**OROTAN™ CA-2500 Dispersant**
Hydrophobic Copolymer Pigment Dispersant for Tinted Waterborne Coatings

**Regional Product Availability**
Asia-Pacific

**Description**
OROTAN™ CA-2500 Dispersant is a new class of hydrophobic copolymer dispersants that are designed to maintain excellent color acceptance and performance in a wide range of paint formulations. It is especially designed for problematic systems thickened with HASE (Hydrophobically-modified Alkali Soluble Emulsion) rheology modifiers that traditionally have poor color acceptance with hydrophobic copolymer-type pigment dispersants.

OROTAN CA-2500 Dispersant is supplied at 27% solids in the ammonia form and recommended for flat though high gloss acrylic, styrene-acrylic, silicone modified acrylic, and vinyl acrylic formulations. It is also effective over a pH range of 6.5 to 10 with a wide temperature range.

The hydrophobic nature of OROTAN CA-2500 Dispersant allows it to have surfactant-like properties offering excellent pigment wetting capability and compatibility with all ACRYSOL™ Rheology Modifiers.

**Key Features**
- Color compatibility
- Very effective with inorganic and organic pigments
- Excellent pigment wetting capability
- Excellent compatibility with a range of rheology modifiers (ASE, HASE and HEUR types)
- Wide versatility. Can be used in flat through high gloss formulations
- Interior stain resistance performance

**Benefits**
- Excellent color development and acceptance of paint formulations
- Compatible for use across a wide variety of pigments
- Efficient use of the dispersant
- Can be used across a range of paint formulations
- Ability to use one dispersant across a paint formulation range
- Consumer satisfaction with cleaner interior walls

**Typical Properties**
(These properties are typical but do not constitute specifications).

<table>
<thead>
<tr>
<th>Property</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear to light amber color</td>
</tr>
<tr>
<td>Solids, by weight, %</td>
<td>27.0</td>
</tr>
<tr>
<td>Density (g/ml), wet</td>
<td>1.04</td>
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<tr>
<td>pH</td>
<td>8.4</td>
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<tr>
<td>Viscosity (Brookfield RVT #1, 60 rpm), cps</td>
<td>&lt; 100</td>
</tr>
<tr>
<td>Chemical Type</td>
<td>Hydrophobic copolymer</td>
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</table>
**Formulating with OROTAN™ CA-2500 Dispersant**

**General**

OROTAN™ CA-2500 Dispersant should be tested at 0.5 to 3.0% active ingredient based on total pigment weight. It is important to determine the proper level for the finished paint formulation or pigmented system by determining a Dispersant Demand Curve.

**Dispersant Demand Method**

1) Add 500 grams of water into a milbase container and stir with high speed disperser on low speed.

2) Add enough pigments into the water to create a high viscosity paste; then, record the pigment slurry concentration.

3) Transfer 250 mls of the pigment slurry to a 300 ml plastic container and record the weight.

4) Measure the viscosity of the pigment slurry with a Brookfield viscometer.

5) Titrate 0.25% of active ingredient OROTAN™ CA-2500 Dispersant on pigmentation into the pigment slurry. Mix on high speed, stop, and record the Brookfield viscosity.

6) Repeat Step 5, until the minimum viscosity is achieved. Data can be plotted graphically by a simple XY axis comparing slurry viscosity versus OROTAN CA-2500 Dispersant concentration.

7) The optimum dispersant concentration is calculated by multiplying the minimum viscosity concentration point by 1.5.

**Heat Age Storage (Compatibility Testing)**

Once the optimum OROTAN™ CA-2500 Dispersant level is determined by the Dispersant Demand Method, it is essential to confirm that the selected dispersant concentration provides good mill base viscosity, adequate stability and compatibility in the actual paint formulation. The heat-age stability testing is used to give an indication of long-term storage stability.

It is also suggested to evaluate properties that are influenced by the dispersant such as: gloss development, tint strength, color acceptance (rub up), water and scrub resistance. Test methods for these evaluations and samples of OROTAN CA-2500 Dispersant are available by contacting your Dow Coating Materials representative.
Handling Precautions
Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

Storage
Store products in tightly closed original containers at temperatures recommended on the product label.

Disposal
Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user’s responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Coating Materials Technical Representative for more information.

Chemical Registration
Many countries within the Asia-Pacific require the registration of chemicals, either imported or produced locally, prior to their commercial use. Violation of these regulations may lead to substantial penalties imposed upon the user, the importer or manufacturer, and/or cessation of supply. It is in your interests to ensure that all chemicals used by you are registered. Dow does not supply unregistered products unless permitted under limited sampling procedures as a precursor to registration.

Note on Asia-Pacific Product Line
Product availability and grades vary throughout the countries in Asia-Pacific. Please contact your local Dow Coating Materials representative for further information and samples.

Product Stewardship
Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice
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