



Technical Data Sheet
for Europe, Middle East, Africa and India

PRIMAL™ SS-640

Acrylic Dispersion

Product Description

PRIMAL™ SS-640 Acrylic Dispersion is manufactured without added APEO (no APEO surfactants intentionally added) and is used over cementitious substrates such as fiber cement tiles for facade and roofing, concrete elements and corrugated sheets.

Application

PRIMAL™ SS-640 Acrylic Dispersion offers long term durability with its good alkali resistance, UV-durability and water whitening resistance. PRIMAL SS-640 Acrylic Dispersion also enables to formulate paints with excellent flexibility reducing significantly cracking tendency on unstable substrates or crack initiation from coating defects. It has a low coalescent demand enabling low VOC levels and very high early blocking resistance. PRIMAL SS-640 Acrylic Dispersion is designed to perform best on industrial coating lines where good preheating and forced drying conditions are available. PRIMAL SS-640 Acrylic Dispersion can be formulated into both pigmented coatings and clear varnishes for use directly over fiber cement or pigmented paints.

Typical Properties¹⁾

Appearance	Milky white liquid
MFFT	28 °C
Solids content	49.5 ... 50.5 %
pH	8.5 ... 9.5
Density	1.07 g/cm ³
Viscosity (Brookfield LV, spindle 2 @ 60 rpm, 25°C)	80 500 mPa·s

¹⁾ Please note that the values shown are typical values for your guidance. They are not to be taken as specifications and are subject to certain variability. Please consult the sales specifications for details.

Formulation Guidelines

PVC and Choice of Pigments: With PRIMAL™ SS-640 Acrylic Dispersion, as in all coating systems, the pigment loading and choice of pigments has a strong influence on final exterior durability. For optimal performance, we recommend pigment volume concentrations not significantly higher than 20% for facade and 25% for roofing applications. We recommend the choice of high durability pigments such as Ti-Pure R-960 and Bayferrox types. Although many kinds of extenders can be used, in general we recommend the use of mica due to the better acid and chemical resistance of this extender.

Coalescent: The choice and amount of coalescent has a major influence on film formation. For optimal performance, the paint film should be sufficiently coalesced so as to prevent microscopic defects such as cracks and blisters. In general, we recommend a level of 7 - 12% Butyl Cellosolve on polymer solids in applications where good preheating and force drying conditions are available. Similar levels of DOWANOL™ PnB or DPnB can also be used alone or as 3:1 blend.

Additives: OROTAN™ 731 A ER and OROTAN™ 851 ER LO products are the preferred dispersant for the formulation of PRIMAL™ SS-640 Acrylic Dispersion. Commercial defoamers such as those available from Byk Chemie can be used, for example use of BYK 019 in grind and BYK 028 or BYK 024 in letdown has shown good performance in lab. However we recommend careful selection of additives to avoid coating defects. Hydroxyethyl cellulose (HEC) based thickeners can be used or synthetic rheology modifiers like hydrophobically modified ethylene oxide urethane (HEUR) based ACRY SOL™ RM-8 W, ACRY SOL™ RM-825 or ACRY SOL™ SCT 275 have given the best results in our laboratories. Waxes like Slip-Ayd SL 300 are often added to improve blocking and stacking properties.

Health and Safety Considerations

Safety Data Sheets (SDS) are available from The Dow Chemical Company. SDS are provided to help customers satisfy their own handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations. SDS are updated regularly, therefore, please request and review the most current SDS before handling or using any product. For further questions consult your Dow contact person.

Storage and Handling

PRIMAL™ SS-640 Acrylic Dispersion should be stored at temperatures between 5°C and 40°C in tightly sealed containers. Avoid freezing of the material! Upon purchase, applicable legislation on storage must be maintained/followed. PRIMAL SS-640 Acrylic Dispersion is protected against microbial attack during transportation and storage in not opened original packaging. To avoid problems with microbial attack during processing and in opened packaging, attention should be paid on hygiene. In some cases it could make sense to add biocides under your sole decision to avoid problems with microorganisms. We recommend using the product under safety precautions as described in the SDS. Avoid contact with eyes and skin. Large quantities should be handled in a correctly ventilated area. Material can create slippery conditions. As the product contains water corrosion-resistance equipment should be used for processing. Low shear pumps like diaphragm pumps should be used.

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.

Additional Information

For more information you may call the following numbers:

International Toll-Free

00800-3-694-6367

International Toll-Free from:

Austria, Belgium, Denmark, Finland (prefix 990), France, Germany, Hungary, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

EMEI Toll Call

0031-11567-2626

Italy Toll-Free National

00800-783-825

South Africa Toll-Free National

00800-99-5078

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