Industrial Coatings

Technical Data Sheet

Luwipal® 066 LF

BASF
The Chemical Company

Product Description

Luwipal® 066 LF is a highly methanol-etherified, melamine-formaldehyde resin for industrial coating applications.

Key Features & Benefits

- Promotes the natural grain and color of wood
- Good elasticity, adhesion, and hardness
- Excellent toughness and weatherability

Chemical Composition

Hexamethoxymethyl melamine-formaldehyde resin

Properties

Typical Characteristics

Appearance	colorless liquid
Non-volatile matter	93 – 96%
Acid value	≤ 1 mg KOH/g
Viscosity at 23°C	2,000 – 6,000 cps
Shear rate D	41.3 s^{-1}
Hazen color number	≤ 50
Density	1.18 g/cm³, 9.85 lbs/gal
Free formaldehyde	≤ 0.6%

Solubility, diluent tolerance

Soluble in ethanol, butanol, ethyl acetate, butyl acetate, methyl ethyl ketone, toluene, xylene, butyl glycol, methylene chloride, 1-methoxy-2-propanol, and (2-methoxymethylethoxy) propanol; limited solubility in methanol and white spirit; soluble in water after the addition of acid.

Compatibility (1:1, solids on solids)

Compatible with many acrylic dispersions, polyvinyl alcohol, nitrocellulose, and short to medium oil non-drying alkyds, many acrylic resins, urea-formaldehyde resins, and melamine-formaldehyde resins.

These typical values should not be interpreted as specifications. Solubility and compatibility should be tested for each individual combination.

Applications

Luwipal® 066 LF is a highly methanol-etherified, melamine-formaldehyde resin that is particularly suited as a crosslinking component for coil and can coatings. Due to its low viscosity, it is also suited for high solids coatings.

Luwipal® 066 LF is recommended for applications such as:

- Interior/exterior general industrial metal coating applications
- Interior/exterior plastic components coating applications
- Automotive OEM applications

Processing

Since Luwipal® 066 LF cures to produce brittle films, formulations must contain some form of plasticizing co-binder. It can then be used to formulate acid-curable finishes as well as baking finishes.

In baking finishes, the resins have low reactivity and require baking temperatures above 150°C (300°F). Adding 1 – 2% of p-toluenesulfonic acid based on melamine-formaldehyde solids reduces curing temperatures but reduces shelf life. Use of blocked catalysts increases shelf life and commercially available.

With small amounts of low molecular-weight alcohols, Luwipal® 066 LF can be diluted with water. Small amounts of acid will improve its solubility in water even further.

Solvent-type acid-curing paints can be formulated with Luwipal® 066 LF blended in ratios of up to 1:1 with short to medium oil, non-drying or semi-drying alkyd resins. A suitable catalyst is p-toluenesulfonic acid added in proportions of 10 – 15%, based on melamine-formaldehyde resin solids. The coatings will have improved resistance to chemicals than those obtained from urea-formaldehyde resins.

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.

Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Luwipal® 066 LF.

Important

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