

Construction Polymers
Technical Report

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Comparison of Gujarat Paints Sample Against Market Sample

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Customer: M/s. Gujarat Paints

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1 OBJECTIVE

To compare the performance properties of Ice Cool From Gujarat Paints against the market samples

2 INTRODUCTION

The study was carried out to compare the performance properties of Ice Cool sample sent by Gujarat Paint against the market sample for wall coating and roof coating.

3 PROCEDURE

3.1 Performance Properties Evaluation: -

The performance properties of Ice Cool sample sent by the Gujarat Paints were evaluated. The performance properties such as Tensile Strength, % Elongation, Water absorption was done. All the performance properties were checked after 7 days of curing at 23°C and compared against the market samples for Vertical Wall and Roof Coating..

4 OBSERVATIONS:

Physical Parameters-

No.	Parameters	Market Roof Coating Sample	Gujarat Ice cool
1	Appearance	Thick & off-white liquid sample	Thick & white Liquid sample
2	pH	9.05	8.11
3	Viscosity on Krebs viscometer in KU	136.9	131.5
4	% Solids, 140°C. 30 min.	68.49	59.63
5	Density	1.43	1.36

Performance Properties against Market Roof Coating Sample:

No.	Parameters	Market Roof Coating Sample	Gujarat Ice cool
		7 days	7 days
1	Applied DFT in mm	1	0.69
2	% Elongation	160.8	468.6
3	Tensile Strength	1.487	1.568
4	Δ E After DPUR Test	28.4	25
5	% Water Absorption	26.75	13.31

Performance Properties against Market Wall Coating Sample:

No.	Parameters	Market Wall Coating Sample	Gujarat Ice cool
		7 days	7 days
1	Applied DFT in micron	350-380	350-380
2	% Elongation	188.8	400.5
3	Tensile Strength	2.46	1.540
4	Δ E After DPUR Test	40	25
5	% Water Absorption	16.39	13.31

5 RESULTS AND DISCUSSIONS: -**5.1 Tensile Strength and Elongation: -**

It is clear from Table above that Tensile and Elongation of Ice Cool Paints is better than Market roof coating sample. The elongation in particular is much higher than the market roof coating sample. As far as the market wall coating sample is concerned, the elongation is much higher than the market sample.

5.2 Water Absorption: -

It is observed from above that the water absorption is also very less for Ice Cool from Gujarat Paints compared to market roof coating sample. The case remains same for wall coating market sample as well. Lower water absorption is always preferred in the coatings.

6. CONCLUSIONS: -

Elongation and tensile properties are much better than market sample for Ice Cool. Normally when the elongation is higher, DPUR is reduced but in case of Ice Cool from Gujarat paints

gives better DPUR than Market Roof Coating Wall Coating sample even though the elongation is much higher. Hence we can conclude that Ice Cool gives much better performance than market sample for roof coating and wall coating.