**Product Specification Sheet:**

**Tinocryl Emulsion Paints - Low VOC**

Low Odor / Low VOC Pure Acrylic Water-based high performance architectural paints

Gloss, series 13100

Semi-gloss, series 13900

Satin, series 13200

**CHARACTERISTICS**

Tinocryl Emulsion Paints - Low VOC are pure acrylic, environmentally friendly, water-based paints with high performance for exterior and interior wood and concrete substrates, in areas where low odor is a priority. They excel in the following characteristics:

* Multifunctional paints for concrete, wood & metal.
* Non-flammable, Color stable & Gloss retentive.
* Adhere to water-based & alkyd based newly & previously coated surfaces (good enamel hold out)
* Quick drying
* Resistant to urban pollution & detergent solutions
* Resistant to alkalis & saponification
* High temperature stability & reflection of sunrays to minimize heat & thermal conductivity

**ENVIRONMENTAL STANDARDS & VOC REQUIREMENTS**

These paints conform to environmental standards and MPI performance requirements, and are free of solvents and the restricted chemical components (as defined by ACGIH 0100 Doc).

Tinocryl Emulsion Paints - Low VOC are **GREENGUARD GOLD CERTIFIED**.

Tinocryl Emulsion Paint - Low VOC Gloss, series 13100 is a Low Odor / Low VOC product containing 41g/l

Tinocryl Emulsion Paint - Low VOC Semi-gloss, series 13900 is a Low Odor / Low VOC product containing 20g/l

Tinocryl Emulsion Paint - Low VOC Satin, series 13200 is a Low Odor / Low VOC product containing 49g/l

They all comply with the following standards:

- LEED v.3 (LEED 2009)
- LEED v.4
- Green Seal GS-11- 20/5/93
- SCAQMD 1113 – 3/6/11
- MPI GPS-1
- US EPA VOC Standards for Architectural Coatings

**TECHNICAL DATA**

Tinocryl Emulsion Paints - Low VOC are 100% acrylic based coatings with selective pigments complying favourably with the MPI standards for Satin Finish Emulsion Paint".
COMPOSITION:

<table>
<thead>
<tr>
<th></th>
<th>Norms</th>
<th>Gloss series 13100</th>
<th>Semi-Gloss series 13900</th>
<th>Satin series 13200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total solids, by volume</td>
<td>ISO 3233</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Total solids, by weight</td>
<td>ASTM D2369</td>
<td>52%</td>
<td>53%</td>
<td>54%</td>
</tr>
<tr>
<td>Non-volatile vehicle (resins) by weight</td>
<td>ASTM D2369</td>
<td>27%</td>
<td>25%</td>
<td>22%</td>
</tr>
<tr>
<td>Total pigments, by weight</td>
<td>ASTM D3723</td>
<td>25%</td>
<td>28%</td>
<td>32%</td>
</tr>
<tr>
<td>Titanium dioxide – rutile of total pigments/gallon</td>
<td>ASTM D1394</td>
<td>1.2 kg</td>
<td>1.22 kg</td>
<td>1.26 kg</td>
</tr>
<tr>
<td>Density kg/ L</td>
<td>ASTM D1475</td>
<td>1.26</td>
<td>1.28</td>
<td>1.32</td>
</tr>
</tbody>
</table>

PHYSICAL PROPERTIES:

<table>
<thead>
<tr>
<th>Tests</th>
<th>Norms</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency, stormer</td>
<td>ASTM D562</td>
<td>115 ± 5 KU</td>
</tr>
<tr>
<td>Finessness of grind</td>
<td>ASTM D1210</td>
<td>6.7 Hegman</td>
</tr>
<tr>
<td>Gloss level at 60 degrees</td>
<td></td>
<td>Gloss: 75 ± 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semi-gloss: 45 ± 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satin: 25 ± 5</td>
</tr>
<tr>
<td>Dry opacity (Hiding power of white paint contrast ratio)</td>
<td>ASTM D2805</td>
<td>99% @ 200 microns w.f.t.</td>
</tr>
<tr>
<td>Washability &amp; scrub resistance</td>
<td>ASTM D2486</td>
<td>Passed 1000 cycles</td>
</tr>
<tr>
<td>Water resistance</td>
<td>-</td>
<td>Passed 5 bar water pressure</td>
</tr>
<tr>
<td>Absorption</td>
<td>-</td>
<td>No excessive absorption (Gilsonite solution test)</td>
</tr>
<tr>
<td>Flexibility</td>
<td>TT-E-2784 A</td>
<td>No film defects</td>
</tr>
<tr>
<td>Recoating</td>
<td>TT-E-2784 A</td>
<td>No lap marks or orange peel. Good recoating &amp; application properties</td>
</tr>
<tr>
<td>Accelerated aging</td>
<td>ASTM D1849</td>
<td>30 days at 50°C, easily redispersed. No coagulation or settling meeting the working properties</td>
</tr>
<tr>
<td>Stain resistance</td>
<td></td>
<td>No stain (Gilsonite solution test)</td>
</tr>
<tr>
<td>Color retention</td>
<td>ASTM D1729</td>
<td>Color unchanged. No color flocculation</td>
</tr>
<tr>
<td>Accelerated weathering &amp; alkali resistance</td>
<td>TT-P-19D (cycle of 4 hours UV exposure at 60°C followed by 4 hours condensation at 40°C over alkali substrate)</td>
<td>No chalking with consistent gloss levels and no color change after 300 hours</td>
</tr>
</tbody>
</table>

RECOMMENDED USES

On new or previously painted wood, concrete, masonry, stucco, fair-faced concrete, gypsum boards, non chalking old paint, cement plaster, tyrolean or grats, brick, eternit, putty filler and properly primed or painted metal substrates, in occupied buildings, hotels & campuses, market places, food & beverage plants, hospitals & pharmaceutical premises, car parks, over & under passes, public places, industrial plants & confined areas. Gloss type series 13100 for exterior & interior applications. Semi-gloss & satin type series 13900 & 13200 for interior & sheltered exterior applications.

SURFACE PREPARATION

Surfaces must be solid, clean & dry, free from oil, grease, salt, efflorescence, dust, & other contaminants. Deteriorated previous coatings, weak, friable & blistered paints or chalky substances should be removed by scrapers, paint removers or flame spraying & rebonded by a primer conditioner. Glossy surfaces need dulling with sand paper.
Wood surfaces:
Moisture content in wood should not exceed 12%. Fill cracks and holes with a suitable filler. Smooth surface properly and dust.

Concrete surfaces:
Newly laid concrete should be allowed to become fully cured. Alkaline & acid surfaces should be cleaned & neutralized. When paint removers or etching solutions are used, water flushing should follow.
To level-up concrete & masonry surfaces, fill blow holes, crevices, hollows, irregularities etc...with TINOCRETE FILL COAT (block filler) field-prepared in compliance with the technical recommendations of TINOCRETE product specs, or a suitable filler.

Metal surfaces:
Rust, remnants, midscale, contaminants, etc… should be removed completely and properly cleaned. Sand blasting or mechanical/manual preparation in compliance with ISO 12944-5 standard should be followed.

PRIMING
Concrete & wood surfaces could be primed with one coat of TINOCRYL EMULSION TINTED PRIMER - LOW VOC, series 21300. SEALOMAT SEALER - LOW VOC (CLEAR), Nr. 15013 or SEALOMAT PIGMENTED SEALER - LOW VOC, series 23200 could also be applied on concrete & plaster surfaces. Previously applied compatible paints that are in good condition need no priming.

Galvanized steel and black steel surfaces require priming with acrylic anti-rust primer Low VOC / Low odor TINOCRYL EMULSION ANTI-RUST PRIMER Nr. 15025, in two coats for black steel and one coat for hot-dip-galvanized steel.

THINNING
With clean water, abt. 25% for brush application & up to 20% for roller or airless spray application.

APPLICATION
As per code of practice and MPI Architectural Painting Specification Manual. Prepare surface & prime as recommended above.
Brush, roller or spray (preferably airless spray) in uniform thickness.
Thickness of paint film depends on condition of surface. Two coats are usually applied, over the priming coat or over the undercoat to give satisfactory results.
In renovation works, touch-up and one coat usually suffice.

Scope of work with Low Odor / Low VOC products:
1. On concrete & wood substrates:
   - Prepare substrate and prime as noted above.
   - Apply 2 coats of TINOFIL PUTTY - LOW VOC, Nr. 15035 & smooth the surface.
   - Apply one coat of undercoat TINOCRYL EMULSION TINTED PRIMER/UNDERCOAT - LOW VOC, series 21300 diluted 50% with water.
   - Apply 2 coats of TINOCRYL EMULSION PAINTS – LOW VOC of the required type & gloss diluted with water by about 20%.

2. On steel and hot-dip-glavanized steel surfaces:
   - Prepare surface and prime as noted above.
   - Apply 2 coats of TINOCRYL EMULSION PAINTS – LOW VOC, gloss, series 13100, semi-gloss, series 13900 or satin, series 13200 diluted 20% with water.
Clean tools and equipment with water immediately after use.
CONDITION OF APPLICATION
Can be applied at surface temperatures from 5°C. Apply only to surfaces with temperatures between 4°C to 10°C above the dew point. This product may be applied at relative humidity ranging from 30% to 85%. Good ventilation is necessary. The product should not be exposed to mechanical stress until fully cured.

APPLICATION EQUIPMENT
Brush & Roller  Recommended for coating small areas.
Conventional Spray  Pressure pot equipped with dual regulators, 3/8" I.D.
Airless Spray  Pressure at nozzle  > 2000 psi
  Nozzle tip  0.015" - 0.019"

DRYING & RECOATING TIME
At a temperature of 23°C & 65% r.h. a coated film of 100µm w.f.t.
- Dries to touch in abt. 20 minutes.  - Dries to recoat in abt. 4 hours.  - Dries to handle in abt. 6 hours.

GLOSS
Available in gloss finish series 13100, semi-gloss finish series 13900 and satin finish series 13200.

COVERAGE
Depends on condition of surface and applied film thickness; in normal applications 40-50 sq.m. per coat per US gallon.  Contents of 1 US gallon cover 44 sq.m. at 35 µm d.f.t.

COLORS
Multi-color range as per color card.  Intermixes & custom colors are available on request.

PACKING
In cylindrical tin containers of the following capacities:
  • 1US gallon = 3.78 L.
  • 1US quart = 0.94 L.
  • 5US gallons pail = 18.9 L.
  • 30US gallons drum = 113.5 L. (on request)

WARRANTY
TINOL products are warranted to be free of materials and manufacturing defects, & to give the performance required of good quality coatings of International Standards, when properly applied in accordance with the written directions and the Code of Practice.  If any product proves to contain materials or manufacturing defects that substantially affect its performance, it will be either replaced free of charge or the purchase price reimbursed.  Other liabilities or claims for any consequential loss or damage are disclaimed.

DISCLAIMER
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