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Laromer® UP 9118

Product Description

Laromer UP 9118 is an unsaturated polyester resin for the formulation of radiation-curable putties, primers and topcoats for wood and wood products. It is very easy to matt and gloss can be significantly reduced with small amount of matting agent.

Key Features & Benefits

- Bisphenol A free
- Very easy to matt
- Good reactivity
- Good resistance to chemical

Chemical Composition

Unsaturated polyester, 58% in Dipropylene glycol diacylate (DPGDA)/Trimethylolpropane triacrylate (TMPTA)

Properties

Typical Properties

Appearance		Clear, slightly yellowish
Viscosity at 23°C (DIN EN ISO 3219)	cps	~ 30,000
Shear rate D	s^{-1}	50
Acid value (ISO 3682, DIN EN 53402)	mg KOH/g	≤ 35
Iodine color number (DIN 6162)		≤ 5
Density at 20 °C (68 °F) (ISO 2811, DIN 53217)	g/cm^3	~ 1.1804
Flash point (DIN 51785, ISO 2719)	°C (°F)	> 100 (212)

Solubility, diluent tolerance

Laromer UP 9118 is soluble in most of the common solvents used in the coatings industry (e.g. butyl acetate). For processing, it can be further diluted with monomers such as propoxylated glycerol triacrylate, trimethylolpropane triacrylate, tripropylene glycol- or dipropylene glycol diacrylate as well as with esters, ketones or aromatic hydrocarbons.

Compatibility

It is homogenously miscible with most unsaturated acrylic resins, e. g., other Laromer grades.

Applications

Laromer UP 9118 is a medium-reactive, unsaturated polyester resin preferably applied in coatings for wood and wood products. After curing, coats are easy to sand, hard and scratch-resistant. Translucent extenders such as barium sulfate, talcum, kaolin or colloidal silica can be used in the manufacture of surfacers.

Laromer UP 9118 can be further diluted with low-volatile monomers such as monofunctional, difunctional or trifunctional acrylates. These are incorporated into the film during curing and influence its properties. Monofunctional acrylates increase film flexibility. Difunctional acrylates have little influence on film hardness and flexibility while trifunctional acrylates increase film hardness.

With an adequate flash-off zone available, inert solvents may also be used. These must, however, be completely removed from the film prior to radiation curing.

A photo initiator must be added to allow curing by ultraviolet radiation. Suitable initiators is α-Hydroxyketone (AHK) type. Best results for white-pigmented coating compounds are obtained using 1–2% Acyl Phosphine Oxide type of photo initiators.

A tertiary amine should not be used as a co-initiator. The high acid value of Laromer UP 9118 could lead to haze and other effects caused by incompatibility could arise.

Laromer UP 9118 is very easy to matte. Below is a starting point formulation for matted clear coat.

Recommended Starting Point Formulation

Low Gloss Clear Topcoat

Material	Pounds
Laromer® UP 9118	40.0
Laromer® DPGDA	44.0
α-Hydroxy ketone	4.0
Efka® FL 3277	2.0
Acematt®[2] OK 607	10.0
Total	**100.0**

Solid content of the SPF is approximately 100%.

[2] *Registered trademark of Evonik*

Please contact the local BASF technical specialist for further details.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in federal, state, and local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Laromer UP 9118.

Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

Important

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