TECHNICAL DATA SHEET

Bonndeco Fine Urethane
Modified Acrylic Polyurethane Resin

Product Description
Bonndeco Fine Urethane is an especially high performance and durable modified acrylic polyurethane paint for applying on new and renovation project for internal and external wall. The resin particles fuse together forming a markedly durable paint as the water evaporates, providing a highly dense colored film. It is tough and abrasion-resistant, providing good chemical and solvent resistance, weathering properties, gloss retention and the one-pack formulations are sensitive to moisture in the wet stage, with an outstanding resistance to humidity, acids and alkali.

Features & Benefits
- Good Water & Alkali Resistant
- Good Weather and Scrub Resistant
- Anti-dirt, Excellent washability
- Anti-carbonation
- Good UV resistant
- Algae and Fungus resistant

<table>
<thead>
<tr>
<th>Typical Painting System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
</tr>
<tr>
<td>Surface should be smooth, clean and dust free.</td>
</tr>
<tr>
<td>Topcoat</td>
</tr>
</tbody>
</table>

Surface Treatment & Condition Requirement

**New Surface**
- Substrates must be properly cured before applications.
- Application surface must be smooth and free of voids or sharp projections.
- Any application surface such as precast concrete, with excess pinholes, honeycomb, cracks, uneven or porous condition, should be filled up prior to the application.
- Any application surface, with laitance, efflorescence, dust, rust, oil grease, curing agent etc. must be removed completely by brushing, sanding or other effective means.
- Recheck surface after repair to assure satisfactory condition prior to Bonndeco application.

**Old Surface**
- All loose coating on the application surface should be removed by wire brushing, sanding or other effective means.
- Any laitance, efflorescence, dust, rust or oil grease must be removed completely by brushing, sanding or other effective means.
- All defective areas, hollow plasters and spoiling concrete must be hacked off.
- Defective wall surfaces must be repaired by filling cracks or re-plastering of hacked off portions.
- To paint areas must be cleansed by high pressure water jet at 1,500 psi and all surfaces should be of the sound, clean, dry and sufficiently smooth that accepted as an appropriate substrate for the application of Bonndeco Products.

Application Surfaces
It is suitable for the application to exterior /interior surfaces of the following substrates:-
- Precast Concrete
- Poured in Place Concrete
- Plaster (Mortar), Stucco, GRC
- Tile Filler, Existing paint film

Application Locations
It is suitable for the application to exterior/interior surface of the following locations:-
- Walls and columns
- Ceilings and beams
- Fence walls, Roof parapets, Bends, etc.

Application
- Roller, Spray, Brush

Glossiness
- Matt, Semi-glossy, Glossy

Color
- Standard color chart from Bonndeco tailor made color

Package available
- 20kg/can

Thinning ratio
- 5 – 10%

Drying time
- At least two (2) eight (8) hours, depending on the weather condition at the time of application.

Theoretical spreading ratio
- Approximately: 70-85m²/ 2 coats/can

Remarks:
1. The recommended coverage rates, including those of normal wastage, are for reference only. Actual coverage may vary depending on the working condition of the site, the degree of evenness and smoothness of the substrate surface, and the pattern of the texture sample as selected and approved by the architect or client.
2. We reserve the right to change or adjust the composition of material used in the specification of our products due to our constant research and development to improve of the quality of our products.

Issued Oct 2019
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Properties

<table>
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<tr>
<th>Properties</th>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition in container</td>
<td>JIS K5400 4.1</td>
<td>It was become uniform without lumps when mixing by stirring.</td>
</tr>
<tr>
<td>Low temperature stability @ -5°C</td>
<td>JIS K5400 5.1</td>
<td>No deterioration.</td>
</tr>
<tr>
<td>Drying time @ 20°C</td>
<td>JIS K5400 6.5</td>
<td>Less than 2 hours.</td>
</tr>
<tr>
<td>Drying time @ 5°C</td>
<td>JIS K5400 6.5</td>
<td>Less than 4 hours.</td>
</tr>
<tr>
<td>Application properties</td>
<td>JIS K5400 4.1</td>
<td>There was no application difficulties when applied twice.</td>
</tr>
<tr>
<td>Specular gloss (60°)</td>
<td>JIS K5400 7.6</td>
<td>82.</td>
</tr>
<tr>
<td>Appearance of film</td>
<td>JIS K5400 7.1</td>
<td>There was normal in the appearance of paint film.</td>
</tr>
<tr>
<td>Opacity</td>
<td>JIS K5400 7.2</td>
<td>0.99.</td>
</tr>
<tr>
<td>Water resistance</td>
<td>JIS K5400 8.19</td>
<td>After immersion in water for 96 hours, the gloss retention was 99% and there was no change in the paint film.</td>
</tr>
<tr>
<td>Alkali resistance</td>
<td>JIS K5400 8.21</td>
<td>After immersion in alkali (5 w/v% sodium hydroxide solution) for 7 days, the gloss retention was 87% and there was no change in the paint film.</td>
</tr>
<tr>
<td>Salt water resistance</td>
<td>JIS K5400 8.23</td>
<td>After immersion in 3% sodium chloride solution for 168 hours, there was no change in the paint film.</td>
</tr>
<tr>
<td>Wet Scrub resistance (1000 times)</td>
<td>JIS K5400 8.11</td>
<td>Passed</td>
</tr>
<tr>
<td>Humidity and cool-heat cycling resistance</td>
<td></td>
<td>The gloss retention was 97% and there was no change in the paint film.</td>
</tr>
<tr>
<td>Determination of resistance of fungal and mould growth</td>
<td>JIS Z22911</td>
<td>There was no fungal grew on the panels and the rating is 0.</td>
</tr>
<tr>
<td>Accelerated weathering resistant for 480 hours</td>
<td>ASTM G53-88</td>
<td>Gloss retention – 70% Degree of chalking - &gt; 8 points Negligible change in color</td>
</tr>
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