

Technical Data Sheet
for Europe, Middle East and AfricaPRIMAL™ E-357 EF
Acrylic Emulsion Polymer

Product Description PRIMAL™ E-357 EF Acrylic Emulsion Polymer is APEO-free* acrylic emulsion polymer for use over cementitious substrates.
**APEO is not intentionally added and is not knowingly introduced from another raw material.*

Application PRIMAL™ E-357 EF Acrylic Emulsion Polymer is designed for use in coatings to be applied on cementitious substrates, such as fibre cement panels for facade and roofing, concrete elements and corrugated sheets. It performs best on industrial coating lines where good preheating and forced drying conditions are available and provides enhanced exterior durability, fast hardness development and high block resistance.
PRIMAL E-357 EF Acrylic Emulsion Polymer has very broad formulation latitude. It can be formulated for curtain coater, spray, airless spray, roller coater and industrial brush applications.
It can be formulated into both pigmented coatings and clear varnishes for use directly over fibre cement or over pigmented coatings.

Typical Properties¹⁾

Appearance	Milky white liquid
MFFT	55 °C
Solids content	47 ... 48 %
pH	9 ... 10
Density	1.08 g/cm ³
Viscosity (Brookfield LV, spindle 1 @ 30 rpm, 25°C)	20 ... 100 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™ E-357 EF Acrylic Emulsion Polymer, as in all coating systems, the pigment loading and choice of pigments has a strong influence on final exterior durability. For optimal performance, we suggest pigment volume concentrations not significantly higher than 20% for facade and 25% for roofing applications.

We suggest the choice of high durability pigments such as Ti-Pure R-960 and Bayferrox types and other mineral pigments. 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.

Formulation Guidelines

Coalescent: The choice and amount of coalescent has a major influence on film formation. For optimal performance, the coat film should be sufficiently coalesced so as to prevent microscopic defects such as cracks and blisters. In general, we suggest a level of 7.5% Butyl Glycol on polymer solids in applications where good preheating and force drying conditions are available. Similar levels of DOWANOL™ PnB or DOWANOL DPnB can also be used.

Additives: OROTAN™ 731 product is the preferred dispersant for formulations with PRIMAL™ E-357 EF Acrylic Emulsion Polymer. The use of TRITON™ CF-10 enhances the wetting of difficult pigments. Commercial defoamers such as those available from Byk Chemie or Cognis can be used; however we suggest the careful selection of additives in order to obtain good curtain coater stability. Cellulosic thickeners or combinations with rheology modifiers like ACRY SOL™ RM-8 product or ACRY SOL RM-2020 product give 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™ E-357 EF Acrylic Emulsion Polymer should be stored at temperatures between 5°C and 40°C in tightly sealed containers. Avoid freezing of the material! Local legislation on storage must be followed.

PRIMAL E-357 EF Acrylic Emulsion Polymer 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 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

Customer Notice

literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Additional Information	<p>For more information you may call the following numbers:</p> <table><tr><td>Europe*</td><td>+800-3-694-6367 (toll free)</td></tr><tr><td>Italy</td><td>800-783-825 (toll free, national)</td></tr><tr><td>Europe, Middle East, Africa</td><td>+31-11567-2626 (toll call)</td></tr><tr><td>South Africa</td><td>+800-99-5078 (toll free, national)</td></tr></table> <p>*) International toll free from Austria, Belgium, Denmark, Finland (prefix 990), France, Germany, Hungary, Ireland, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.</p>	Europe*	+800-3-694-6367 (toll free)	Italy	800-783-825 (toll free, national)	Europe, Middle East, Africa	+31-11567-2626 (toll call)	South Africa	+800-99-5078 (toll free, national)
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