

M/s. Sri coatings  
11-2-5, Seshasai Street, Opp. Yechuri Towers,  
Ramaraopeta, Kakinada 533 004  
A.P. India

Sep. 10, 2012

Your reference letter dated 21 May, 2012

Job No: IN/ASK- 21/12-13

Dear Sir,

Subject: Testing of External Buried Pipe Coating (MCU Coatings)

Please find hereby the test results of coated samples submitted to us.

### External Buried Pipe Coating - Test Requirements - For MCU Coatings


Sr. No.	Test Details	Methods	Unit	Results
1	Wet thickness of the coating system	D 4138	µm	1050
2	Average Dry thickness of the Coating System	D 4138	µm	900
3	Minimum Dry Thickness	D 4138	µm	850
4	Tensile strength	ASTM D 638	MPa	5.0
	Elongation	ASTM D 638	%	39%
5	Hardness Shore D	D 2240	-	90
6	Impact Resistance	ASTM G 14	Jules	Passes
7	Indentation Resistance	Indentation Resistance at 23°C-EN 10290-For 24 hrs.	- mm	0.2
8	Indentation Resistance	Indentation Resistance at 80°C-EN 10290-For 24 hrs.	- mm	0.4

  
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9	Adhesion Test -Resistance to Removal at 23°C	EN 10290	visual	4 B
10	Adhesion Test -Resistance to Removal at 80 °C @ 100 hrs after	EN 10290	visual	3 B
11	Adhesion Test - Pull Off Method at 23°C (on straight plates after full curing)	ASTM D4541-	MPa	6.0
12	Adhesion Test - Pull Off Method at 80 °C	EN 10290	MPa	6.2
13	Abrasion resistance H 10, Wheel, 1000 g, 1000 cycles	ASTM D 4060	mg	20.0
14	Taber Abrasion resistance CS-17, Wheel, 1000 g, 1000 cycles	ASTM D 4060	mg	352.0
15	Thermal Ageing	Thermal Ageing for 100 days @ 100°C-EN 10290	days	Passes
16	Adhesion Test after Immersion in Hot tap water	Adhesion Test after Immersion in Hot tap water at 80°C for 100 hours-EN 10290	MPa	5.0
17	Water vapour transmission	ASTM E 96	gm/m <sup>2</sup> /day	1.50
18	Holiday detection	EN10290-Test voltage of 8 V/μm (max. 20 KV)	KV	Passes ( 15)
19	Dielectric Withstand (Oil)	ASTM D 149		2.5V/1μ
20	Cathodic Disbondment test @23°C 30 days	ASTM G 8, G 95	mm	6.0
21	Cathodic Disbondment test @80°C 30 days	ASTM G 8, G 95	mm	8.0
22	Chemical test (Immersion in Chemicals @ RT after 30 days)	ASTM D 543	Days	No change was observed except in case of 25% NaOH, where blisters were seen
	(a) 25% Sodium Hydroxide			
	(b) 10% Sodium Chloride			
	(c) 25% Sodium Carbonate			
	(d) 25% Sulphuric Acid			
	(e) 10% Nitric Acid			
	(f) 5 % Acetic Acid			
	(g) 10% Hydrochloric Acid			
	(h) Petrol, Diesel & Kerosene			
23	Flexibility at 25 °C, 180° bend over 0.5" mandrel at 75 μ	ASTM D 1737	Degree	Passes
24	Tear Strength	ASTM D 624	MPa	250

25	Accelerated Weathering 1,000 hours	ASTM G 154 Replacing ASTM G 53)	visual	Passes
26	Salt spray test - 2500 hrs.	ASTM B 117	visual	Passes
27	Water Absorption Test	ASTM D 570	%	0.6

est results pertain to sample submitted to us.

  
S. Khanna

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