



TERACURE® N-39

Low-Viscosity Aliphatic Polyisocyanate Hardener
Based On Hexamethylene Diisocyanate Trimer (HDI)

TYPICAL CHARACTERISTICS

Appearance	Clear Liquid
NCO (As Supplied) %	23.0 ± 1.0
Weight Per Gallon, Lbs @25°C	9.43
Flash Point (CC), °C	>160
Viscosity @25°C, mPa@s	650 ± 50
Equivalent Weight, Avg. (As Supplied)	183
Color, Hazen (APHA)	≤ 40
Hexamethylene Diisocyanate Monomer (HDI), %	< 0.5
Solids Content, Approx, %	100
Bulk Density, kg/m @25°C, Approx	1131

COMPATIBILITY

Teracure® N-39 is a low-viscosity aliphatic polyisocyanate hardener based on Hexamethylene Diisocyanate Trimer (HDI homopolymer). Teracure® N-39 is designed for use as a hardener with 2K polyurethane and polyaspartic coatings systems. At 100% solids, Teracure® N-39 provides a low viscosity for high-solids and solvent-free coatings formulations. Teracure® N-39 is used as the hardener in 2K coatings systems with resins such as polyurethane polyols (polyether, polyester, and acrylic) and polyaspartic amines.

Teracure® N-39 is soluble in esters (such as butyl acetate and propylene glycol monomethyl ether acetate); in ketones (such as acetone, methyl ethyl ketone, methyl isobutyl ketone, cyclohexanone); and aromatic hydrocarbons (such as xylene, toluene, Aromatic 100 or Solvesso 100); and mixtures of these solvents.

In blends of solvents and other materials with Teracure® N-39, contaminants such as moisture and reactive groups (hydroxyl or amino groups) must be avoided. Use only solvents that contain no more than 0.05% water as a maximum. In all cases, the blends should be carefully evaluated and tested for stability in storage. Do not dilute Teracure® N-39 with solvents below a solids content of 40% by weight. Do not use aliphatic hydrocarbon solvents with Teracure® N-39.

Teracure® N-39 can be blended with aliphatic polyisocyanates and aromatic polyisocyanates, but in each case the compatibility must be tested for stability.

APPLICATIONS

Teracure® N-39 is a low-viscosity hardener, usable in both high-solids or solvent-free polyurethane and polyaspartic coatings systems. These coatings systems based on Teracure®

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N-39 can be formulated to provide relatively low-viscosity, solvent-free, air-dry or forced-dry coatings for OEM automotive coatings, auto refinishes, general transportation coatings, and industrial metal coatings, as well as for plastics, concrete and composites.

Teracure® N-39 can be reacted with polyaspartic amines for direct-to-metal applications.

Teracure® N-39 is also used in polyaspartic concrete coatings featuring fast cure, excellent adhesion, and high film-build for self-leveling systems.

The performance attributes of properly formulated coatings based on Teracure® N-39 include excellent light-fastness, outdoor durability, mechanical properties and chemical resistance.

Coatings formulated with N-39 also exhibit very high gloss and color retention.

Because of its relatively low viscosity at 100% solids, Teracure® N-39 can be used to create easy-to-use solvent-free or high-solids coatings.

FEATURES

Low Viscosity @ 600 ± 150 mPa@s

Hardener For Both Polyurethanes and Polyaspartics

Outstanding Resistance to Solvents and Other Chemicals

Excellent Weatherability, Durability, Color Retention and Gloss Retention

Outstanding Mechanical Properties and Abrasion Resistance

Compatible With A Variety Of Other Isocyanates

PROUDCT USES (For professional use only. Not intended for retail sales.)

Teracure® N-39 must be tested in advance in both laboratory and hands-on field trials before commercial use to determine the best formulation and suitability for use and application.

Pflaumer's technical service center personnel are available to answer formulating questions.

Recommended starter formulations can be designed upon request for specific applications.

OTHER PFLAUMER PRODUCTS FOR THE FORMULATOR

Pflaumer offers other products for formulating 2K coatings:

Terachem ® 53-Colorants	37 Ready-to-use pigment dispersions for 2K polyurethanes and polyaspartics, including color packs for on-site use
Teracure ® Aliphatic Polyisocyanates	Complete line of HDI-based trimer isocyanates
Teraspartic ®Polyaspartic Amines	For slow, medium, and fast curing
Terachem ®53-2242	Anti-sag additive for 2K polyaspartics
Terachem ®53-2371	Aluminum Oxide Nano-Dispersion for 2K polyaspartics
Tallicin ®1500	Flow and leveling modifier
Tallicin ®3000	Pot life extender for trimer-type isocyanates used in 2K polyurethanes
Tallicin ®4000	Bubble-release, agent and flow/leveling modifier for high-solids polyurethanes

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Tallicin ® 4040	Bubble-release, flow and leveling modifier for solvent-free polyaspartics and polyurethanes
Tallicin ®4600	Stabilized Tin Catalyst for Polyurethanes

SAFETY, STORAGE, AND HANDLING

Consult MSDS before use. Store Teracure® N-39 in tightly sealed containers. Prevent contact with moisture and excess humidity. Once opened, any remaining Teracure® N-39 in the container is best stored under dry nitrogen blanketing. Store, transfer, and handle under a nitrogen blanket. Replace damaged gaskets on drums or totes. Keep storage temperatures at 15°C - 40°C (59°F - 104°F).

Shelf life of product is 9 months from date product is shipped by Pflaumer and then maintained in original closed containers and stored in proper storage conditions at 25°C (75°F). If repackaging, use containers that will prevent moisture contamination. Avoid containers made with polyethylene, polystyrene, copper or tin.

CONTAINER SIZES

55 gallon drums (225 Kg/496 Lb)

275 gallon totes (1,125 Kg/2,480 Lb)

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