



ACRYSOL™ I-62A Emulsion

Aqueous Alkali-Soluble Resin for Pigment Dispersion

Regional Product Availability

- Asia-Pacific

Description

ACRYSOL™ I-62A Emulsion is an aqueous alkali-soluble acrylic copolymer which has broad utility as a dispersant for organic and inorganic pigments. As a pigment dispersant, it offers excellent dispersion for whites and a variety of deep-tone formulations. It is especially useful in formulations designed for thermosetting applications. It is a waterborne colloidal dispersion containing both carboxylic acid and hydroxyl functionality, and as such will crosslink with melamine-formaldehyde or urea-formaldehyde resins, thereby becoming part of the polymer matrix and improving the film properties.

Features and Benefits

- High pigment dispersing efficiency.
- Broad formulation latitude.
- Offers improved water resistance of coating.
- Cross-links with cross-linker chemistries such as aminoplast resins.
- Supplied un-neutralized, allowing choice of neutralizer.

Typical Properties

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

Property	Typical Values
Appearance	Opaque, white to off-white liquid
Solids, by weight, %	50.0
Density, wet, (g/ml)	1.04
pH	3.5
Glass Transition Temperature, Tg ($\pm 2^\circ\text{C}$)	45
Minimum Film Forming Temperature ($\pm 2^\circ\text{C}$)	19
Viscosity (Brookfield LV #2, 60 rpm, 25°C), cps	< 300
Storage precautions	Protect from freezing

Potential Applications

- Pigment dispersion.
- Graining inks.
- Graphic arts.



Formulating Guidelines

Neutralization: ACRY SOL™ I-62A Emulsion is supplied at 50% solids at low pH. Before pigment dispersion, ACRY SOL I-62A Emulsion should be diluted and neutralized, as in the following examples:

Material	Example 1 Parts by Weight	Example 2 Parts by Weight
ACRY SOL™ I-62A Emulsion (50%)	10.0	50.0
Water	10.0	47.1
DMAE (50% aqueous solution)	2.0	
Ammonia (28%)		2.9

In typical applications, ACRY SOL I-62A Emulsion is diluted to 25% weight solids, then neutralized with a quantity of dimethylaminoethanol (DMAE) roughly equal to 20% weight solids of ACRY SOL I-62A Emulsion. The final solution pH should be approximately 8.7 to 9.5, independent of amine, i.e., whether ammonia or tertiary amine is used. For thermoset coating formulations containing melamine-formaldehyde resins, a tertiary amine such as DMAE or triethylamine (TEA) is suggested for best formulation stability.

Efficiency

A level of 2 to 4% resin solids of ACRY SOL™ I-62A Emulsion, based on total pigment weight, is usually sufficient for good pigment dispersion and dispersion stability. The actual amount of ACRY SOL I-62A Emulsion solids required is dependent on the specific choice of pigments. Higher levels may be necessary with carbon blacks or for milling organic pigments.

Water Resistance and Durability

ACRY SOL™ I-62A Emulsion is an excellent choice with thermosetting polymers because it offers maximum water resistance by becoming incorporated into the polymer matrix. The use of a non-reactive dispersant could cause poorer water resistance. Durability data demonstrates that the coatings based on ACRY SOL I-62A Emulsion perform comparably to those which employ the conventional dispersants.

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.

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883-00369-01-121 DOW
11/2021, Rev.2