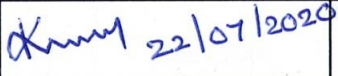
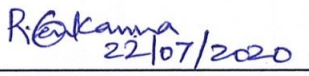


		MANUFACTURER'S NAME & ADDRESS: BHEL (BAP) - Ranipet Approved Suppliers		MANUFACTURING QUALITY PLAN				MQP NO: IEZS:PMR REV NO: 01 DATE: 22/07/2020 PAGE: 1 OF 2				
												PRODUCT: Inorganic Ethyl Zinc Silicate Primer to IS 14946 : 2001 (Reaffirmed 2017)
				SUB-SYSTEM : ---								
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
1	2	3	4	5	6	7	8	9	D**	**	10	11

1.0	RAW MATERIALS:													
1.1	Pigments, solvents, resins & additives	Composition	M	Review	IS 14946	IS 14946	IS 14946 & BHEL PO	TC	-	V	-	-		
2.0	INPROCESS CONTROLS:													
2.1	Measurement of Ingredients	Weight / Volume	A	Measure	IS 14946	Supplier's Procedure and IS 14946		Log	-	P	-	-		
2.2	Dispersion	Granulating Pigments	M	Visual	IS 14946	Supplier's Procedure and IS 14946		Log	-	P	-	-		
2.3	Let-down & Mixing	Proper mixing of resins, solvents and additives	M	Visual	IS 14946	Supplier's Procedure and IS 14946		Log	-	P	-	-		
3.0	FINAL INSPECTION & TESTING (Refer Notes 1, 2 & 3):													
A. WET PAINT														
3.1	Finished Paint	Mixing Ratio	M	Measure	IS 14946 / IS 101	IS 14946	IS 14946	TC	√	P	V	-		
3.2		Consistency	M	Visual		IS 14946 / IS 101	IS 14946	IS 14946	TC	√	P	W	-	
3.3		Flash Point	A	Measure			IS 14946	IS 14946	TC	√	P	W	-	
3.4		Drying Time: a) Surface Dry b) Hard Dry c) Time to top coat	A	Visual & Measure			IS 14946	IS 14946	TC	√	P	W*	-	*W for Surface & Hard Dry. Others, V.
3.5		Volume Solids, percent min \$	A	Measure			IS 14946 & BHEL PO	IS 14946 & BHEL PO	TC	√	P	W	-	\$ To be tested at NABL accredited lab
3.6		Mass (kg/10 litre), min	M	Measure			IS 14946	IS 14946	TC	√	P	W	-	
3.7		Solids percent by weight of the mixed paint shall be 50 Min for shop coat and 68 Min for main coat	M	Measure			IS 14946 & BHEL PO	IS 14946 & BHEL PO	TC	√	P	W	-	
3.8		Mud-cracking	M	Visual			IS 14946	IS 14946	TC	√	P	W	-	
3.9		Pot Life (h), min	M	Measure			IS 14946	IS 14946	TC	√	P	V	-	

 22/07/2020		 22/07/2020		LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER, C: BHEL / BHEL AIA, N: CUSTOMER; P: PERFORM, W: WITNESS, V: VERIFICATION; CLASS: A - CRITICAL; B - MAJOR; C - MINOR; MTC- MILL /MANUFACTURER'S TEST CERTIFICATE; IR- INSPECTION REPORT.
PREPARED BY		REVIEWED & APPROVED BY		
K.S. GOPAKUMAR, DE/QA		VENKANNA RUPANI, DM/QA		
SIGNATURE & SEAL				

		MANUFACTURER'S NAME & ADDRESS: BHEL (BAP) - Ranipet Approved Suppliers		MANUFACTURING QUALITY PLAN				MQP NO: IEZS:PMR REV NO: 01					
				PRODUCT: Inorganic Ethyl Zinc Silicate Primer to IS 14946 : 2001 (Reaffirmed 2017)				DATE: 22/07/2020 PAGE: 2 OF 2					
				SUB-SYSTEM : ---									
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
1	2	3	4	5	6	7	8	9	D**	M	C	N	10
													11

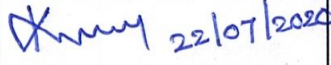
B. DRY COAT (To be conducted after 72 hours of curing)													
3.10		DFT (μ) per coat	A	Measure				TC	√	P	W	-	
3.11		Colour	M	Visual				TC	√	P	W	-	
3.12		Finish	M	Visual				TC	√	P	W	-	
3.13		Protection against Corrosion #	M	Visual & Measure				TC	√	P	V	-	#under condensation
3.14		Salt Spray Test	M	Visual & Measure		IS 14946 / IS 101		TC	√	P	V		
3.15		Heat Resistance Test	M	Visual				TC	√	P	V	-	
3.16		Keeping properties - after being stored unmixed for six months from the date of delivery	A	Visual	IS 14946 / IS 101		IS 14946 & BHEL PO	TC	√	P	V	-	
3.17		Metallic zinc content in non-volatile portion \$ a) shop coat primer shall be 65 percent, min b) main coat primer 75 percent, min	M	Measure		IS 14946		TC	√	P	W	-	\$ To be tested at NABL accredited lab
3.18		Effect of Welding	M	Visual			IS 14946	TC	√	P	V	-	
4.0	MARKING, PACKING & CERTIFICATION:												
4.1	Identification & Packing	Stenciling & Packing	M	Visual	IS 14946	IS 14946	IS 14946 & BHEL PO	TC	√	P	V	-	
4.2	Certification	Compliance	A	Review	IS 14946	IS 14946	IS 14946 & BHEL PO	TC	√	P	V	-	

Record of Revisions

Rev No	Date	Clauses revised	Description of Revision
00	12/08/2015	--	Original Issue.
01	22/07/2020	All	QP No changed from ZES:PMR to IEZS:PMR. MQP Completely reorganized and revised.

Notes:

- Latest editions / versions of the referred standards shall be used.
- Sample selection for testing to be done in the presence of BHEL / BHEL AIA.
- Apart from above indicated tests, any other requirement(s) specified in BHEL PO shall be complied with by the supplier.

 22/07/2020		 22/07/2020		LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER, C: BHEL / BHEL AIA, N: CUSTOMER; P: PERFORM, W: WITNESS, V: VERIFICATION; CLASS: A - CRITICAL; B - MAJOR; C - MINOR; MTC- MILL /MANUFACTURER'S TEST CERTIFICATE; IR- INSPECTION REPORT.
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