



TAMOL™ 2002 Dispersant

Description

TAMOL™ 2002 Dispersant is a high-performance hydrophobic copolymer dispersant especially suitable for semi-gloss and gloss paints. TAMOL 2002 Dispersant is supplied in an emulsion form, manufactured without the use APEO surfactants. Relative to TAMOL 681 Dispersant, TAMOL 2002 provides reduced use cost, reduced as-supplied viscosity, lower odor, higher as-supplied solids, and formulation flexibility via choice of neutralizing base and absence of solvent.

TAMOL 2002 Dispersant is supplied in the unneutralized emulsion form and thus, allows the formulator to choose the neutralizing base to best meet odor and handling requirements. Sodium hydroxide, potassium hydroxide, sodium carbonate and AMP™ 95 Multifunctional Amine, as well as ammonia, can be used to neutralize the emulsion. Depending on the formulation, improved gloss and reduced silking compared to TAMOL 681 Dispersant has been seen in laboratory testing.

Like TAMOL 681 Dispersant, TAMOL 2002 Dispersant offers excellent gloss potential combined with good corrosion resistance and compatibility with reactive pigments. It is very compatible with HEUR rheology modifiers, such as ACRY SOL™ RM-995 and ACRY SOL™ RM-5000 Rheology Modifiers. Early water resistance of TAMOL 2002 Dispersant is strongly influenced by the choice of neutralizing base, with volatile bases typically giving better resistance.

To obtain the maximum gloss and hiding often required in higher gloss paints, we suggest a usage level of 3%-5% dispersant solids on pigment solids. As a starting point when replacing TAMOL 681 Dispersant, TAMOL 2002 should be used at the same solids level. It is a prudent practice to test one or two lower levels of TAMOL 2002 Dispersant as well, since it may be possible to use lower levels of TAMOL 2002 in some formulations with good results.

Since TAMOL 2002 Dispersant is supplied in the low pH, unneutralized emulsion form, it requires neutralization and solubilization before it can efficiently disperse the pigment. Although TAMOL 2002 must be neutralized to maximize its function as a dispersant, it is not necessary to pre-neutralize as a separate step. Usually all that is required is a slight modification to the order of addition to assure that the pH is above 8.5 prior to addition of pigment.

If TAMOL 2002 Dispersant is added to the grind liquids (ensure that the total liquid volume is at least twice the volume of the TAMOL 2002), then base can be added with stirring until the pH is about 9. The pigment can then be added as usual. [Once the approximate level of base to achieve pH 9.0 is determined, the base can be added to the grind liquids + TAMOL 2002 mixture without measuring pH every time.] Note that mixing TAMOL 2002 Dispersant with other grind liquids before adding base facilitates adequate dilution, so that any viscosity increase on neutralization is minimized. The pH of the grind should be maintained above approximately 8.5 as pigment is added.

Caution: TAMOL™ 2002 Dispersant should not be exposed to "swelling solvents" such as methyl CARBITOL™ Glycol Ether Solvent while it is still in the emulsion form. The rapid swelling can result in gel formation. Adding methyl CARBITOL™ Glycol Ether Solvent after the base is preferred to avoid this problem.

Typical Physical Properties

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

| Property | Typical Values |
|--------------------------|--|
| Appearance | Off-white milky liquid |
| Chemical type | Hydrophobic copolymer emulsion polyelectrolyte |
| pH (as shipped) | 3.0 to 5.0 |
| Solids, % | 42 |
| Viscosity, cP, #3/60 rpm | 10 to 75 |
| Density, lb/gal | 8.86 |

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 Considerations

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 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.

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

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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