

Annexure

Name of Institute: Gujarat Industrial Research and Development Agency-Vadodara

Testing Facility available - Paint & Coating

Sr.No.	Type of Testing	Laboratory	Instrument Detail	Standard (If any)	Applicable Testing Charges (per sample) + GST Extra
1	Non-volatile matter by mass	Paint and Coating	Hot Air Curculating Oven, Analytical Weight Balance	IS:101(P8Sc-2) ,IS:1746 ; IS:5480, ISO 3251 Fifth edition 2019-05,ISO 3233-3:2015,ASTM D1489	950
2	Non-volatile matter by Volume	Paint and Coating	Hot Air Curculating Oven, Analytical Weight Balance	IS:101(P2Sc-2),ISO 3233-3:2015,ASTM D2832 - 92(2016)	1250
3	Volume solid	Paint and Coating	Hot Air Curculating Oven, Analytical Weight Balance	IS 101(Part- 8/Sec6): 1993 (RA2009),ASTM D2697- 03(RA2014),IS 13213:1991(RA 2012) IS 101(Part- 8/Sec6): 1993 (RA2009)	1250
4	Specific Gravity/ Density	Paint and Coating	Analytical Weight Balance	ISO 2811-1 Third edition 2016-03-01, IS 101 Part 1- section 7: 1987 (Reaff.2004)	950
5	Viscosity (By ford Cup Method)	Paint and Coating	Ford Cup	IS 101(Part-1/Sec.5):1989 (RA 2009), SO 2431 Fifth edition 2011-11-15, ASTM D1200 – 10 (Reapproved 2018)	650
6	Viscosity (By Rotational Viscometer Method)	Paint and Coating	Rotational Viscometer	ASTM D4402 / D4402M, ASTM D7867 - 13 , ISO 2555:2018	950
7	Viscosity (By Ubbelohd viscometer)	Paint and Coating	Ubbelohd viscometer	ASTM D445-446, ASTM D2515, ISO 3104-3105	950
8	Viscosity (By Gardner bubble viscometer)	Paint and Coating	Gardner bubble viscometer	DIN ISO 4630	750
9	Ash content	Paint and Coating	Muffle Furnance	ASTM D 5630,ASTM D 2584, ISO 3451	1100
10	Dry/WET film thickness	Paint and Coating	Dry film thickness tester, Wet film Thickness tester	ISO 2808:2019, IS:101(P3Sc-2) IS:13238, IS:13213	550
11	Drying Time (Surface dry, Hard dry)	Paint and Coating	Drying time recorder	IS 101(Part - 3/Sec 1) 1986(RA2007), IS 15489:2013	950
12	Consistency	Paint and Coating	NA	IS:101(P1Sc-5)	250
13	Finish	Paint and Coating	NA	IS:101(P3Sc-4)	250
14	Color	Paint and Coating	Colour meter	IS:101(P3Sc-4)	550
15	Flash point	Paint and Coating	Flash point tester	IS:101(P1Sc-6),IS: 2932(PART-1), IS: 2933(P-1),IS:13213	500
16	Mass, in kg/10 litres	Paint and Coating	Analytical Weight Balance	IS:101(P1Sc-7),IS: 2932(PART-1), IS: 2933(P-1), IS:13213	550
17	Gel time	Paint and Coating	Gel time tester	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	850
18	Particle size	Paint and Coating	Particle size analyser	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	700
19	Density (Powder)	Paint and Coating	Analytical Weight Balance	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	950
20	Bulk Density (Powder)	Paint and Coating	Bulk Density tester	IS 9428, IS : 1462,IS:8183, IS 13630 (P-2)	650
21	Thermal characteristics (Tg1, Tg2 & Delta H)	Paint and Coating	Differntial Scanning Calometry (DSC)	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	3500

22	% Cure (Delta Tg)	Paint and Coating	Differential Scanning Calometry (DSC)	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	3500
23	Moisture Content (by Karl Fischer method)	Paint and Coating	Karl Fischer Titrator	ASTM D6304, ASTM D4928 - 12(2018), ASTM D4017 - 02(2015)	850
24	Moisture Content (by Moisture Analyzer)	Paint and Coating	Moisture Analyzer	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	850
25	Pigment Content	Paint and Coating	Hot Air Circulating Oven, Analytical Weight Balance	IS 2074:1992(RA 2009), IS:101(P8Sc-2)	4500
26	pH Value	Paint and Coating	pH Meter	IS:286, IS:3025 (P-11)	550
27	Infrared spectrograms (FT-IR)	Paint and Coating	FT-IR Analyser	NA	3500
28	Buchholz hardness	Paint and Coating	Buchholz hardness tester	ISO 2815, BS 3900-E9, DIN 53153, NF T30-052	850
29	Salt Spray resistance, per hr	Paint and Coating	Salt Spray chamber	ASTM B117	27.7 + 800 (Extra soln.)
30	Stripping Test	Paint and Coating	NA	IS 137: 1965(RA2009), IS 13607:1992(RA 2009) IS 158:2015	950
31	Tensile Strength (at 23±2°C)	Paint and Coating	Tensile Testing Machine	ISO 527, ASTM D 638	950
32	Elongation at Break (at 23±2°C)	Paint and Coating	Tensile Testing Machine	ISO 527, ASTM D 638	950
33	Tear Strength	Paint and Coating	Tear Tester	ASTM D1004: 2013,ASTM D1938: 2014,IS 13360(Part-5/S10):1996 (RA 2008)	1250
34	Flexural strength	Paint and Coating	Tensile Testing Machine	IS 4456 (P-1), IS 9162, IS 9103; IS 516, IS 456,IS 867	950
35	Flexibility-Bend test	Paint and Coating	Conical/Cylindrical Mandrel	ASTM D 522-A, BS 3900-E11, ISO 6860	650
36	Flexibility-Bend test	Paint and Coating	Fixed radius Mandrel	CSA Z 245.2018	1250
37	Adhesion to Steel (Cross-Hatch Adhesion)	Paint and Coating	Cross-Hatch Adhesion tester	AS 3894.9, AS 1580.408.4, ASTM D 3359-B, BS 3900-E6, ECCA T6, EN 13523-6, ISO 2409, ISO 16276-2, JIS K 5600-5-6, NF T30-038	1050
38	Hardness Test (Shore D)	Paint and Coating	Shore D Hardness tester	ASTM D 2240, ISO 868	850
39	Tabor Abrasion	Paint and Coating	Taber Abrasion tester	ASTM D3389, ASTM D3730, ASTM D3884, ASTM D4060, ASTM D4685, ASTM D4712, ASTM D5146, ASTM D5324, ASTM D6037, ASTM D7255, ASTM F362, ASTM F510, BS 3900-A7, DIN 52347, DIN 53109, DIN 53754, DIN 53799, DIN 68861, EN 13329(E), EN 13696, EN 14431, EN 14864, EN 438-2, EN 660-2, ISO 5470, ISO 5470-1, ISO 7784-2, ISO 9352, NEN 1857, TAPPI T476	1,800
40	Pull off Adhesion test	Paint and Coating	Pull off Adhesion tester	ASTM D4541 ISO 4624	1400
41	Scratch resistance	Paint and Coating	Scratch Hardness tester	BS 3900, IS 101, ISO 1518, ASTM D5178, and ASTM D2197	1050
42	Impact Resistance (Tubular impact)	Paint and Coating	Tabular impact tester	ASTM 2794, IS : 101, ISO 6272	1050
43	Resistance to gas pressure variations	Paint and Coating	High Pressure Vessel	ISO 15741, API 5L2	59620
44	Resistance to hydraulic blistering	Paint and Coating	High Pressure Vessel	ISO 15741, API 5L2	16500

45	UV accelerated weathering test (1 hrs)	Paint and Coating	UV Accelerated Weathering Tester	ASTM D4587, ASTM G154, ASTM G151, ASTM D925, ASTM D904, ASTM D6577, ASTM D5894, ISO 29664	120
46	Specific electrical coating resistance (for 100 days) @ 23 0C & 60 0C	Paint and Coating	Specific electrical coating resistance tester	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	79,467
47	Cathodic disbondment test- CD Test	Paint and Coating	Cathodic disbondment tester	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	68,750
48	Indentation test	Paint and Coating	Indentation tester	ISO 21809-1&2, DIN 30670, CSA Z 245.2018	1250
49	Simultaneous Thermal Analysis (DSC/TGA/DTA)	Paint and Coating	Simultaneous Thermal Analysis Instruments	NA	3500
50	Dynamic Mechanical Analysis	Paint and Coating	Dynamic Mechanical Analyser	NA	3500