Technical Data Sheet

RESIMENE® CE 7504 ULF

Developmental Resin

Application

RESIMENE® CE 7504 ULF is a methylated/iso-butylated melamine formaldehyde crosslinker with a high degree of alkylation, high monomer content and outstandingly low free formaldehyde content. It is supplied as a clear and colourless liquid, free of organic solvents.

RESIMENE® CE 7504 ULF is particularly suitable to formulate high solids coatings with excellent appearance, interlayer adhesion and flexibility. Typical applications include automotive topcoats, coil coatings and general industrial metal coatings.

Properties	Typical values*	Standard
Non-volatile content, foil method, 45 min 45 °C [%]	> 98.0	ASTM D 1259
Viscosity, 25 °C [mPas]	2400 – 3800	DIN EN ISO 3219-B
Colour (APHA)	≤ 30	DIN EN ISO 6271
Haze (APHA)	≤ 5	DIN EN ISO 7027
Free formaldehyde content [%]	< 0.1	DIN EN ISO 11402 4.3

*Typical values are based on available data and do not necessarily represent the resin specification after full commercialization

Processing

RESIMENE® CE 7504 ULF is soluble in alcohols, esters, ketones, aromatic and – partially – aliphatic hydrocarbons. In combination with suitable acrylic, alkyd, polyester or epoxy resins it can be used to formulate baking enamels with excellent hardness, flexibility and resistance properties.

RESIMENE® CE 7504 ULF is not water soluble but in combination with co-solvents it can be used in water-borne coatings as well, such as anodic electrodeposition coatings (AED).

Optimum film properties can typically be achieved with binder/crosslinker ratios in the range of 70/30 to 75/25, based on solids. The optimum ratio depends on the nature of the binder resin, the cure conditions and the required coating properties and therefore should be determined experimentally. Due to the high alkylation degree of RESIMENE® CE 7504 ULF we recommend usage of a blocked sulfonic acid catalyst such as Nacure 5225[1] to provide good cure response at typical baking schedules (20 min 140 – 150 °C). If acid functional groups are present in the main binder resin, the crosslinking reaction is accelerated as well.

To achieve optimum formulation stability in water-borne systems, the addition of tertiary amines at a concentration of 0.5 – 1.0% on total binder solids and a pH value of the formulation in the range of 8.0 – 8.5 are recommended.

Storage

Liquid resins age when stored. As a result of aging, product properties may change over time. The speed of these changes depends on storage conditions.

RESIMENE® CE 7504 ULF can be stored for at least 24 months from the date of production at 15 - 25 °C in originally closed containers. If exposed to higher temperatures, resin properties might change even before reaching the storage life indicated above. At low temperatures, the resin becomes highly viscous, but may be fully reused after warming up to room temperature. The application of excessive local heat should be avoided.

The storage life indicated above is a guideline based on our experience. Users of this resin should conduct individual tests in order to fully understand possible changes to the product performance due to aging.

[1]Nacure is a registered trademark of King Industries, Inc, www.kingindustries.com

Handling and safety requirements
Detailed information is available in the safety data sheet for the product.

Prefere Melamines GmbH
Alt Fechenheim 34
D-60386 Frankfurt am Main
Germany

Prefere Melamines LLC
730 B Worcester Street
Springfield, MA 01151
USA