paths) c. Cleanlines (texture) rating, A (0 to 8 specks), B (9 to 15 specks), G. Grind applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 1 Trial 2 Trial 1 Trial 1 Trial 2 Trial 1 Trial 1 Trial 1 Trial 2 Trial 1 Trial 1 Trial	IV.	Viscosi	ity (ASTM D562)			
Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Trested by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 Tria		a.	Temperature of the sample, °C			
a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes b. Recoat Time, minutes Computed by / Date			Tested by / Date		Comput	ed by / Date
b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Tested by / Date Tested by / Date Computed by / Date Tested by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes b. Recoat Time, minutes Tested by / Date Tested by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date	'.					
C. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Till. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date						
c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Tested by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date		D.				
B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Tapered Gage Trial 1 Trial 2 AVERAGE Computed by / Date Tomputed by / Date Tomputed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date Till. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date		С.	Cleanliness (texture) rating,			
C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Tial 1 Trial 2 AVERAGE e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Time (ASTM D4062) Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date						
(not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage E. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Tomputed by / Date Computed by / Date Tomputed by / Date Tomputed by / Date Computed by / Date Tested by / Date Computed by / Date Tomputed by / Date Computed by / Date Computed by / Date Tomputed by / Date Computed by / Date Computed by / Date Tomputed by / Date Computed by / Date Computed by / Date Computed by / Date Tomputed by / Date Computed by / Date						
Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date TIII. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date						
e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Tomputed by / Date Computed by / Date Tomputed by / Date Tomputed by / Date Computed by / Date Tested by / Date Computed by / Date		d.				
e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date T. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Drving Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date Titl. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date			rapered dage			
A. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date		e.	Fineness of Grind, Hegman reading	Trial 1	Trial 2	AVERAGE
a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date			· -		Comput	ed by / Date
a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date						
become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date	/I.	Wet Ed	dge Time (ASTM D7488)			
b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date		a.		coat		
become visible, min. Tested by / Date Computed by / Date		L				
Tested by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date Computed by / Date TIII. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date		D.				
A. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date			become visible, min.			
a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date X. Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date			Tested by / Date		Comput	ed by / Date
a. Set-to-Touch, minutes b. Recoat Time, minutes Tested by / Date Computed by / Date	r	Drving T	ime (ASTM D1640)			
b. Recoat Time, minutes Tested by / Date Computed by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min						
Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Computed by / Date						
Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Comput	ed by / Date
Tested by / Date Computed by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date	III.	<u>Levelli</u>	ng (ASTM D4062)			
Tested by / Date Computed by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date		Leve	lling of Test Paint (from 0 to 10)			
CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Comput	ed by / Date
CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	IX.	Contra	st Ratio (PNS ISO 6504)			
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		·				
Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60 ⁰ , 75 μm, 24 hours dry, GU min		CONT				
SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Comput	ed by / Date
	۲.	<u>Specul</u>	ar Gloss (PNS ISO 2813)			
Tested by / Date Computed by / Date		SPECU	JLAR GLOSS 60º, 75 μm, 24 hours dry, GU r	min		
			Tested by / Date		Comput	ed by / Date

WORKSHEET FOR TESTING OF GLOSS LATEX PAINT

Lab. No.:		Sample Identific	cation:	Color:
KI.	Wat Al	brasion (ASTM D2486)		
***	a.	Test Method used		
	b.	Reference Paint used		
	C.	Cycles for Test Paint		
	d.	Cycles for Reference Paint		
		WET ABRASION, cycles, min. 7 da	ıvs drv	
			.,,,	Committed by / Date
		Tested by / Date		Computed by / Date
II.	<u>Adhesi</u>	ion by Tape Test (ASTM D3359)		
	a.	Test Method Used		
	b.	Substrate Employed		
	C.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
		Mean		
	£	Range		
	f.	Adhesion Strength of the Pressure-Sensitiv	•	
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
	la.	Lot Number		
	h.	Estimate of the Interface at which the		
	:	Coating Failure Occurred		
	i.	Immersion Conditions	otina	
		Time between Immersion and Test Method of Sample Preparation	sting	
		Tested by / Date		Computed by / Date
III.	Volatil	e Organic Compounds (ASTM D3960)		
1111.	a.	Weight of Total Volatiles, %		
	a. b.	Weight of Volatiles, %		
	C.	Weight of Water, 70 Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e.	Density of Water at 25°C, g/L		
	f.	Density of Water at 25 c, g/E Density of Exempt Volatile Compound at 2!		
		VOLATILE ORGANIC COMPOUND (VOC)		
		$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	$\frac{d}{df}$	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
KIV.	Lead C	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Cham:	cal Tact/a Cortified by		
	CHEITH	cal Test/s Certified by :	(Chem	nist / PRC Lic. No.)
			CHCIII	ice, including
	Checke	ed and Reviewed by / Date :		
	CITCON		(Head of Mate	erials Testina Section/Unit)
			u icau vi mait	JIIII JUULI JUULII JUULII J

WORKSHEET FOR TESTING OF ENAMEL PAINT

Lab. N	lo.: Sample Ider	Sample Identification:				
I.	Total Solids by Weight (PNS ISO 3251)					
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), % =d _ × 100 b Total Solids _{average} , %	Trial 1	Trial 2	Trial 3		
	Tested by / Date		Computed b	py / Date		
II.	Storage Stability (ASTM D1849)					
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date	Trial 1	Trial 2	Trial 3		
	 e. Absolute Density of Water at specified temperature (see Table 1) f. Volume of density cup, mL f =C e 	AVED	NCF and a			
	AVERAGE _{vol. of density cup} , mL:					
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h f	Trial 1	Trial 2	Trial 3		
			AVERAGE _{density} , kg/L:			
	Tested by / Date		Computed b	y / Date		

WORKSHEET FOR TESTING OF ENAMEL PAINT

Lab. N	No.:	Sample Identifi	cation:	· · · · · · · · · · · · · · · · · · ·	Color:
IV.	a.	ity (ASTM D562) Temperature of the sample, °C Viscosity, KU			
		Tested by / Date		Compute	ed by / Date
v.	a. b. c.	Pess of Grind (ASTM D1210) Tapered Gage used Cleanliness (texture) method (not applicable for Two Parallel Paths) Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) Scanning Direction of the Tapered Gage			
		Tapered Gage	Trial 1	Trial 2	AVERAGE
	e.	Fineness of Grind, Hegman reading Tested by / Date		Compute	ed by / Date
VI.		dge Time (ASTM D7488) Time Elapsed when the edges of the first of become visible (wet edge time), min. Time Elapsed when the X-marks become visible, min. Tested by / Date	coat 	Compute	 ed by / Date
VII.		Time (ASTM D1640) Set-to-Touch, minutes Recoat Time, minutes Tested by / Date		Compute	ed by / Date
				·	
VIII.		elling of Test Paint (from 0 to 10)			
		Tested by / Date		Compute	ed by / Date
IX.	<u>Contra</u>	ast Ratio (PNS ISO 6504)			
	CONT	TRAST RATIO, %, min 75 μm, 24 hours dry			
		Tested by / Date		Compute	ed by / Date
X.	<u>Specu</u>	lar Gloss (PNS ISO 2813)			
	SPEC	JLAR GLOSS 60º, 75 μm, 24 hours dry, GU r	min		
		Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF ENAMEL PAINT

Lab. N	No.:	Sample Identific	cation:	Color:
XI.	Wet Al	brasion (ASTM D2486)		
71.	a.	Test Method used		
	b.	Reference Paint used		
	C.	Cycles for Test Paint		
	d.	•		
	u.			
		WET ABRASION, cycles, min. 7 days dry		
		Tested by / Date		Computed by / Date
XII.	Adhesi	ion by Tape Test (ASTM D3359)		
	a.	Test Method Used		
	b.	Substrate Employed		
	c.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
		Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitiv	re Tape	
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
		Lot Number		
	h.	Estimate of the Interface at which the		
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
	.,			
XIII.		le Organic Compounds (ASTM D3960)		
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
	С.	Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e.	Density of Water at 25°C, g/L		
	f.	Density of Exempt Volatile Compound at 25	5ºC, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = $\frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	1/f)	
			, ,	Committeed by J.D. J.
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIV.	Lead C	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
Chemi	cal Test/	's Certified by :	(Chemist / PRC	C.Lic. No.)
			(Shermot) The	. 2.0. 1101)
Checke	ed and R	Reviewed by / Date :		
			ad of Materials Tes	stina Section/Unit)

WORKSHEET FOR TESTING OF SEMI-GLOSS ENAMEL PAINT

Lab. N	lo.: Sample Iden	tification:		Color:		
I.	Total Solids by Weight (PNS ISO 3251)					
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), % =d _ × 100 b Total Solids _{average} , %	Trial 1	Trial 2	Trial 3		
	Tested by / Date		Computed b	y / Date		
II.	Storage Stability (ASTM D1849)					
		Trial 1	Trial 2	Trial 3		
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Standard Table) f. Volume of density cup, mL f =C	Trial 1	Computed b	y / Date Trial 3		
	e	ΔVER	AGE ml:			
	AVERAGE _{vol. of density cup} , mL:					
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3		
		1	AVERAGE _{density} , kg/L:			
	Tested by / Date		Computed b	y / Date		

WORKSHEET FOR TESTING OF SEMI-GLOSS ENAMEL PAINT

a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Computed by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date I. Wet Edge Time (ASTM D1488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, wet edge time), min. Tested by / Date Computed by / Date II. Drying Time (ASTM D1640): a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date III. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date	₋ab. N	No.:	Sample Identifi	cation:		Color:
a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date G. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Specular Gloss (PNS ISO 5504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date	٧.	<u>Visc</u> osi	ity (ASTM D562)			
Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanlines (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Levelling (ASTM D1640): a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date	-	a.	Temperature of the sample, °C			
a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date			Tested by / Date		Compute	ed by / Date
b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (3 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Levelling (ASTM D1640): a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes c. Dry Hard, minutes Computed by / Date						
(not applicable for Two Parallel Paths) C. Cleanliness (cexture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
C. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), Cot applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible (wet edge time), min. Tested by / Date Computed by / Date Computed by / Date I. Drying Time (ASTM D1640): a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date II. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date		D.				
A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date		c.				
C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
(.not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date		d.	Scanning Direction of the Tapered Gage			
Tested by / Date Computed by / Date Computed by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date				Trial 1	Trial 2	AVERAGE
A. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date		e.	Fineness of Grind, Hegman reading			
a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tested by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date			Tested by / Date		Compute	ed by / Date
ATI. Drying Time (ASTM D1640): a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Tested by / Date Computed by / Date	Ί.	a.	Time Elapsed when the edges of the first of become visible (wet edge time), min. Time Elapsed when the X-marks			
a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min	II.	Drying	Time (ASTM D1640):			
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min		a.				
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min						
Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min		c.	Dry Hard, minutes			
Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	III.	<u>Levelli</u>	ing (ASTM D4062)			
Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		Leve	elling of Test Paint (from 0 to 10)			
CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	(.	Contra	st Ratio (PNS ISO 6504)			
Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		CONT	RAST RATIO, %, min 75 µm, 24 hours dry			
SPECULAR GLOSS 60 ⁰ , 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
		<u>Specul</u>	lar Gloss (PNS ISO 2813)			
Tested by / Date Computed by / Date		SPECU	JLAR GLOSS 60°, 75 μm, 24 hours dry, GU r	min		
			Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF SEMI-GLOSS ENAMEL PAINT

Lab. N	lo.:	Sample Identific	cation:	Color:
Vī	اء منالہ ۵	ion by Tone Took (ACTM DOOFS)		
XI.		ion by Tape Test (ASTM D3359) Test Method Used		
	a. b.	Substrate Employed		
	C.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
	C.	Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitive	e Tape	
	g.	Specific Product Name of the Tape Used		
	J	. Manufacturer		
		Lot Number		
	h.	Estimate of the Interface at which the		
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
XII.	Volatil	e Organic Compounds (ASTM D3960)		
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
	c.	Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e.	Density of Water at 25°C, g/L		
	f.	Density of Exempt Volatile Compound at 25	5ºC, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = $\frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	1/f)	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIII.	Lead C	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :		
			(Chen	nist / PRC Lic. No.)
	Checke	ed and Reviewed by / Date :	(110-1-544	Applied Techine Continue (Unit)
			(пеаа от Ма	terials Testing Section/Unit)

WORKSHEET FOR TESTING OF FLAT-WALL ENAMEL PAINT

Lab. N	lo.: Sample Ider	Sample Identification:				
I.	Total Solids by Weight (PNS ISO 3251)					
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$	Trial 1	Trial 2	Trial 3		
	Total Solids _{average} , %					
	Tested by / Date		Computed	by / Date		
II.	Storage Stability (ASTM D1849)					
		Trial 1	Trial 2	Trial 3		
a. b. c. d. e. f. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date	Trial 1	Computed Trial 2	by / Date Trial 3		
	e	AVED A	CE ml			
	AVERAGE _{vol. of density cup} , mL:					
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h f	Trial 1	Trial 2	Trial 3		
		A	VERAGE _{density} , kg/L	:		
	Tested by / Date		Computed	by / Date		

WORKSHEET FOR TESTING OF FLATWALL ENAMEL PAINT

a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Computed by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, wet edge time), min. Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date	₋ab. N	No.:	Sample Identifi	cation:		Color:
a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Levelling (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date	٧.	<u>Visc</u> os	ity (ASTM D562)			
Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanlines (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Computed by / Date I. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible (wet edge time), min. Tested by / Date Computed by / Date Computed by / Date II. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date		a.	Temperature of the sample, °C			
a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Computed by / Date The Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date The Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date The Elapsed When the X-marks become visible, min. Tested by / Date Computed by / Date Specular Gloss (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry, GU min Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Comput	ed by / Date
b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), In 6 (2 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Met Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tested by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date						
(not applicable for Two Parallel Paths) C. Cleanliness (cexture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
C. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), Cot applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible (wet edge time), min. Tested by / Date Computed by / Date Computed by / Date I. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date II. Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date		D.				
A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), and C (16 or more specks) (Inot applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date		c.				
C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date			A (0 to 8 specks),			
(.not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date		d.	Scanning Direction of the Tapered Gage			
Tested by / Date Computed by / Date Computed by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date				Trial 1	Trial 2	AVERAGE
A. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date		e.	Fineness of Grind, Hegman reading			
a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tested by / Date Computed by / Date			Tested by / Date		Compute	ed by / Date
II. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date III. Levelling (ASTM D4062): Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min	Ί.	a.	Time Elapsed when the edges of the first of become visible (wet edge time), min. Time Elapsed when the X-marks			
a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062): Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062): Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min	II.	Drying	Time (ASTM D1640)			
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min		a.	Set-to-Touch, minutes			
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min						
Levelling (ASTM D4062): Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min		c.	Dry Hard, minutes			
Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	III.	<u>Levelli</u>	ing (ASTM D4062):			
Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		Leve	elling of Test Paint (from 0 to 10)			
CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	<.	Contra	st Ratio (PNS ISO 6504)			
Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		CONT	RAST RATIO, %, min 75 µm, 24 hours dry			
SPECULAR GLOSS 60 ⁰ , 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
		<u>Specul</u>	lar Gloss (PNS ISO 2813)			
Tested by / Date Computed by / Date		SPECU	JLAR GLOSS 60º, 75 μm, 24 hours dry, GU r	min		
			Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF FLATWALL ENAMEL PAINT

Lab. N	No.:	Sample Identific	cation:	Color:
XI.	Adhaa	ion by Tano Tost (ASTM D2250)		
VI .	<u>Aunes</u> a.	ion by Tape Test (ASTM D3359) Test Method Used		
	b.	Substrate Employed		
	C.	Type of Coating		
	d.			
	e.	Number of Tests		
	٠.	Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitive	e Tape	
	q.	Specific Product Name of the Tape Used		
	3	Manufacturer		
		Lot Number		
	h.			
	•••	Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	stina	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
XII.	Volati	lo Organia Compounda (ASTM D2060)		
XII.		le Organic Compounds (ASTM D3960)		
	a.	,		
	b.	Weight of Water, %		
	C.	Weight of Exempt Volatile Compound, %		
	d.	,		
	e. f.			
	1.	Density of Exempt Volatile Compound at 25	5°C, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = (a-b-c)(d)		
		$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(a)}$	$\overline{f/f}$	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIII.	<u>Lead (</u>	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :		
	CHCHI	car restrict by	(Chen	nist / PRC Lic. No.)
			•	
	Check	ed and Reviewed by / Date :	(1)	
			(Head of Mai	terials Testing Section/Unit)

WORKSHEET FOR TESTING OF EPOXY ENAMEL PAINT

D '111 1 (ACTIA DOCCO)		
Pencil Hardness (ASTM D3363) a. Gouge Hardness		
b. Scratch Hardness		
c. Manufacturer of the Pencil Used		
d. Lot or Batch Number of the Pencil U	 Used	
e. Grade of the Pencil Used		
Tested by / Date		Computed by / Date
Adhesion by Tape Test (ASTM D3359)		
a. Test Method Used		
b. Substrate Employed		
c. Type of Coatingd. Method of Cure		
e. Number of Tests		
Mean		
Range		
f. Adhesion Strength of the Pressure-	 Sensitive Tane	
g. Specific Product Name of the Tape		
Manufacturer		
Lot Number		
h. Estimate of the Interface at which t	the	
Coating Failure Occurred		
i. Immersion Conditions		
Time between Immersion		-
Method of Sample Prepara	ation	
Tested by / Date		Computed by / Date
Impact Resistance (ASTM D2794) IMPACT RESISTANCE, J (mm-kg)		
Tested by / Date		Computed by / Date
Flexibility (ASTM D522)		
FLEXIBILITY, conical mandrel, 150	μm <u> </u>	
Tested by / Date	<u></u>	Computed by / Date
Volatile Organic Compounds (ASTM D3	960)	
a. Weight of Total Volatiles, %		
b. Weight of Water, %		
 c. Weight of Exempt Volatile Compound 	nd, %	
d. Density of Coating at 25°C, g/L		
 e. Density of Water at 25°C, g/L f. Density of Exempt Volatile Compou 	 Ind at 25 ⁰ C, g/L	
VOLATILE ORGANIC COMPOUND		
VOC = $\frac{(a-b-c)(a-b-c)(a-b-c)}{100\%-(b)(a/e)}$	$\frac{f}{f(c)(d/f)}$	
Tested by / Date		Computed by / Date
(Chemist/Chem. Tech. / PRC Lid		
Lead Content (ASTM E1613 / ASTM F28	<u>853)</u>	
LEAD CONTENT, mg/kg		
Tested by / Date		Computed by / Date
(Chemist/Chem. Tech. / PRC Lie	c. No.)	
(Chemisty Chemi Teem) The En		
Chemical Test/s Certified by	:	
•	:(Chemist ,	/ PRC Lic. No.)

WORKSHEET FOR TESTING OF ALKYD-BASED SEMI-GLOSS ENAMEL PAINT

Lab. N	lo.: Sample Iden	tification:		Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g	Trial 1	Trial 2	Trial 3
e.	Total Solids (by weight), $\% = \underline{\underline{d}} \times 100$			
	Total Solids _{average} , %			
	Tested by / Date		Computed	by / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see standard Table) f. Volume of density cup, mL f = _C_ e	Trial 1	Computed Trial 2	by / Date Trial 3
		AVERAG	GE _{vol. of density cup} , mL	:
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3
		A	VERAGE _{density} , kg/L	:
	Tested by / Date		Computed	by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED SEMI-GLOSS ENAMEL PAINT

Lab. N	No.:	Sample Identifi	cation:		Color:
IV.		cosity (ASTM D562)			
	a. b.	Temperature of the sample, °C Viscosity, KU			
		Tested by / Date		Comput	ed by / Date
V.		ess of Grind (ASTM D1210)			
		Tapered Gage used			· · · · · · · · · · · · · · · · · · ·
	b.	Cleanliness (texture) method (not applicable for Two Parallel Paths)			
	C.	Cleanliness (texture) rating,			
	0.	A (0 to 8 specks),			
		B (9 to 15 specks), and			
		C (16 or more specks)			
	له ا	(not applicable for Two Parallel Paths)			
	a.	Scanning Direction of the Tapered Gage Tapered Gage			
			Trial 1	Trial 2	AVERAGE
	e.	Fineness of Grind, Hegman reading			
		Tested by / Date		Comput	ed by / Date
VI.	Wet Ed	dge Time (ASTM D7488)			
	a.				
	b.	become visible (wet edge time), min. Time Elapsed when the X-marks			
	ь.	become visible, min.			
		Tested by / Date		Comput	ed by / Date
					·
VII.		Time (ASTM D1640)			
	а. b.	Set-to-Touch, minutes Recoat Time, minutes			
	C.	Dry Hard, minutes			
	-				
		Tested by / Date		Comput	ed by / Date
VIII.	Levelli	ng (ASTM D4062):			
	Leve	elling of Test Paint (from 0 to 10)			
		Tested by / Date		Comput	ed by / Date
IX.	Contra	st Ratio (PNS ISO 6504)			
	CONT	RAST RATIO, %, min 75 µm, 24 hours dry			
		Tested by / Date		Comput	ed by / Date
Х.	<u>Specul</u>	lar Gloss (PNS ISO 2813)			
	SPECL	JLAR GLOSS 60°, 75 μm, 24 hours dry, GU r	nin		
		Tested by / Date		Comput	ed by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED SEMI-GLOSS ENAMEL PAINT

Lab. N	No.:	Sample Identific	cation:	Color:
V T	- داله ۵	ion by Tone Tost (ACTM POOFO)		
XI.		Sion by Tape Test (ASTM D3359)		
	a.			
	b.	Substrate Employed		
	C.	Type of Coating		
	d.			
	e.			
		Mean		
	,	Range	. T	
	f.	Adhesion Strength of the Pressure-Sensitiv		
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
		Lot Number		
	h.			
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		T . II . / D .		6
		Tested by / Date		Computed by / Date
XII.	Volati	le Organic Compounds (ASTM D3960)		
\11 .	a.	Weight of Total Volatiles, %		
				
	b.	Weight of Water, %		
	C.	Weight of Exempt Volatile Compound, %		
	d.			
	e.	Density of Water at 25°C, g/L		
	f.	Density of Exempt Volatile Compound at 2	5°C, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = (a-b-c)(d)		
		$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	$\overline{d/f}$	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIII.	Lead (Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
		(**************************************		
	Chemi	ical Test/s Certified by :		
		· · · · · · · · · · · · · · · · · · ·	(Chei	mist / PRC Lic. No.)
	Check	ed and Reviewed by / Date :		
	2.10010		(Head of Ma	terials Testing Section/Unit)
			(Ticaa of Ma	co.ia.s resuing section, orner

WORKSHEET FOR TESTING OF ALKYD-BASED GLOSS ENAMEL PAINT

Lab. N	lo.: Sample Ider	ntification:		Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$	Trial 1	Trial 2	Trial 3
	Total Solids _{average} , %			
	Tested by / Date		Computed I	by / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Standard Table) f. Volume of density cup, mL f =C	Trial 1	Computed I	by / Date Trial 3
	e AVERAGE _{vol. of density cup} , mL:			
		Trial 1	Trial 2	Trial 3
	 g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h/f 	THUI I	111012	THUI J
		ı	AVERAGE _{density} , kg/L	
	Tested by / Date		Computed I	by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED GLOSS ENAMEL PAINT

Lab. No.:		Sample Identif	Color:		
IV.		ity (ASTM D562)			
		Temperature of the sample, °C Viscosity, KU			
		Tested by / Date		Comput	ed by / Date
٧.	Finene	ess of Grind (ASTM D1210)			
	a.	Tapered Gage used			
	b.	Cleanliness (texture) method (not applicable for Two Parallel Paths)			
	c.	Cleanliness (texture) rating,			
		A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks)			
	d.	(<i>not applicable</i> for Two Parallel Paths) Scanning Direction of the Tapered Gage Tapered Gage			
			Trial 1	Trial 2	AVERAGE
	e.	Fineness of Grind, Hegman reading			
		Tested by / Date		Comput	ed by / Date
VI.	Wet Ed	dge Time (ASTM D7488)			
	a.		coat		
	b.	become visible (wet edge time), min. Time Elapsed when the X-marks			
		become visible, min.			· · · · · · · · · · · · · · · · · · ·
		Tested by / Date		Comput	ed by / Date
VII.	Drying	Time (ASTM D1640)			·
	_	Sat to Tauch minutes			
	a. b.	Set-to-Touch, minutes Recoat Time, minutes			
		Tested by / Date		Comput	ed by / Date
VIII.	Levelli	ng (ASTM D4062)			
		elling of Test Paint (from 0 to 10)			
		Tested by / Date		Comput	ed by / Date
IX.	Contra	est Ratio (PNS ISO 6504)			
		RAST RATIO, %, min 75 µm, 24 hours dry			
	COITI				and hor / Data
		Tested by / Date			ed by / Date
X.	Specul	ar Gloss (PNS ISO 2813)			
	SPECU	JLAR GLOSS 60° , 75 μ m, 24 hours dry, GU r	min		
		Tested by / Date		Comput	ed by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED GLOSS ENAMEL PAINT

Lab. N	No.:	Sample Identific	cation:	Color:
XI.	Wet A	brasion (ASTM D2486)		
	a.			
	b.	Reference Paint used		
	c.	-,		
	d.	Cycles for Reference Paint		
		WET ABRASION, cycles, min. 7 da	ys dry	
		Tested by / Date		Computed by / Date
KII.	Adhes	ion by Tape Test (ASTM D3359)		
	a.	_ []		
	b.	Substrate Employed		
	c.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
		Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitive	e Tape	
	g.	Specific Product Name of the Tape Used		
	3	Manufacturer		
		Lot Number		
	h.			
	•••	Coating Failure Occurred		
	i.	Immersion Conditions		
	••	Time between Immersion and Tes	stina	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
KIII.	<u>Volatil</u>	le Organic Compounds (ASTM D3960)		
	a.	,		
	b.	Weight of Water, %		
	c.	Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e.	Density of Water at 25°C, g/L		
	f.	Density of Exempt Volatile Compound at 25	5ºC, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	1/f)	
			1//)	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIV.	l oad C	Content (ASTM E1613 / ASTM F2853)		
VIV.	<u>Leau C</u>	•		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :		
		,	(Chem	nist / PRC Lic. No.)
	Chock	ad and Paviawad by / Data		
	CHECK	ed and Reviewed by / Date :	(Head of Ma	terials Testing Section/Unit)
			u icau di i'la	COLIGIS I COULTY SCUULDITY OF THE

WORKSHEET FOR TESTING OF ALKYD-BASED FLAT-WALL ENAMEL PAINT

Lab. N	o.: Sample Identification:			Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$	Trial 1	Trial 2	Trial 3
	Total Solids _{average} , % Tested by / Date		Computed b	y / Date
п.	Storage Stability (ASTM D1849)	Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date		Computed b	y / Date
III.	Density (ASTM D1475)	Trial 1	Trial 2	Trial 3
	 a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Table 1) f. Volume of density cup, mL f = _C 	IIIGI I	THOI Z	ina 3
	,	AVERA	GE _{vol. of density cup} , mL:	
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3
	Tested by / Date		Computed b	y / Date

WORKSHEET FOR TESTING OF ALKYD-BASED FLATWALL ENAMEL PAINT

a. Temperature of the sample, "C b. Viscosity, KU Tested by / Date Computed by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date I. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date	₋ab. N	No.:	Sample Identifi	cation:		Color:
a. Temperature of the sample, °C b. Viscosity, KU Tested by / Date Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tomputed by / Date Computed by / Date Tomputed by / Date Computed by / Date Levelling (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date	٧.	<u>Visc</u> osi	iscosity (ASTM D562)			
Fineness of Grind (ASTM D1210) a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanlines (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date I. Drving Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date II. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date	-	a.	Temperature of the sample, °C			
a. Tapered Gage used b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Trial 1 Trial 2 AVERAGE Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Tested by / Date Computed by / Date			Tested by / Date		Compute	ed by / Date
b. Cleanliness (texture) method (not applicable for Two Parallel Paths) c. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage Tapered Gage Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date I. Drving Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date II. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date						
c. Cleanliness (cexture) rating, A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date I. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date II. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min						
C. Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), Cot applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible (wet edge time), min. Tested by / Date Computed by / Date Computed by / Date I. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date II. Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date		D.				
A (0 to 8 specks), B (9 to 15 specks), B (9 to 15 specks), and C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date		c.				
C (16 or more specks) (not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date						
(not applicable for Two Parallel Paths) d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Levelling (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date						
d. Scanning Direction of the Tapered Gage Tapered Gage e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date						
e. Fineness of Grind, Hegman reading Tested by / Date Computed by / Date Levelling (ASTM D1640) Tested by / Date Computed by / Date		d.	Scanning Direction of the Tapered Gage			
Tested by / Date Computed by / Date Computed by / Date Computed by / Date Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Tested by / Date Computed by / Date				Trial 1	Trial 2	AVERAGE
A. Wet Edge Time (ASTM D7488) a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date		e.	Fineness of Grind, Hegman reading			
a. Time Elapsed when the edges of the first coat become visible (wet edge time), min. b. Time Elapsed when the X-marks become visible, min. Tested by / Date Computed by / Date Tested by / Date Computed by / Date Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date			Tested by / Date		Compute	ed by / Date
II. Drying Time (ASTM D1640) a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date III. Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min	I.	a.	Time Elapsed when the edges of the first of become visible (wet edge time), min. Time Elapsed when the X-marks			
a. Set-to-Touch, minutes b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
b. Recoat Time, minutes c. Dry Hard, minutes Tested by / Date Computed by / Date Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Computed by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min	II.	Drying	Time (ASTM D1640)			
Computed by / Date Tested by / Date Computed by / Date						
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min						
Levelling (ASTM D4062) Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min		С.	Dry Hard, Hillutes			
Levelling of Test Paint (from 0 to 10) Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 µm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min SPECULAR GLOSS 60°, 75 µm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	III.	<u>Levelli</u>	ng (ASTM D4062)			
Contrast Ratio (PNS ISO 6504) CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min		Leve	elling of Test Paint (from 0 to 10)			
CONTRAST RATIO, %, min 75 μm, 24 hours dry Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
Tested by / Date Computed by / Date Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min	⟨.	Contra	est Ratio (PNS ISO 6504)			
Specular Gloss (PNS ISO 2813) SPECULAR GLOSS 60 ⁰ , 75 μm, 24 hours dry, GU min		CONT	RAST RATIO, %, min 75 µm, 24 hours dry			
SPECULAR GLOSS 60°, 75 μm, 24 hours dry, GU min			Tested by / Date		Compute	ed by / Date
	ı	<u>Specul</u>	lar Gloss (PNS ISO 2813)			
Tested by / Date Computed by / Date		SPECU	JLAR GLOSS 60°, 75 μm, 24 hours dry, GU r	min		
			Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED FLATWALL ENAMEL PAINT

Lab. I	No.:	Sample Identific	cation:	Color:
VT	8 alls a a	ion by Tone Tost (ACTM D2250)		
XI.		ion by Tape Test (ASTM D3359) Test Method Used		
	a. b.	Substrate Employed		
	C.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
	٠.	Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitiv	e Tape	
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
		Lot Number		
	h.	Estimate of the Interface at which the		
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
XII.	<u>Volatil</u>	le Organic Compounds (ASTM D3960)		
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
	c.	Weight of Exempt Volatile Compound, %		
	d.	Density of Coating at 25°C, g/L		
	e.	Density of Water at 25°C, g/L	TOC -/I	
	f.	Density of Exempt Volatile Compound at 25	5°C, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = $\frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	d/f)	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XIII.	Lead C	Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :	(Chan	nist / PRC Lic. No.)
			(CHEII	IISC / FING LIC. INO.)
	Checke	ed and Reviewed by / Date :		
			(Head of Mat	terials Testing Section/Unit)
			,	<u> </u>

WORKSHEET FOR TESTING OF ALKYD-BASED METAL PRIMER

Lab. N	lo.: Sample Iden	tification:		Color:
I.	Total Solids by Weight (PNS ISO 3251)			
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$ Total Solids _{average} , %	Trial 1	Trial 2	Trial 3
	Tested by / Date		Computed b	y / Date
II.	Storage Stability (ASTM D1849)			
		Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date	Trial 1	Computed b	y / Date Trial 3
	е	AVFRA	GE _{vol. of density cup} , mL:	
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3
		ı	AVERAGE _{density} , kg/L:	
	Tested by / Date		Computed b	y / Date

WORKSHEET FOR TESTING OF ALKYD-BASED METAL PRIMER

Lab. I	No.:	Sample Identification:			Color:
IV.	Viscos	ity (ASTM D562)			
	a. b.	Temperature of the sample, °C Viscosity, KU			
		Tested by / Date		Compute	ed by / Date
V.	Finene	ess of Grind (ASTM D1210)			
	a.	Tapered Gage used Cleanliness (texture) method			
		(not applicable for Two Parallel Paths)			
	C.	Cleanliness (texture) rating, A (0 to 8 specks), B (9 to 15 specks), and			
	d.	C (16 or more specks) (not applicable for Two Parallel Paths) Scanning Direction of the Tapered Gage Tapered Gage			
	e.	Fineness of Grind, Hegman reading	Trial 1	Trial 2	AVERAGE
		Tested by / Date		Compute	ed by / Date
VI.	Drving	Time (ASTM D1640)		-	
	a.	Set-to-Touch, minutes			
	b. c.	Recoat Time, minutes Dry Hard, minutes			
		Tested by / Date		Compute	ed by / Date
VII.	Contra	est Ratio (PNS ISO 6504)			
	CONT	RAST RATIO, %, min 75 µm, 24 hours dry			
		Tested by / Date		Compute	ed by / Date
VIII.	<u>Specul</u>	ar Gloss (PNS ISO 2813)			
	SPECU	JLAR GLOSS 60°, 75 μm, 24 hours dry, GU n	nin		
		Tested by / Date		Compute	ed by / Date

WORKSHEET FOR TESTING OF ALKYD-BASED METAL PRIMER

Lab.	No.:	Sample Identific	cation:	Color:
TV	- عماله ۵	ion by Tono Tost (ACTM D22F0)		
IX.	<u>Adnes</u>	ion by Tape Test (ASTM D3359) Test Method Used		
	a. b.	Substrate Employed		
	C.	Type of Coating		
	d.	Method of Cure		
	e.	Number of Tests		
	-	Mean		
		Range		
	f.	Adhesion Strength of the Pressure-Sensitiv	re Tape	
	g.	Specific Product Name of the Tape Used		
		Manufacturer		
		Lot Number		
	h.	Estimate of the Interface at which the		
		Coating Failure Occurred		
	i.	Immersion Conditions		
		Time between Immersion and Tes	sting	
		Method of Sample Preparation		
		Tested by / Date		Computed by / Date
				
X.	Volati	le Organic Compounds (ASTM D3960)		
	a.	Weight of Total Volatiles, %		
	b.	Weight of Water, %		
	c.	Weight of Exempt Volatile Compound, %		
	d.			
	e.	Density of Water at 25°C, g/L		
	f.	Density of Exempt Volatile Compound at 2	5ºC, g/L	
		VOLATILE ORGANIC COMPOUND (VOC)		
		VOC = (a-b-c)(d)		
		$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	$\frac{1}{f}$	
		(-)(-)	, , ,	
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
XI.	Lead (Content (ASTM E1613 / ASTM F2853)		
		LEAD CONTENT, mg/kg		
		Tested by / Date		Computed by / Date
		(Chemist/Chem. Tech. / PRC Lic. No.)		
	Chemi	cal Test/s Certified by :		
		· · · · · · · · · · · · · · · · · · ·	(Cho	emist / PRC Lic. No.)
	Chack	ed and Reviewed by / Date :		
	CHECK	ed and Neviewed by / Date :	(Head of M	laterials Testing Section/Unit)
			(Head of M	accided resulty Section/Offic)

WORKSHEET FOR TESTING OF EPOXY METAL PRIMER

Lab. N	lo.: Sample Iden	ntification:		Color:		
I.	Total Solids by Weight (PNS ISO 3251)					
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$	Trial 1	Trial 2	Trial 3		
	Total Solids _{average} , %					
	Tested by / Date		Computed I	py / Date		
II.	Storage Stability (ASTM D1849)					
		Trial 1	Trial 2	Trial 3		
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date	Trial 1	Computed I	by / Date Trial 3		
		e AVERAGE _{vol. of density cup} , mL:				
		Trial 1	Trial 2	Trial 3		
	 g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h/f 					
	·	,	AVERAGE _{density} , kg/L	:		
	Tested by / Date		Computed I	py / Date		

WORKSHEET FOR TESTING OF EPOXY METAL PRIMER

lo.:	Sample Identific	cation:	Color: _
	sity Using a Stormer-Type Viscometer (A	STM D562)	
	Temperature of the sample, °C Viscosity, KU		
	Tested by / Date		Computed by / Date
	sity by Ford Viscosity Cup (ASTM D1200)	 !	
	Temperature of the sample, °C		
b.	Efflux Time with the Cup Orifice, seconds		<u></u>
	Tested by / Date		Computed by / Date
Finen	ess of Grind (ASTM D1210)		
a.			
b.	Cleanliness (texture) method		
	(not applicable for Two Parallel Paths)		
c.			
	A (0 to 8 specks),		
	B (9 to 15 specks), and		
	C (16 or more specks)		
	(<i>not applicable</i> for Two Parallel Paths)		
d.	Scanning Direction of the Tapered Gage		
	Tapered Gage		
		Trial 1	Trial 2 AVERAGE
e.	Fineness of Grind, Hegman reading		Tildi Z AVENAGE
	Tested by / Date		Computed by / Date
	ile Organic Compounds (ASTM D3960)		
	Weight of Notar 9/		
	Weight of Water, %		
	Weight of Exempt Volatile Compound, %		
d.			
e.		·0C ~/I	
г.	Density of Exempt Volatile Compound at 25	5°C, g/L	·
	VOLATILE ORGANIC COMPOUND (VOC)		
	$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	<u>//f)</u>	
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic. No.)		
<u>Lead</u>	Content (ASTM E1613 / ASTM F2853)		
	LEAD CONTENT, mg/kg		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic. No.)		
Chem	ical Test/s Certified by :		
		(0	Chemist / PRC Lic. No.)
CI .			
Check	xed and Reviewed by / Date :		
		(Head of	f Materials Testing Section/Uni

WORKSHEET FOR TESTING OF WATER-BASED GLOSS ROOF PAINT

Lab. N	lo.: Sample Iden	tification:		Color:	
I.	Total Solids by Weight (PNS ISO 3251)				
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \underline{d} \times 100$ Total Solids _{average} , $\%$	Trial 1	Trial 2	Trial 3	
	Tested by / Date		Computed b	y / Date	
II.	Storage Stability (ASTM D1849)				
		Trial 1	Trial 2	Trial 3	
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date Density (ASTM D1475) a. Mass of density cup, g b. Mass of density cup + water, g c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Table 1) f. Volume of density cup, mL f =C	Trial 1	Computed b	y / Date Trial 3	
	e	Δ\/FRΔ	GE . c ml·		
	AVERAGE _{vol. of density cup} , mL:				
	g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L $i = \frac{h}{f}$	Trial 1	Trial 2	Trial 3	
		ı	VERAGE _{density} , kg/L:		
	Tested by / Date		Computed b	y / Date	

WORKSHEET FOR TESTING OF WATER-BASED GLOSS ROOF PAINT

Lab. No.:		Sample Identification:			Color:	
V.	Viscosi	ity (ASTM D562)				
	a.	Temperature of the sample, °C Viscosity, KU				
		Tested by / Date		Compute	ed by / Date	
•		ss of Grind (ASTM D1210)				
		Tapered Gage used Cleanliness (texture) method				
		(not applicable for Two Parallel Paths)				
	c.	Cleanliness (texture) rating,				
		A (0 to 8 specks), B (9 to 15 specks), and C (16 or more specks)				
	d.	(not applicable for Two Parallel Paths) Scanning Direction of the Tapered Gage Tapered Gage				
			Trial 1	Trial 2	AVERAGE	
	e.	Fineness of Grind, Hegman reading				
		Tested by / Date		Compute	ed by / Date	
	W-+ F-	Les Time (ACTM D7400)				
		Ige Time (ASTM D7488) Time Elapsed when the edges of the first of	oat			
	۵.	become visible (wet edge time), min.				
	b.	Time Elapsed when the X-marks				
		become visible, min.				
		Tested by / Date		Compute	ed by / Date	
I.	Drving	Time (ASTM D1640)				
		Set-to-Touch, minutes				
	b.	Recoat Time, minutes				
		Tested by / Date		Compute	ed by / Date	
II.	<u>Contra</u>	st Ratio (PNS ISO 6504)				
	CONT	RAST RATIO, %, min 75 µm, 24 hours dry				
		Tested by / Date		Compute	ed by / Date	
	<u>Specul</u>	ar Gloss (PNS ISO 2813)				
.	SPECL	JLAR GLOSS 60°, 75 µm, 24 hours dry, GU m	nin			

WORKSHEET FOR TESTING OF WATER-BASED GLOSS ROOF PAINT

ab. No.: _	Sample Identifi	cation:	Color:
. Wet /	Abrasion (ASTM D2486)		
a			
b			
C	-,		
d	. Cycles for Reference Paint		
	WET ABRASION, cycles, min. 7 da	ays dry	
	Tested by / Date		Computed by / Date
. <u>Adhe</u>	sion by Tape Test (ASTM D3359)		
a			
b	1 /		
C	,, <u> </u>		
d			
е			
	Mean		
	Range		
f.	· · · · · · · · · · · · · · · · · · ·		
g	·		
	Manufacturer		
	Lot Number		
h			
_	Coating Failure Occurred		
i.			
	Time between Immersion and Te Method of Sample Preparation	sting 	
	Tested by / Date		Computed by / Date
	"In Operating Comments (ACTM D20C0)		
	ile Organic Compounds (ASTM D3960)		
a	,		
b	3		
c. d			
			
e f.			
		3 C, g/L	
	VOLATILE ORGANIC COMPOUND (VOC)		
	$VOC = \frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	d/f)	
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic. No.)		
II. <u>Lead</u>	Content (ASTM E1613 / ASTM F2853)		
	LEAD CONTENT, mg/kg		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic. No.)		
Chow	nical Test/s Certified by :		
CHEII	ilical resurs certified by	(Che	mist / PRC Lic. No.)
Check	ked and Reviewed by / Date :		
		(Head of Mat	terials Testing Section/Unit)

WORKSHEET FOR TESTING OF ELASTOMERIC WALL COATING

Lab. N	lo.: Sample Iden	tification:		Color:
I.	Total Solids by Weight (PNS ISO 3251)	Trial 1	Trial 2	Trial 3
a. b. c. d. e.	Mass of dish, g Mass of sample, g Mass of dish + sample (after heating), g Mass of sample (after heating), g Total Solids (by weight), $\% = \frac{d}{b} \times 100$			
	Total Solids _{average} , %			
	Tested by / Date		Computed	by / Date
II.	Storage Stability (ASTM D1849)	Trial 1	Trial 2	Trial 3
a. b. c. d. e. f. g. h. i. j. k. l.	Start of storage date Sample weight at start of storage End of storage date Sample weight at end of storage Temperature of storage Skinning Pressure Corrosion of the container Odor of spoilage Rigidity of the lower layer (ASTM D 869) Consistency (ASTM D 562) Grains, lumps, or streaks in the brushed film Tested by / Date		Computed	by / Date
		Trial 1	Trial 2	Trial 3
	a. Mass of density cup, g	TITOL I	THAT E	Trial 5
	b. Mass of density cup + water, g			
	 c. Mass of water, g d. Temperature of water, °C e. Absolute Density of Water at specified temperature (see Table 1) f. Volume of density cup, mL f = _c_ e 			
		AVERA	GE _{vol. of density cup} , ml	_:
		Trial 1	Trial 2	Trial 3
	 g. Mass of density cup filled with sample, g h. Mass of sample, g i. Density, g/mL or kg/L i = h 	mai 1	THGI Z	THAI 3
	. <u></u> f		VERAGE _{density} , kg/l	.:
	Tested by / Date		Computed	

WORKSHEET FOR TESTING OF ELASTOMERIC WALL COATING

Lab. No.: _		Sample Identification:			Color:	
٧.	<u>Viscos</u>	ity (ASTM D562)				
	a. b.	Temperature of the sample, °C Viscosity, KU				
		Tested by / Date		Comput	ed by / Date	
•	<u>Finene</u>	ess of Grind (ASTM D1210)				
	a.	Tapered Gage used				
	b.	Cleanliness (texture) method				
	c.	(<i>not applicable</i> for Two Parallel Paths) Cleanliness (texture) rating,				
	C.	A (0 to 8 specks),				
		B (9 to 15 specks), and				
		C (16 or more specks)				
	٨	(not applicable for Two Parallel Paths)				
	u.	Scanning Direction of the Tapered Gage Tapered Gage				
			Trial 1	Trial 2	AV/ED ACE	
	e.	Fineness of Grind, Hegman reading	Trial 1	Trial 2	AVERAGE	
		Tested by / Date		Comput	ed by / Date	
I.	Wet Ed	dge Time (ASTM D7488)				
	a.	Time Elapsed when the edges of the first co	oat			
		become visible (wet edge time), min.				
	b.	Time Elapsed when the X-marks				
		become visible, min.				
		Tested by / Date		Comput	ed by / Date	
II.	<u>Drying</u>	Time (ASTM D1640)				
	a.	Set-to-Touch, minutes				
	b.	Recoat Time, minutes				
		Tested by / Date		Comput	ed by / Date	
III.	<u>Volatil</u>	e Organic Compounds (ASTM D3960)				
	a.	Weight of Total Volatiles, %				
	b.	Weight of Water, %				
	c.	Weight of Exempt Volatile Compound, %				
	d.	, , , , , , , , , , , , , , , , , , , ,				
	e. f.	Density of Water at 25°C, g/L Density of Exempt Volatile Compound at 25	i ⁰ C. a/l			
	••					
		VOLATILE ORGANIC COMPOUND (VOC)				
		VOC = $\frac{(a-b-c)(d)}{100\% - (b)(d/e) - (c)(d)}$	<u>'/f)</u>			
		Tested by / Date		Comput	ed by / Date	
		(Chemist/Chem. Tech. / PRC Lic. No.)				

WORKSHEET FOR TESTING OF ELASTOMERIC WALL COATING

Lab.	No.: Sampl	e Identif	fication:	Color:
IX.	Lead Content (ASTM E1613 / ASTM	F2853)		
	LEAD CONTENT, n	ng/kg		
	Tested by / Date			Computed by / Date
	(Chemist/Chem. Tech. / PRC Li	c. No.)		
	Chemical Test/s Certified by	:	(2)	
			(Chei	mist / PRC Lic. No.)
	Checked and Reviewed by / Date	: _		
			(Head of Ma	aterials Testing Section/Unit)

Lab. No. Sample Identificati Type	:ion :				
1. Condition in	Container		-	·	
2. Specific Grav	vity			Total 4	Trial 2
b. apparent ma completely ir c. apparent ma (if used) and	ass of specimen, without with ass of specimen (and sinked mersed and the wire partially immersed sinked of partially immersed wire associated associated associated wire associated with associated wire associated wire associated wire associated with a sociated with a soc	r, if used) Illy immersed in liq ker 2, g		Trial 1 =	
Specific Grav	vity, 23°C = ———— (<i>a -</i>	<i>b</i>)	=	AVE:	
	Tested by / Date			Computed by / Date	
3. Drying Time a. Start, tir b. No pick- Drying Time				Computed by / Date	
4. Softening Po	oint, ºC	•	-		
	Tested by / Date		AVE: _	Computed by / Date	
Dish a. Mas b. Mas c. Mas d. Mas e. Mas	lid (Ash), % (Pigment + a ID s of empty dish, g s of sample, g s of dish + sample, g s of dish + ash, g s of ash, g Solids (Ash) =e x b			AVE: Computed by / Date	
6. Binder, % (1	.00 - % Ash)				
	Tested by / Date		-	Computed by / Date	

Lab. Samı Type	ple Identification	:			
7.		c, % xtenders = % Ash – (% ⁻ xtenders = % Ash – (% F			
		Tested by / Date		Computed by / Da	te
8.		Daylight Reflectance) at 45° - 0°		AVE:	
		Tested by / Date		Computed by / Da	te
9.	Cracking Resist	tance @ Low Temp.			
		Tested by / Date		Computed by / Da	te
10.	Impact Resista	nce, mm•kg or J			
		Tested by / Date		Computed by / Da	ite
11.		orce (N) kture Surface Area on sar igth, MPa = <u>a</u> <u>b</u>	mple, (mm²)	Computed by / De	uto.
		Tested by / Date		Computed by / Da	
12.	c. Flowability,	n, g n + residue, g , % Residue <u>a</u> x 100	Trial 1	Trial 2	AVE:
		Tested by / Date		Computed by / Da	te

Lab. No. : Sample Identification : Type :					
a. Mass of can, g b. Mass of can + residue, g c. Flowability, % Residue $= \underbrace{b - a}_{400} \times 100$		Trial 1		Trial 2	AVE:
Tested by / Date				Computed b	py / Date
14. Yellowness Index	Trial 1		Tria	12	AVE:
Tested by / Date				Computed b	by / Date
For White: Titanium Dioxide (TiO ₂), % by wt. o a. Mass of empty crucible, g b. Mass of sample (ash), g c. Mass of crucible + ignited res d. Mass of ignited residue, g % TiO ₂ = ### ### #### #####################	sidue, g				
For Yellow: Lead Chromate (PbCrO ₄), % by wt. a. Volume of Sodium Thiosulfate b. Normality of Sodium Thiosulfa c. Mass of sample (ash), g	Solution use			Trial 1	Trial 2
$\% PbCrO_4 = \frac{a \times b \times 0.033}{c}$		x % Ash			
Tested by / Date				Computed I	oy / Date
(Chemist/Chem. Tech. / Pi	RC Lic. No.)				

No. 16 (1.180 mm) No. 20 (0.850 mm) No. 30 (0.600 mm) No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Computed by / Date	% Passing
16. Glass Beads, % a. Mass of sample (ash), g b. Mass of extracted glass beads, g % Glass Beads =b x %Ash	% Passing
a. Mass of sample (ash), g b. Mass of extracted glass beads, g % Glass Beads =b x %Ash Tested by / Date Computed by / Date 17. Grading (Glass Beads) Mass of Glass Beads, g = Sieve No. Mass Retained, g Mass Passing, g No. 16 (1.180 mm) No. 20 (0.850 mm) No. 30 (0.600 mm) No. 30 (0.600 mm) No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date 18. Glass Beads, Refractive Index Tested by / Date Computed by / Date	% Passing
b. Mass of extracted glass beads, g % Glass Beads =b x %Ash	% Passing
% Glass Beads = _b _ x %Ash	% Passing
Tested by / Date Computed by / Date 17. Grading (Glass Beads) Mass of Glass Beads, g = Sieve No.	% Passing
17. Grading (Glass Beads) Mass of Glass Beads, g = Sieve No. Mass Retained, g Mass Passing, g No. 16 (1.180 mm)	% Passing
Sieve No. Mass Retained, g Mass Passing, g No. 16 (1.180 mm)	% Passing
No. 16 (1.180 mm) No. 20 (0.850 mm) No. 30 (0.600 mm) No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	% Passing
No. 20 (0.850 mm) No. 30 (0.600 mm) No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	
No. 20 (0.850 mm) No. 30 (0.600 mm) No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	
No. 50 (0.300 mm) No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	
No. 80 (0.180 mm) No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	
No. 100 (0.150 mm) Pan Tested by / Date Computed by / Date Tested by / Date Tested by / Date Computed by / Date	
Tested by / Date Computed by / Date 18. Glass Beads, Refractive Index Tested by / Date Computed by / Date Computed by / Date	
Tested by / Date Computed by / Date 18. Glass Beads, Refractive Index Tested by / Date Computed by / Date	
18. Glass Beads, Refractive Index Tested by / Date Computed by / Date	
Tested by / Date Computed by / Date	
19. Glass Beads, Roundness	
True Spheres Irregular Spheres a. Retained on Sieve No. 50 (300-µm) b. Passed on Sieve No. 50 (300-µm) c. Total Mass, g	
% True Spheres	
= <u>C true spheres</u> C true spheres + C irregular spheres	
C tide sprieres • C Inegular sprieres	
Tested by / Date Computed by / Date	
Chemical Test/s Certified by :	
Checked and Reviewed by / Date :	

WORKSHEET FOR TESTING OF REFLECTORIZED TRAFFIC PAINT

ASTM D2205

	manda Talantification .		
Ту _І	•		
1.	SPECIFIC GRAVITY		
	a. Mass of pycnometer empty, g		
	b. Mass of pycnometer filled with water,	, g	
	c. Mass of pycnometer + half filled w/sa	imple, g	
	d. Mass of pycnometer + sample + water	er, g	<u></u>
	(c - a)	_	
	Specific Gravity =		
	(b-a) - (d-b)	- c)	
	Tested by / Date		Computed by / Date
		_	
2.	DRYING TIME		
	a. Start, time		
	b. No pick-up, time		
	Drying Time, mins. = $(b - a)$		
	Tested by / Date		Computed by / Date
_			
3.	EXTRACTION		
	a. Mass of empty container, g		
	b. Mass of container + sample, g		
	c. Mass of sample, g		
	d. Mass of container + pigment, g		
	e. Mass of pigment, g % Pigment = <u>e</u> x 100		
	% Fighterit = <u>e</u> x 100 C		
	AVEF	RAGE	
	% Vehicle = $100 - \%$ Pigment		
	Tested by / Date		Computed by / Date
		_	
4.	NON-VOLATILE MATTER (Total S	olids)	
	a. Container ID		
	b. Mass of container, empty, g		
	c. Mass of sample, g		
	d. Mass of container + sample, g		
	e. Mass of container + oven-dried residue	e, g	
	e – b		
	f. Total Solids, % = — x 100		
	C AVEF	2AGF	
	AVE	VIOL	
	Tested by / Date		Computed by / Date
		_	

WORKSHEET FOR TESTING OF REFLECTORIZED TRAFFIC PAINT

ASTM D2205

	b. No. : mple Identification : pe :				
5.	NON-VOLATILE V	YEHICLE % Total Solids –	% Pigment		
	n-Volatile Vehicle = by weight of vehicle)	% Vehi		< 100	
	Tes 	eted by / Date		Computed by	/ Date
6.		rs = % Pigment - (%	TiO ₂ + % Glass Beads) PbCrO ₄ + % Glass Bead		
	Tes	ted by / Date		Computed by	/ Date
7.	CONSISTENCY AT	Г 20°C			
	Vis	cosity, KU			
	Tes	ited by / Date		Computed by	/ Date
8.	d. Mass of ignited is $\frac{d}{d}$ % TiO ₂ = $\frac{d}{b}$ For Yellow: Lead Chromate (PbCrO ₄ a. Volume of Sodium b. Normality of Sodi c. Mass of sample (a $\frac{a \times b}{b}$)% PbCrO ₄ = $\frac{d}{d}$	y, % by wt. of Paint rucible, g (pigment), g + ignited residue, g residue, g w. X % Pigment x % Pigment x % Pigment x % Paint n Thiosulfate Solution um Thiosulfate Solution ash), g x 0.033 x 3.23	used, ml on used, N 		Trial 2
	Tes	ted by / Date	_	Computed by	/ Date
	(Chemist/Ch	em. Tech. / PRC Lic. No.	<i>.)</i>		

WORKSHEET FOR TESTING OF REFLECTORIZED TRAFFIC PAINT

ASTM D2205

Lab. No Sample Type		fication:					
€.	GLASS	BEADS:					
9/	1. 6 Beads	(by mass of paint) = —	beads, g b	 0	 		
		a. Mass of sample (pigb. Mass of extracted b	eads, g <i>b</i>				
%	6 Beads	(by mass of pigment)=	—— x % a	6 Pigment			
	Mass of	f Beads, $g/L = (% beads)$	ds x mass/	liter)		_	
		Tested by / Date				Computed by ,	/ Date
	2.	Grading:					
	No. 70 No. 80	eve Sizes (0.210 mm) (0.180 mm)) (0.063 mm)	Mass Reta	ained, g	Mass Passir	ıg, g 	% Passing
		Tested by / Date			(Computed by ,	/ Date
	3.	Refractive Index					
		Tested by / Date				Computed by ,	/ Date
	Chemic	al Test/s Certified by	:_		(Chemist /	PRC Lic. No.,)
	Checke	d and Reviewed by / Dat	:e : <u>-</u>	(He	ead of Materials	s Testing Se	ction/Unit)

WORKSHEET FOR TESTING OF GALVANIZED IRON SHEETASTM A90

San	•	: _ entification : _ le/Class : _						_ _ _
1.	Weig	ht of Coating						
	a. b.	Original weight Thickness of	· -			R	C	L
	c. d.	_	pped sheet, g stripped sheet,	AVERAGE mm	=			
	e.	Weight of Coa	ating, g/m²	AVERAGE	=			
		Weigh	t of Coating, g/ : K = 7830		$\frac{a-c}{c}$	x		
	f.	Triple spot (a	verage of <i>e</i>), g/	/m²				
	g.		pecimen with the		atina), a/m²			
	<u> </u>	Tes	sted by / Date em. Tech. / PRC Lic		,	Computed	by / Date	
2.	Base	Metal Thicknes $T = \underline{d_R}$	ss (7), mm AVE + d _{CAVE} +	<i>d</i> _{L AVE}				
		Test	red by / Date			Computed	by / Date	
3.		Weight of Shee	-	T] + 100	<u> </u>			
			red by / Date		00)	Computed	by / Date	_
	Che	emical Test/s Cer	tified by	:	(Chei	mist / PRC Lic.	No.)	
	Che	ecked and Reviev	ved by / Date	:	(Head of Mai	terials Testing S	Section/Unit)	

WORKSHEET FOR TESTING OF GALVANIZED IRON PIPE

ASTM A90

Sample Identification : Inside Diameter/Size of Pipe :					
1.	Weight of Coating			_	
a. b. c.	Original weight of specimer Weight of stripped specime Thickness of stripped speci	n, g		I	
d.	Height of stripped specime	AVERAGE n, mm	=		
e.	Outside diameter of strippe	AVERAGE ed specimen,	= mm		
f.	Inside diameter of stripped	AVERAGE specimen, m	= ım		
g.	Coated area of original spe Coated area of original spe A = Ao + Ai Ao = 3.1416 x	cimen, m ²	=		
h.	Ai = 3.1416 x Weight of Coating, g/m ² Weight of Coating, kg/m ²	f x d			
	Weight of Coating, g/m ²	= <u>a -</u> g	<u>b</u> х	1 x 10 ⁶	
	Tested by				Computed by / Date
•	(Chemist/Chem. To	ech. / PRC Lic.	No.)		
2. a.	Wall Thickness Wall Thickness, mm			I	
	,	AVERAGE	=		
	Tested by	/ Date	_		Computed by / Date
	Chemical Test/s Certified	by	:	(Chei	mist / PRC Lic. No.)
	Checked and Reviewed b	y / Date	:	(Head of Ma	terials Testing Section/Unit)

WORKSHEET FOR TESTING OF GUARD RAIL

PHYSICAL AND CHEMICAL TESTS ASTM A370, ASTM A90

Lab. No.			ASTM AS70, ASTM A30		
San	nple Identification:				
A.	PHYSICAL TEST :	ASTM A370			
1.	Thickness, mm				
2.	Width, mm				
3.	Area, mm²			 -	
4.	Yield Point, kN			 -	
5.	Tensile Load, kN				
6.	Elongation:				
	a. Final Ler	ngth, mm			
	b. Gage Le	ength, mm			
Cor	nputation:				
Yiel	d Strength, MPa	$= (4) \times 1000$) =		
		(3)	-		
Ter	nsile Strength, MPa		_ =		
		(3)			
Elo	ngation, %	$= \left[\frac{(6a) - (6b)}{(6b)} \right]$	$\frac{ 0) }{ x } \times 100 =$		
		[(6b)			
Tested by / Date :			Computed by / Date :		
			· , , ,		
Che	ecked and Reviewed	by / Date :			
			(Head of Materials Testing Section/Unit)		

WORKSHEET FOR TESTING OF GUARD RAIL

ASTM A90, ASTM A370, ASTM A856

Lab. N	lo. :			
Samp	le Identification:			
В.	CHEMICAL TEST (ASTM A90):	4.1	<i>#</i> 2	#2
a. b.	Original weight of specimen, g Thickness of specimen, mm	#1 	#2 	#3
c. d.	AVERAGE = Weight of stripped specimen, g Thickness of stripped specimen, mm			
e.	AVERAGE = Weight of Coating, g/m^2			
	Weight of Coating, $g/m^2 = \frac{a - c}{c} \times d$ where: $K = 7830$	х К		
f.	Triple spot (average of <i>e</i>), g/m ²			
g.	Single spot (specimen with the lightest coating), Tested by / Date (Chemist/Chem. Tech. / PRC Lic. No.)	_	Computed by / D	ate
	Chemical Test/s Certified by :	(Chemist /	PRC Lic. No.)	
	Checked and Reviewed by / Date :	lead of Materials	Testing Section	/Unit)

WORKSHEET FOR TESTING OF GABION & MATTRESS WIRES

PHYSICAL AND CHEMICAL TESTS ASTM A370, ASTM A90

Lab. No.			
San	nple Identification:		
A.	PHYSICAL TEST :	ASTM A370	
		Body	Selvedge
1.	Diameter, mm		
2.	Area, mm²		
3.	Yield Point, kN		
4.	Tensile Load, kN		
5.	Elongation:		
	a. Final Ler	ngth, mm	
	b. Gage Le	ngth, mm	
Cor	mputation:		
Yie	ld Strength, MPa	$= \frac{(3) \times 1000}{(2)} =$	
Tensile Strength, MPa		$= \frac{(4) \times 1000}{(2)} =$	
Elo	ngation, %	$= \left[\frac{(5a) - (5b)}{(5b)} \right] \times 100 =$	
Tes	sted by / Date :	Computed by / Date :	
Che	ecked and Reviewed	by / Date : (Head of Materials Testing Section,	/Unit)

WORKSHEET FOR TESTING OF GABION/MATTRESSASTM A90, ASTM A370

Lab	. No. :					-
San	nple Identification:					
В.	CHEMICAL TEST (AS	TM A90):				
a. b.	Original weight of wire, g Diameter of original wire,			Body		Selvedge
		AVERAGE	=			
c. d.	Weight of stripped wire, of Diameter of stripped wire					
		AVERAGE	=			
e.	Weight of Coating, g/m ²					
	COMPUTATION:					
	Weight of C	oating, g/m ²	= _	$\frac{a-c}{c}$ x d x	K	
	where:	K = 1960				
	Tested	by / Date			Cor	nputed by / Date
	(Chemist/Chem.	Tech. / PRC Lic.	No.)			
	Chemical Test/s Certifie	ed by	:	(Chemis	t / PR	C Lic. No.)
	Checked and Reviewed	by / Date	:	/Hood of Matari	ala Ta	cting Coction // Init
				(Head of Materia	ais i e	sting Section/Unit)

WORKSHEET FOR TESTING OF TIE WIRE

PHYSICAL AND CHEMICAL TESTS ASTM A370, ASTM A90M

Lab	Lab. No. :						
Sar	Sample Identification:						
A.	PHYSICAL TEST : ASTM A370						
1.	Diameter, mm						
2.	Area, mm ²						
3.	Yield Point, kN						
4.	Tensile Load, kN						
5.	Elongation:						
	a. Final Length, mm						
	b. Gage Length, mm						
Yie	imputation: Id Strength, MPa = $\frac{(3) \times 1000}{(2)}$ Insile Strength, MPa = $\frac{(4) \times 1000}{(2)}$ Insile Strength, MPa = $\frac{(5a) - (5b)}{(5b)}$	<u> </u>					
Tes	sted by / Date :	Computed by / Date :					
Ch	Checked and Reviewed by / Date : (Head of Materials Testing Section/Unit)						

WORKSHEET FOR TESTING OF TIE WIRE

ASTM A90, ASTM A370

b. No.	:		
nple Ide	entification:		
СНІ	EMICAL TEST (ASTM A90):		
a. b.	Original weight of wire, g Diameter of original wire, mm		
	AVER	AGE =	
c. d.	Weight of stripped wire, g Diameter of stripped wire, mm		
	AVER	AGE =	
e.	Weight of Coating, g/m ²		
	COMPUTATION:		
	Weight of Coating, g/m ²	= <u>a - c</u>	_ x <i>d</i> x K
	where: K = 1960		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic.	No.)	
Che	emical Test/s Certified by	:	(Chemist / PRC Lic. No.)
Che	cked and Reviewed by / Date	:(He&	ad of Materials Testing Section/Unit)

WORKSHEET FOR TESTING OF HIGH TENSILE WIRE

PHYSICAL AND CHEMICAL TESTS ASTM A370, ASTM A90

Lal	o. No.	ī	
Sample Identification		:	
A.	PHYSICAL TEST	: ASTM A370	
1.	Diameter, mm		_
2.	Area, mm²		_
3.	Yield Point, kN		_
4.	Tensile Load, kN		_
5.	Elongation:		
	a. Final Le	ngth, mm	_
	b. Gage Le	ength, mm	_
Со	mputation:		
Tensile Strength, MPa		$= \frac{(4) \times 1000}{(2)} =$	
Elongation, % = $ \frac{(5a) - (5b)}{(5b)} $		$1 \frac{1}{1 \cdot 1 \cdot 1} \cdot \frac{1}{1 \cdot$	
Te	sted by / Date :	Computed by / Date :	
Ch	ecked and Reviewed	d by / Date :(Head of Materials Testing Section/Unit)	

WORKSHEET FOR TESTING OF HIGH TENSILE WIRE

ASTM A90, ASTM A370

СНІ	EMICAL TEST (ASTM A90):		
a. b.	Original weight of wire, g Diameter of original wire, mm		
	AVER	AGE =	
c. d.	Weight of stripped wire, g Diameter of stripped wire, mm		
	AVER	AGE =	
e.	Weight of Coating, g/m ²		
	COMPUTATION:		
	Weight of Coating, g/m ²	= <u>a - c</u>	x <i>d</i> x K
	where: K = 1960		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic.	No.)	
Che	mical Test/s Certified by	:	
	,		(Chemist / PRC Lic. No.)

WORKSHEET FOR TESTING OF WIRE

ASTM A370M

Lab. No.	:	
Sample Identification	:	
 Diameter, mm Area, mm² Tensile Load, kN Elongation, mm: (a) Final (b) Gage length 		
Computation:		
Tensile Strength, MPa	$a = \frac{(3) \times 1000}{(2)}$	
Elongation, %	$= \left[\frac{(4a) - (4b)}{(4b)} \right] \times 100$	
Tested by / Date:		Computed by / Date:
Checked / Reviewed t	by:(Head of Materials	Testing Section/Unit)

WORKSHEET FOR TESTING OF WIRE

ASTM A90, ASTM A370

CHI	EMICAL TEST (ASTM A90):		
a. b.	Original weight of wire, g Diameter of original wire, mm		
	AVER	AGE =	
c. d.	Weight of stripped wire, g Diameter of stripped wire, mm		
	AVER	AGE =	
e.	Weight of Coating, g/m ²		
	COMPUTATION:		
	Weight of Coating, g/m ²	= <u>a - c</u>	_ x d x K
	where: $K = 1960$		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic.	No.)	
Che	emical Test/s Certified by	:	
			(Chemist / PRC Lic. No.)
Che	ecked and Reviewed by / Date	:	ad of Materials Testing Section/Unit

WORKSHEET FOR TESTING OF WIRE ROPE ASTM A931

Lab. No. :		
Sample Identification :		
4 5: .		
1. Diameter, mm		
2. Area, mm ²		
2. Prophing Force I/N		
3. Breaking Force, kN		
Tested by / Date:		Computed by / Date:
resteaby / Bate.		Compated by / Date.
Checked / Reviewed by:		
,	(Head of Materials T	esting Section/Unit)

WORKSHEET FOR TESTING OF WIRE ROPE

ASTM A90, ASTM A370

CHE	MICAL TEST (ASTM A90):		
a. b.	Original weight of wire, g Diameter of original wire, mm		
	AVERA	AGE =	
c. d.	Weight of stripped wire, g Diameter of stripped wire, mm		
	AVERA	AGE =	
e.	Weight of Coating, g/m²		
	COMPUTATION:		
	Weight of Coating, g/m ²	= <u>a - c</u>	_ x <i>d</i> x K
	where: K = 1960		
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC Lic.	No.)	
Cher	nical Test/s Certified by		
001		-	(Chemist / PRC Lic. No.)
Chec	cked and Reviewed by / Date	:	and of Materials Testing Section/Un

WORKSHEET FOR TESTING OF STEEL PLATE

ASTM A370M

Lab. No.	:		
Sample Identification	:		
 Thickness, mm Width, mm Area, mm² Yield Point, kN Tensile Load, kN Elongation, mm: (a) Final (b) Gage length 			
Computation:		(4) × 1000	
Yield Strength, MPa	=	$\frac{(4)\times 1000}{(3)}$	
Tensile Strength, MP	a =	$\frac{(5)\times 1000}{(3)}$	
Elongation, %	=	$\left[\frac{(6a) - (6b)}{(6b)}\right] \times 100$	
Tested by / Date:			Computed by / Date:
Checked / Reviewed	by:	(Head of Materials T	esting Section/Unit)

WORKSHEET FOR TESTING OF STEEL PLATE

ASTM A90

Lab.	No. :			
Samp	ole Identification:		· · · · · · · · · · · · · · · · · · ·	
В.	CHEMICAL TEST (ASTM A90):	#1	#2	# 2
a. b.	Original weight of plate, g Thickness of plate, mm	#1 	#2 	#3
c. d.	AVERAGE = Weight of stripped plate, g Thickness of stripped plate, mm			
e.	AVERAGE = Weight of Coating, g/m^2			
	Weight of Coating, $g/m^2 = \frac{a - c}{c} \times d$ where: $K = 7830$	x K		
f.	Triple spot (average of e), g/m ²			
g.	Single spot (specimen with the lightest coating), g	/m²		
	Tested by / Date (Chemist/Chem. Tech. / PRC Lic. No.)		Computed by / Da	te
	Chemical Test/s Certified by :	(Chemist /	PRC Lic. No.)	
	Checked and Reviewed by / Date :(He	ead of Materials	Testing Section,	(Unit)

WORKSHEET FOR TESTING OF SOIL NAIL

ASTM A370M

Lab. No. :	
Sample Identification:	
(1) Nominal Size, mm	(8) Elongation, mm (a) Final (b) Gage length (c) Difference (9) Deformation: (a) Avg. spacing, mm (b) Avg. height, mm (c) Gap, mm (10) Weight of Coating, % (Report content from Chemical Unit)
Computation:	
(a) Plain: (mm²)	
Tested by / Date:	Computed by / Date:
Checked / Reviewed by:	
	als Testing Section/Unit)

WORKSHEET FOR TESTING OF SOIL NAIL

ASTM A90

Lal	o. N	No. :					
Saı	mple	le Identification :					
В.		CHEMICAL TEST (ASTM A90):					
	a.	Original weight of specimen, g					
	b.	Weight of stripped specimen, g					
	c.	Nominal Area (from Table 1 of ASTM A615), m ²					
	d.						
		COMPUTATION:					
		Weight of Coating, $g/m^2 = \underline{a - b}$					
		Tested by / Date	Computed by / Date				
(Chemist/Chem. Tech. / PRC Lic. No.)							
		Chemical Test/s Certified by :	(Chemist / PRC Lic. No.)				
		Checked and Reviewed by / Date :(Head	d of Materials Testing Section/Unit)				

WORKSHEET FOR TESTING OF REINFORCING STEEL BARS

ASTM A370, E290

ab. No. :	
Sample Identification :	
LABORA	ATORY DATA
(1) Class: () Plain () Deformed	(9) Elongation, mm (a) Final
(2) Nominal Size, mm	
(3) Nominal Area, mm ² (Table)	
(4) Nominal Mass, kg/m (Table)	
(5) Diameter, mm (Plain)	_
(6) Length of Specimen, mm	
(7) Mass of Specimen, kg (actual)	
(8) Tensile Load at:	(11) Phosphorus Content, %
(a) Yield point, kN	_ (Report content from Chemical Unit)
(b) Maximum, kN	_ (12) Bending:
	Degrees of bend
	Pin diameter
	Bend
COMPUTATION:	
(13) Area (Table)	
(a) Plain: (mm²)	
_	
(b) Deformed: (mm ²)	
(14) Specimen Unit Mass, kg/m	
(14) Specimen Unit Mass, kg/m(7) x 1000	
(14) Specimen Unit Mass, kg/m(7) x 1000 (6)	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, %	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4)	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100 (13)	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100 (13) (17) Tensile Strength, MPa	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100 (13) (17) Tensile Strength, MPa (8b) x 1000	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100 (13) (17) Tensile Strength, MPa (8b) x 1000 (13)	
(14) Specimen Unit Mass, kg/m (7) x 1000 (6) (15) Variation in Mass, % (14) - (4) x 1000 (4) (16) Yield Point, MPa (8a) x 100 (13) (17) Tensile Strength, MPa (8b) x 1000 (13) (18) Ratio of Tensile / Yield	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (7) x 1000	
(14) Specimen Unit Mass, kg/m (7)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	
(14) Specimen Unit Mass, kg/m (6) (15) Variation in Mass, % (14) - (4)	

WORKSHEET FOR PHOSPHORUS CONTENT DETERMINATION OF STEEL BARS

ASTM E350

Standardization of Sodium Hy	droxide (NaOH	l) Solutio	n: Trial 1	Trial 2
Mass of Potassium Acid Phthalate, g		=		
Volume of NaOH Solution, mL Phosphorus Equivalent, g P/mL		=		
Phosphorus Equivalent, g P/IIIE	AVERAGE	=		
lculation:	A × 0.00134	7		
Phosphorus Equivalent, g P/mL = _	B x 0.2042	<u>/</u>		
Standardization of Nitric Acid	(HNO ₃) Solutio	n:	Trial 1	Trial 2
Volume of NaOH Solution, mL		=		111d1 Z
Phosphorus Equivalent of NaOH Solut	tion, g P/mL	=		
Volume of HNO₃ Solution, mL Phosphorus Equivalent, g P/mL		=		
, , , , , , , , , , , , , , , , , , , ,	AVERAGE	=		
alculation: Phosphorus Equivalent, g P/mL =	A x B			
I. Phosphorus Content				
Volume of NaOH Solution used for the	e sample. mL	=	Trial 1	Trial 2
Phosphorus Equivalent of the NaOH S	Solution, g P/mL	=		
Volume of HNO ₃ Solution used for the Phosphorus Equivalent of the HNO ₃ S		=		
Volume of NaOH Solution used for the	e blank, mL	=		
Volume of HNO ₃ Solution used for the Mass of the sample, g	e blank, mL	=		
Phosphorus Content, %		=		
· · · · · · · · · · · · · · · · · · ·	RAGE	=		
alculation:				
Phosphorus, $\% = (AB - CD)$	<u>- (EB – FD)</u> G	x 100		
Tested by / Date			Computed by / D	ate
(Chemist/Chem. Tech. / PRC	Lic. No.)			
Chemical Test/s Certified by	:		mist / PRC Lic. No.)	

WORKSHEET FOR PHOSPHORUS CONTENT DETERMINATION OF STEEL BARS (By Spectrometer)ASTM E415

Lab.	No. :		
Samp	ole Identification:		
A.	RESULTS, %:		
	Trial 1	=	
	Trial 2	=	
	Trial 3	=	
	AVERAGE, %	=	
В.	QUALITY CONTROL (QC):		
	QC, CRM ID	=	
	QC, CRM, Actual Value (AV), %	=	
	QC, CRM, Certified Value (CV), %	=	
	% Accuracy <u>% AV</u> x 100 % CV	=	
	Tested by / Date		Computed by / Date
	(Chemist/Chem. Tech. / PRC	Lic. No.)	
	Chemical Test/s Certified by	:	(Chemist / PRC Lic. No.)
	Checked and Reviewed by / Date	:	(Head of Materials Testing Section/Unit)

WORKSHEET FOR TESTING OF MISCELLANEOUS STEEL PRODUCTS

PHYSICAL AND CHEMICAL TESTS ASTM A370, ASTM A90

Lab	. No. :				
San	nple Identification:				
A.	PHYSICAL TEST :	ASTM A370			
1.	Thickness, mm				
2.	Width, mm				
3.	Area, mm²				
4.	Yield Point, kN				
5.	Tensile Load, kN				
6.	Elongation:				
	a. Final Len	ngth, mm			
	b. Gage Ler	ngth, mm			
Con	mputation:				
Yiel	d Strength, MPa	$= \frac{(4) \times 1000}{(3)}$		=	
Ten	nsile Strength, MPa	$= \frac{(5) \times 1000}{(3)}$		=	
Eloi	ngation, %	$= \left[\frac{(6a) - (6b)}{(6b)} \right]$	<u>)</u>] x 100	=	
Tes	eted by / Date :			Computed by / Date :	
Che	ecked and Reviewed	by / Date : _		(Hood of Materials Testins	Cortion / Init)
				(Head of Materials Testing	occion/onic)

WORKSHEET FOR TESTING OF CONCRETE MASONRY UNIT

ASTM C140

	. No. nple Identification	:					
				Specimen	#1	Specimen #2	Specimen #3
a.	Width (W), mm			•			
b.	Length (L), mm			·			
c.	Height (H), mm			·			
d.	Net Cross-Sectio	nal Area, mm²					
f.	Ultimate Load, N	I					
g.	Net Compressive	Strength, MPa					
h.	Average Net Con	npressive Strength, M	1Pa				
i.	Moisture Content	t, %					
j.	Water Absorption	n, kg/m³					
k.	Dry Density, kg/ı	m^3					
l.	Average Dry Der	nsity, kg/m³					
	Specimen	As Received	0	on Dmr		Saturated	Immorand
	Specimen	Mass (1) kg		en-Dry ss (2) kg		Saturated lass (3) kg	Immersed Mass (4) kg
	1	11000 (2) 119	- 133	<u> </u>		wee (e) iig	1 10.00 (1) 119
	2						
	3						
Con	nputation:						
00	.pacacioni			(1) - (2)			
	Moisture Conte	ent, %	=	×	100		
				(3) - (2)			
				(3) - (2)			
	Water Absorpt	tion, kg/m³	=	×	100	0	
				(3) - (4)			
				(3) - (4)			
	Net Cross-Sect	tional Area, mm²	=	X	(100	0) ²	
				(c)			
				(2)			
	Dry Density, k	g/m³	=		1000)	
				(3) - (4)			
_				_			
Teste	ed by / Date :			Compute	ed by	/ Date :	
Chec	ked and Reviewed	d by / Date :					
J. 100	and neviewee			(Head of Ma	terials	s Testing Section/l	Jnit)

WORKSHEET FOR TESTING OF REINFORCED CONCRETE CULVERT PIPE (RCCP)AASHTO T280

Lab. No. :	
Sample Identification:	
<u>Dimensions:</u>	
1. Actual Internal Diameter, mm	
2. Thickness of Wall, mm	
3. Laying Length, mm	
3a. Laying Length, m	
Strength Test:	
4. Load to Produce 0.3 mm crack, kN	
5. Ultimate load, kN	
Reinforcement:	
6. Diameter, mm	
7. Number of lines	
8. Number of Inner Hoops	
9. Number of Outer Hoops	
10. Inner Spacing, mm	
11. Outer Spacing, mm	
12. Inner Net protective covering, mm	
13. Outer Net protective covering, mm	
Absorption Test:	
14. Oven dry mass, g	
15. Wet mass, g	

WORKSHEET FOR TESTING OF REINFORCED CONCRETE CULVERT PIPE (RCCP) AASHTO T280

Computation:	
Load to produce 0.3 mm crack, N/m/mm	$= \frac{(4) \times 1000}{(3a) \times (1)}$
Ultimate load, N/m/mm	$= \frac{(5) \times 1000}{(3a) \times (1)}$
Total Area of Inner Reinforcement, mm ² /m	$= \frac{(6)^2 \times 0.7854 \times (8)}{(3a)}$
Total Area of Outer Reinforcement, mm ² /m	$= \frac{(6)^2 \times 0.7854 \times (9)}{(3a)}$
Absorption, %	$= \frac{(15) - (14)}{(14)} \times 100$
Tested by / Date :	Computed by / Date :
Checked and Reviewed by / Date :	(Head of Materials Testing Section/Unit)

WORKSHEET FOR COMPRESSIVE STRENGTH TEST OF CONCRETE CYLINDERS (MOLDED AND CORED SPECIMENS)ASTM C39, AASHTO T24

Lab. No.: Type :		□ Molded	□ Cored									
			For Molded / Cored Specimens						For Cored Specimens			
Specimen No.	Age, days	Sample ID	Diameter, mm	Cross Sectional Area (A), sq.mm	Max Load (F), kN	Compressive Strength (CS=F/A), MPa	Compressive Strength (CSx145.038), psi	Length, mm (For Core)	L/D Ratio (For Core)	Correction Factor (CF) (For Core)	Corrected Strength (CSxCF), MPa (For Core)	Corrected Strength (CSxCFx 145.038), psi (For Core)
										<u> </u>		
										<u> </u>		
										 		
Tested by		d by / Date:	- - -				Computed by	/ Date :		- - - -		
		y	(Hea	ad of Material	s Testing Section	n/Unit)	-					

WORKSHEET FOR FLEXURAL STRENGTH TEST OF CONCRETE BEAM

ASTM C78, C293

Loading Method:		☐ Third Point Loading			☐ Mid-Point Loading			
Laboratory No.	Sample Identification	Age at date of test, days	Span Length (L), mm	Width (b), mm	Depth (d), mm	Max. Load (P), kN	Flexural Strength, MPa	Flexural Strength, psi
Formulas for	Computation:							
Third Point Loading Method = $\frac{PL}{bd^2}$				Mid-Point L	₋oading Met	110u =	$\frac{PL}{2d^2}$	
Tested by / Date :				Computed	l by / Date	:		
Checked a	nd Reviewed	by / Date :		(Head of	Materials 1	Testing Sec	tion/Unit)	
				(Licau Ol	riacciiais I	coung occ	aony Onic)	

WORKSHEET FOR CONCRETE CORE THICKNESS DETERMINATION

ASTM C42, ASTM C174

-:		Thickness (t), mm									Ave. Thislesses	Compated
cimen No.	Station	1	2	3	4	5	6	7	8	9 (Center)	Avg. Thickness, mm	Corrected Thickness, mn
mputatior	: verage Thickness =	= <u>t1+t2+</u> 9	.+t9									
sted by /							Computed	by / Date	:			

WORKSHEET FOR TESTING OF WATER FOR CONCRETING

AASHTO T26

Sample Id	dentification:		
I.	APPEARANCE	=	
	COLOR	=	
	ODOR	=	
	Tested	by / Date	Computed by / Date

II. TOTAL SOLIDS

Lab. No.

Trial No.	Container ID	Mass of Sample, g	Mass of Empty Container, g	Mass of Container + Residue, g	TOTAL SOLIDS, %
1					
2					
				AVERAGE:	

Calculation:

TOTAL SOLIDS, % = (Masscontainer + residue - Masscontainer) x 100

Masssample

Tested by / Date

Computed by / Date

III. pH VALUE

Trial No.	Temperature, ⁰ C	рН
1		
2		
AVERAGE:		

Tested by / Date

Computed by / Date

(Chemist/Chem. Tech. / PRC Lic. No.)

IV. TIME OF SETTING

 Room Temp. (°C) = _____
 Room R.H. (%) = _____

 (must be 23 ± 4 °C)
 (shall not be less than 50%)

	TIME OF SETTING				
	Control	Sample			
a. Time Made					
b. Initial Set					
c. Final Set					

Tested by / Date	Computed by / Date

WORKSHEET FOR TESTING OF WATER FOR CONCRETING

AASHTO T26

ple Identification:					
. AUTOCLAVE EX	PANSION				
Poom Tomp (9C)	\ _		Doom D) L (04) _	
(<i>must be 23</i> ± 4) = °C)			k.H. (%) = ot be less than 50	
((07.0		
				AUTOCLAVE E	
		1.6. 4.1.1.		Control	Sample
		men before Autoclaving			
	· · · · · · · · · · · · · · · · · · ·	men after Autoclaving,	mm		
c. Gauge length, r Calculation:	IIIII				
Calculation.		b – a			
Autoclave Ex	pansion , % = -	x	100		
·		С			
Tested	by / Date		С	omputed by / Date	
					
(<i>must be 23</i> ± <i>4</i>) = °C)			l.H. (%) = ot be less than 50	
•					
Date Molded:	<i>℃)</i>	Trial No.		ot be less than 50	9%)
•	℃)	Trial No.			ength, MPa
Date Molded:	<i>℃)</i>	1		ot be less than 50 Compressive Stre	9%)
Date Molded:	<i>℃)</i>	1 2		ot be less than 50 Compressive Stre	ength, MPa
Date Molded:	<i>℃)</i>	1 2 3		ot be less than 50 Compressive Stre	ength, MPa
Date Molded:	<i>℃)</i>	1 2		ot be less than 50 Compressive Stre	ength, MPa
Date Molded:	<i>•C)</i> Date	1 2 3 AVERAGE:		ot be less than 50 Compressive Stre	ength, MPa
Date Molded:	<i>C</i>) Date Compr	1 2 3	(shall n	ot be less than 50 Compressive Stre	ength, MPa
Date Molded: Age in Days 7 days	Date Compr	1 2 3 AVERAGE:	(shall n	Compressive Stre	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 d	Date Lays = Comprocess Compr	1 2 3 AVERAGE:	- x	Compressive Stre Control	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 d	Date Compr	1 2 3 AVERAGE:	- x	Compressive Stre	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 d	Date Lays = Comprocess Compr	1 2 3 AVERAGE:	- x	Compressive Stre Control	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 d	Date Lays = Comprocess Compr	1 2 3 AVERAGE:	- x	Compressive Stre Control	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 c	Date Lays = Comprocess Compr	1 2 3 AVERAGE:	- x	Compressive Stre Control	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 days	Date Comprise	1 2 3 AVERAGE:	- x	Compressive Stre Control	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 c	Date Comprise	1 2 3 AVERAGE: ressive Strength _{sample} ressive Strength _{control}	- x	Compressive Stre Control 100 = omputed by / Date	ength, MPa
Date Molded: Age in Days 7 days % Control, @ 7 days	Date Comprise	1 2 3 AVERAGE: ressive Strength _{sample} ressive Strength _{control}	- x	Compressive Stre Control	ength, MPa

WORKSHEET FOR TESTING OF CURING COMPOUND

ASTM C309, C156, D1644, ASTM D1475

Lal	o. No. :		
Saı	nple Identification:		
A.	SPECIFIC GRAVITY: (ASTM D1475) a. Mass of pycnometer, g b. Mass of pycnometer filled with water, g c. Mass of pycnometer filled with sample g	CEMENT WATER SAND	: : :
(c. Mass of pycnometer filled with sample, g Unit Mass, $g/cc = c - a$ $b - a$		
	Tested by / Date		Computed by / Date
В.	DRYING TIME: (ASTM C309) Application Time, h Dry to touch, h		
	Tested by / Date WATER RETENTION: (ASTM C156)		Computed by / Date
.	ML = Mass loss of the sample, g		
	M1 = Mass of the sealed sample, g		
	M2 = Mass of the sample after applying curing compound, g		
	M3 = Mass of the sample at the conclusion of the test, g		
	NV = proportion of non-volatile matter in the curing, g		
	MA = mass of the curing compound applied (M2 – M1), g		
	$ML = M1 + (NV \times MA) - M3$		
	L = Mass loss per unit Area		
	L = 1000 x (ML/A), kg/m2		

WORKSHEET FOR TESTING OF CURING COMPOUND

ASTM C309, C156, D1644, ASTM D1475

NON-VOLATILE (ASTM D1644)		
A = weight of dish, g S = weight of specimen used, g C = weight of dish and contents after heating, g		
$NV = [(C - A)/S] \times 100$		
Tested by / Date		Computed by / Date
Checked/Reviewed by/Date :(Head of Materials	Testing Section/Unit)	

WORKSHEET FOR MINERAL FILLER

ASTM D546, ASTM C311, ASTM D4318

Sieve No.	Wt. Retained	Wt. Passing	% Passing
1. No. 16 (1.18 mm)		11 cm 1 diceg	70 1 400111
2. No. 30 (0.60 mm)			
3. No. 50 (0.30 mm)			
4. No. 200 (0.075 mm)			
Date Tested:			
PLASTICITY INDEX (ASTM D43	318 / AAHTO T90)		
Plasticity Index = Liquid Lim	it - Plastic Limit =		
Date Tested:			
LOCCON ICUITION (LOT) (ACT		127)	
	TM C311 / AACUTA T1		
LOSS ON IGNITION (LOI) (ASI	M C311 / AASHTO T1	127)	
	M C311 / AASHTO T1	-	
		-	
Weight of sample, g =		_	
Weight of sample, g = Weight of empty		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g =		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition)		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible +		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g =		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition,		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight)		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition,		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight)		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI =		_	
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested:			
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested:			
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested:			
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested: Tested by / Date			
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested:			
Weight of sample, g = Weight of empty crucible, g = Weight of crucible + sample, g = (before ignition) Weight of crucible + sample, g = (after ignition, to constant weight) % LOI = Date Tested: Tested by / Date			

WORKSHEET FOR TESTING OF HYDRATED LIME

mple Identification:					
PHYSICAL TESTS (ASTM C1 A. Grading:	10)				
Weight of Sample, g =					
Weight of Sample, g =					
Sieve Sizes	Weight Retained,		leight ssing, g	Percent Passing (by Mass)	
1.					
2.					
3.					
4.					
5.					
5.					
Tested by / Date		Computed by / Date			
CHEMICAL TESTS (ASTM C2					
CHEMICAL TESTS (ASTM CZ	25)	al 1	Trial 2	Blank	
CHEMICAL TESTS (ASTM CZ	25)	al 1	Trial 2	Blank	
CHEMICAL TESTS (ASTM CZ	25)	al 1	Trial 2	Blank	
A. Calcium Oxide (CaO) Mass of empty crucible, g	25)	al 1	Trial 2	Blank	
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g	25)	al 1	Trial 2		
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g	25)	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and	25)	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and residue, g Mass of ignited residue, g	25)	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and residue, g Mass of ignited residue, g = d - b	25)	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and residue, g Mass of ignited residue, g = d - b CaO =e x 100	25)	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and residue, g Mass of ignited residue, g = d - b	Tria	al 1			
A. Calcium Oxide (CaO) Mass of empty crucible, g Average of a comprising the constant weight, g Mass of sample, g Mass of ignited crucible and residue, g Mass of ignited residue, g = d - b CaO = e x 100	Tria				

WORKSHEET FOR TESTING OF HYDRATED LIME

ASTM C25, ASTM C110

₋ab. ſ	No. :				
Samp	le Identification:				
	B. Magnesium Oxide (Mg	0)			
. M	ass of empty crucible, g		Trial 1	Trial 2	Blank
ı. Ma	ass of empty crucible, g	-			
	verage of <i>a</i> comprising the				
	onstant weight, g	-			
	ass of sample, g	-		-	
	ass of ignited crucible and sidue, g	_			
	ass of ignited residue, g		-	_	
	d – b	_			
. %	$MgO = e \times 72.4$	-			
j. Co	orrected % MgO = $f - \%$ Blank	-		_	
	Average % MgO	-			
	Tested by / Date			Computed by / Date	:
	(Chemist/Chem. Tech. / PRC Li	c. No.)			
	Chemical Test/s Certified by		:	(Chemist / PRC Lic. I	Va)
				(CHEITHSE / FRC LIC. I	vo.)
	Checked and Reviewed by / Da	te	:		
			(He	ad of Materials Testing Se	ection/Unit)

WORKSHEET FOR TESTING OF FLY ASH

ASTM C311

	ntification:		
Mois	sture Content		
a.	Mass of empty container, g	_	
u.	riass of empty container, g		
b.	Average of a comprising the constant weight, g	-	
c.	Mass of sample (as received), g	-	
d.	Mass of container + sample before drying = $b + c$,		
e.	Mass of container + sample after drying at 110 \pm 5 $$	⁰C, g -	
f.	Average of e comprising the constant weight, g	-	
	% Moisture Content - f - h v 100	=	
	% Moisture Content = $\frac{f - b}{c}$ x 100	_	
	Tested by / Date	Compute	ed by / Date
			/ /
(Che	emist/Chem. Tech. / PRC Lic. No.)		
-	emist/Chem. Tech. / PRC Lic. No.) s on Ignition (LOI)		
Loss	s on Ignition (LOI)		
-	•	-	
Loss	s on Ignition (LOI)	-	
Loss a.	Mass of empty crucible, g	-	
Loss a. b.	Mass of empty crucible, g Average of <i>a</i> comprising the constant weight, g	-	
Loss a. b. c.	Average of <i>a</i> comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g),	- - g -	
Loss a. b.	Average of <i>a</i> comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g), Mass of crucible + sample before ignition, g = b + c	- g - c -	
b. c. d.	Average of <i>a</i> comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g),	- g - c -	
b. c. d. e.	Mass of empty crucible, g Average of a comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g), Mass of crucible + sample before ignition, $g = b + c$ Mass of crucible + sample after ignition at 750 \pm 50	- g - c -	
b. c. d.	Mass of empty crucible, g Average of a comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g), Mass of crucible + sample before ignition, $g = b + c$ Mass of crucible + sample after ignition at 750 \pm 50 Average of e comprising the constant weight, g	- g - c -	
b. c. d. e.	Mass of empty crucible, g Average of a comprising the constant weight, g Mass of moisture-free sample (between 0.5 to 4 g), Mass of crucible + sample before ignition, $g = b + c$ Mass of crucible + sample after ignition at 750 \pm 50	- g - c -	

WORKSHEET FOR TESTING OF FLY ASH

ASTM C311

Lab.	No.	:								
Samp	ole Ider	ntification:								
III.	Dens	Density								
	Roon (<i>mus</i>	n Temp. (°C) = st be 23 ± 4 °C)	Room R.H. (%) = (<i>shall not be less than 50%</i>)							
	a.	Weight of Le Chatelier Flask & Kerosene, g								
	b.	Initial volume reading, mL								
	c.	Bath Temperature at initial volume recording, °C								
	d.	Weight of sample (about 50 g), g								
	e.	Weight of Le Chatelier Flask, Kerosene & sample, g								
	f.	Final volume reading, mL								
	g.	Bath Temperature at final volume recording, °C (temp. variation with $c \le 0.2$ °C)	-							
		Density = $\frac{e-a}{f-b}$	=							
		Tested by / Date	Computed by / Date							
	(Che	mist/Chem. Tech. / PRC Lic. No.)								
IV.	Fine	ness by the 45-µm (No. 325) Sieve								
		n Temp. (°C) = st be 23 ± 4 °C)	Room R.H. (%) =(shall not be less than 50%)							
	b. 9	Sieve ID/Serial No. Sieve Correction Factor (from Calibration), % (+ or -) = % Residue Value _{CERTIFIED} - % Residue Value _{OBSERVED}								
	d. V	Weight of sample, g Weight of sample retained at the Sieve, g Corrected Residue = $\underline{d} \times (100 \pm b)$, %								
		Fineness = $100 - e$								
		Tested by / Date	Computed by / Date							

WORKSHEET FOR TESTING OF FLY ASH

ASTM C311

Lab. N	lo.	:		 			
Sampl	e Identification	:					
V.	Autoclave Expansion						
	Room Temp. (°C (must be 23 ± 4	(r) =			Room R.H. (%) shall not be le) = ess than 50%)	
La - Lb - G -		or reading of specimen or reading of specimen m			_		
		sion, % = <u>Lb</u> Tested by / Date	<u>– La</u> x 100 G	_	Computed	by / Date	
VI.	Compressive S	trength		_		_	
	Room Temp. (°C (must be 23 ± 4	r) =			Room R.H. (%) shall not be le		
	Date Molded:						
A	ge in Days	Date	Trial No.		ompressive S Control	Strength, mPa Sample	
	7 days		1 2 3 AVERAGE:				
	% Control, @ 7 o	days = —	ve Strength _{sample}	— х	100 =		
		Tested by / Date		_	Computed	by / Date	
VII.	Water Require	ment		_			
	Y = V	Water required for the t	est mixture to be	± 5 of co	ontrol flow		
	Water requireme percentage of co		x 100 =	-			
		Tested by / Date		_	Computed	by / Date	
	Chemical Test/s	Certified by	:	(Cher	mist / PRC Lic.	No.)	
	Checked and Rev	viewed by / Date	:(Head o	of Materi	ials Testing Se	ction/Unit)	

WORKSHEET FOR RETROREFLECTIVE SHEETING

ASTM 4956

Adhe	sion (ASTM D4956):		
	Adhesion =		
	Tested by / Date		Computed by / Date
Shrin	kage (ASTM D4956):		
	1. After 10 minutes, mm	=	
	2. After 24 hours, mm	=	
	Tested by / Date		Computed by / Date
I. Flexi	bility (ASTM D4956):		
	Flexibility =		
	Tested by / Date		Computed by / Date
Charle	ad and Davioused by / Data		
Checke	ed and Reviewed by / Date :	(Head of	Materials Testing Section/Ur

WORKSHEET FOR TESTING OF CERAMIC AND GLASS TILES

ASTM C1505

Specimen No.	Span Length (L), mm	Width (b), mm	Thickness (h), mm	Breaking Load (P), N	Breaking Strength (B), N (B=PL/b)	Modulus of Rupture (R) N/mm ² R = <u>3B</u> 2h ²
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
Test	ed/Comput	ed by:			Date Tes	ted:

(Head of Materials Testing Section/Unit)

WORKSHEET FOR TESTING OF GEOTEXTILE

ASTM D4632, D6241, D4833, D4533

Lab. No.	:	
Sample Identification	:	

GRAB TENSILE STRENGTH (ASTM D4632)

Machine Direction				
Sample No.	Maximum Load, N			
Average				
Cros	ss-Machine Direction			
Sample No.	Maximum Load, N			
Average				

SEAM STRENGTH (ASTM D4632)

Sample No.	Maximum Load, N
Average	

ELONGATION (ASTM D4632)

Sample No.	Increase in Length, %
Average	

WORKSHEET FOR TESTING OF GEOTEXTILE

ASTM D4632, D6241, D4833, D4533

	APEZOID TEAR		INCTURE TEST		
	ASTM D4533)	<u></u>	(ASTM D6241 / ASTM D4833)		
Sample No.	Maximum Load, N	Sample No.	Maximum Load, N		
_					
Average		Average			
ested by / Date	j.	Computed by /	Date:		

WORKSHEET FOR TESTING OF SEVEN WIRE STRAND

ASTM A416

ab. No. :	
Sample Identification:	
	LABORATORY DATA
1. Diameter, mm	
2. Area, mm²	
3. Yield Strength, l	kN
4. Breaking Streng	th, kN
5. Elongation, mm (a) Final (b) Gage Length	
COMPUTATION:	
Elongation, % =	<u>(5a) – (5b)</u> x 100 (5b)
Tested/Computed	by: Date Tested:
	
	
Checked/Reviewed by:	
	(Head of Materials Testing Section/Unit)

WORKSHEET FOR TESTING OF CARBON FIBER SHEET / PLATE

Lab. No.	:				
Sample Id	entification:				
		LABORA	TORY DATA		
Sample No.	Thickness, mm	Width, mm	Area, mm²	Breaking Load, N	Tensile Strength (Breaking Load/Area)
1					
2					
3					
4					
5					
			Average Te	nsile Strength =	
Т.	ested/Computed by:		Dat	e Tested:	
					
					
Checked/F	Reviewed by:				
-	(Head of Materials T	esting Section/Unit)		

COMPRESSIVE STRENGTH TEST OF HYDRAULIC CEMENT GROUT (NON-SHRINK) ASTM C109

Lab. No.	:				
Sample Identifica	ition:				
Compressive S	Strength: (ASTM (C109)			
Sample I.D.	Age in Days	Temp., ⁰C	RH, %	Date	Compressive Strength, MPa
Average					
Te	sted by / Date	<u> </u>	_	Computed by /	Date
			- -		
Checked/F	Reviewed by / Date		ials Testing Section	on/Unit)	

WORKSHEET FOR TESTING OF EROSION MAT

Lab. No. : _		
Sample Identification : _	LABORATORY DATA	<u> </u>
	LABORATORT DATA	•
Гуре :		
Strip Width, m :	_	
	MACHINE DIRECTION	
Specimen No.	Breaking Force (N)	Elongation (%)
AVERAGE		
717217102		
Breaking Force per linear n	neter = Average Breaking Force / Strip	o Width
	CROSS-MACHINE DIRECT	
Specimen No.	Breaking Force (N)	Elongation (%)
AVERAGE		
Breaking Force per linear n	neter = Average Breaking Force / Strip	o Width
Tested/Computed	by:	Date Tested:
		· · · · · · · · · · · · · · · · · · ·
Checked/Reviewed by:		

WORKSHEET FOR TESTING OF EPOXY RESIN

Lab. No.	:				
Sample Ide	entification :				
1.	Length, mm				
2.	Width, mm				
3.	Area, mm ²				
4.	Compressive Load	d, kN			
COMPUTA	TION:				
Compressi	e Strength, MPa =	= <u>(4) </u>	<u>x 1000</u> (3)		
Te	sted/Computed by	:	-	Date	e Tested:
Checked/R	eviewed by:		terials Testing Se	ection/Unit)	
		(ineau oi Ma	terds resulty se	ccion/Onic)	

WORKSHEET FOR TESTING OF SHOTCRETE

EN 14488-5

Lab. No.	:	
Sample Identification	:	
·		
Camandala Asia (Davia	١.	
Sample's Age (Days):	
Material		

Deflection, mm (d)	Load, kN (F)	Energy Absorption, J (E)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

WORKSHEET FOR SHOTCRETE

EN 14488-5

	2.1 2 1 100 0	
26		
27		
28		
29		
30		

^{*}Note: In determining the Energy Absorption Capacity, the Energy Absorption at deflection 25mm will be used

FORMULA:

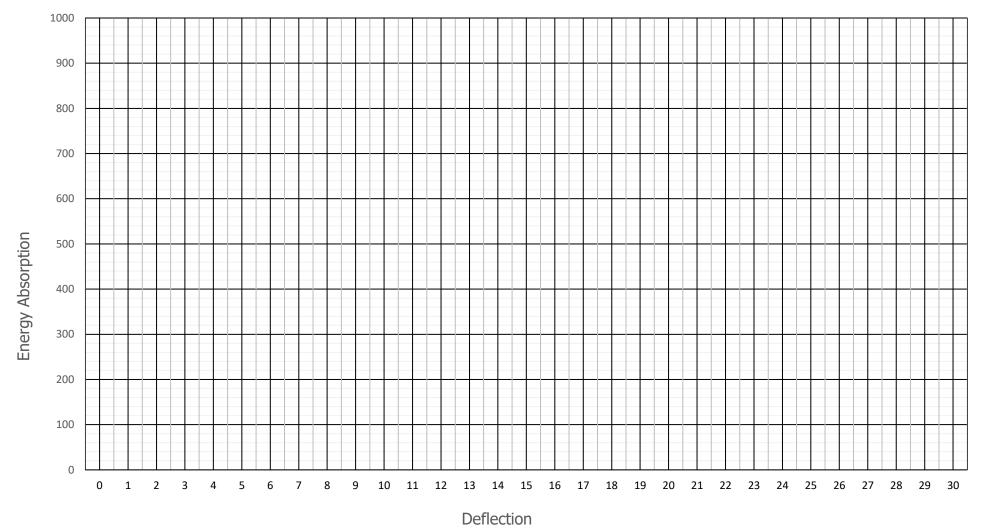
Energy Absorption, J =
$$\frac{1}{2}$$
 $x\left(F_i+F_f\right)x\left(d_f-d_i\right)+E_i$

Tested/Computed by:	Date Tested:
Checked and Reviewed by:	ead of Materials Testing Section/Unit)

WORKSHEET FOR SHOTCRETE

EN 14488-5

Relationship bet. Energy Absorption and Deflection



WORKSHEET FOR PIGMENTS - INTEGRALLY COLORED CONCRETEASTM C979

	=		
Tested by / Date			Computed by / Date
(Chemist/Chem. Tech. / PRC Lic. No.)			
Alkali Resistance (ASTM C979/C979M)	=		
Tested by / Date			Computed by / Date
(Chemist/Chem. Tech. / PRC Lic. No.)			
Sulfates Soluble in Hydrochloric Acid (ASTI	м D50):	:	
a. Mass of Sample, g	=		
b. Mass of Empty Crucible, g	=		
c. Mass of Crucible + Ignited Residue, g	=		
d. Mass of Ignited Residue, g	=		
e. SO ₃ , %	=		
CALCULATION:			
Tested by / Date		a	Computed by / Date
(Chemist/Chem. Tech. / PRC Lic. No.)			
Matter Soluble in Water (ASTM D1208):			
a. Mass of Sample, g	=		
b. Mass of Empty Container, g	=		
c. Mass of Container + Residue, g	=		
d. Mass of Residue, g	=		
e. Matter Soluble in Water, %	=		
CALCULATION:			
Matter Soluble in Water, % =	<u>d</u>	x 2.5	x 100
			Computed by / Date
Tested by / Date			
Tested by / Date (Chemist/Chem. Tech. / PRC Lic. No.)			
		- (2)	
(Chemist/Chem. Tech. / PRC Lic. No.)		(Chem	ist / PRC Lic. No.)

WORKSHEET FOR TENSILE STRENGTH OF PLASTICS

Lab. No.	:				
Sample Io	lentification :				
Sample No.	Thickness, mm	Width, mm	Area, mm²	Breaking Load, N	Tensile Strength (Breaking Load/Area), MPa
1					
2					
3					
4					
5					
			Averag	ge Tensile Strength =	
Т	ested by / Date:			Computed by / Da	ate:
					
					
Checked /	Reviewed by:	(Head of	Materials Testir	ng Section/Unit)	
		(i icau 0i	materials result	ig Jection, Unit.)	

WORKSHEET FOR FLEXURAL STRENGTH OF PLASTICS

Lab. No.	:				
Sample Io	lentification :				
Sample No.	Width (b), mm	Depth (d), mm	Span Length (L), mm	Maximum Load (P), N	Flexural Strength = <u>3PL</u> , MPa 2bd ²
1					
2					
3					
4					
5					
			Average I	-lexural Strength =	
Tested by	/ Date:		Comput	ed by / Date:	
					
Checked /	Reviewed by:	(Head of	Materials Testing Se	ction/Unit	
1 2 3 4 5 Tested by	/ Date:	mm	Average F	(P), N Flexural Strength =	Strength = 3PL, MPa

WORKSHEET FOR ACCELERATED WEATHERING TEST

ASTM A370, B117

Lab. No.	:		
Sample Ide	entification:		
I. Pre-Ac	celerated Weathering Test (Salt-Spray Test)	
1.	Diameter, mm		
2.	Area, mm ²		
3.	Initial Tensile Load, kN		
4.	Initial Tensile Strength, MPa		
II. Post-A	Accelerated Weathering Test	(Salt-Spray Test)	
1.	Diameter, mm		
2.	Area, mm²		
3.	Final Tensile Load, kN		
4.	Final Tensile Strength, MPa		
5.	Strength Retained, %		
COMPUTA	TION:		
Tensile Str	rength, MPa = <u>Tensile Load</u> Are		
Strength R	Retained, % = <u>Final Tensik</u> Initial Tens	<u>e Strength</u> x 100 ile Strength	
Τe	ested/Computed by:		Date Tested:
Checked/R	Reviewed by:	Iterials Testing Section/Unit	