

Chemlok® 487 A/B Adhesive

Description

LORD Chemlok® 487 A/B two-component adhesive is used to bond thermoplastic elastomers (TPEs) to metals, glass, plastics (both thermoplastic and thermoset) and other elastomers during injection molding. Chemlok 487 adhesive works well for bonding Santoprene®, Kraton® and Sarlink® thermoplastic elastomers. When using Chemlok 487 adhesive to mold TPEs to glass, apply Chemlok 144 primer prior to adhesive application.

Features and Benefits

Durable – provides a strong, durable bond that, in many instances, has strength equal to or greater than the elastomer being molded.

Fast Drying – allows for spray application; provides a uniform coating over a large surface area, accelerated solvent evaporation and a shortened drying time.

Versatile – bonds a variety of TPEs to a variety of substrates.

Santoprene is a trademark of Advanced Elastomer Systems. Kraton is a trademark of Kraton Polymers. Sarlink is a trademark of DSM Thermoplastic Elastomers.

Application

Surface Preparation – Remove grease, oil, fingerprints, dust, mold release agents, rust and other contaminants from the surfaces to be bonded. Wear chemical resistant gloves. Wipe the surfaces with a clean cloth soaked in a solvent such as acetone, methyl ethyl ketone or isopropyl alcohol. On metal surfaces, a suitable alkaline degreasing agent may be used. Rinse metals and allow the surfaces to thoroughly dry.

Mixing – Thoroughly stir Chemlok 487A component. While stirring Chemlok 487A component, add Chemlok 487B component using the following mix ratio:

by Weight	100:13.6, 487A to 487B
by Volume	100:15.0, 487A to 487B

Thoroughly mix the two-component adhesive before use. Transfer the mixed adhesive to an enclosed vessel where it can be kept free from moisture contamination. Mixed working life is approximately one week at room temperature. Solids content, by volume, of mixed adhesive is 10-11%.

Typical Properties*

	487A	487B
Appearance	Clear to Yellow Liquid	Clear to Cloudy Water-thin Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	100-350	1-10
Density kg/m ³ (lb/gal)	860.0-910.0 (7.2-7.6)	780.0-820.0 (6.5-6.8)
Solids Content, % by Weight	12.6-15	1-2
by Volume	11-12	1-2
Flash Point, °C (°F)	27 (81)	15 (60)
Solvents	Xylene	Methyl Isobutyl Ketone (MIBK)

*Data is typical and not to be used for specification purposes.

LORD TECHNICAL DATA

Chemlok 487 adhesive is normally used full strength for dip and brush applications. For spray application, dilute adhesive with xylene or toluene to a Zahn Cup #2 viscosity of 24-28 seconds.

Applying – Apply adhesive by dip, brush or spray methods. The recommended dry film thickness of Chemlok 487 adhesive is 17.8-25.4 micron (0.7-1.0 mil), which requires that a wet film thickness of 170-244 micron (6.7-9.6 mil) be applied.

Drying/Curing – Allow Chemlok 487 adhesive to air-dry for one hour at room temperature. Oven heat methods will accelerate drying to less than 10 minutes at 93°C (200°F).

Although optimum adhesion is achieved when molding is done shortly after adhesive application and drying, coated parts can sit for 4 to 5 days before bonding if care is taken to protect the coated parts from contamination. Prior to molding, preheat the adhesive coated parts to 107-121°C (225-250°F) and immediately place parts into the mold.

For insert mold bonding, apply Chemlok 487 adhesive to prepared metal or plastic inserts at a dry film thickness of 17.8-25.4 micron (0.7-1.0 mil). For harsh environments, prime metal inserts with Chemlok 205 primer before applying Chemlok 487 adhesive topcoat.

For injection molding TPEs to glass, clean the glass surface with a vinegar-based glass cleaner and apply Chemlok 144 primer. Thoroughly hydrolyze this primer before applying Chemlok 487 adhesive. Allow the adhesive to air-dry for one hour at room temperature or for 3-10 minutes at 93°C (200°F). Preheat primed and adhesive topcoated glass to 121°C (250°F) prior to injection molding. Exercise caution in removing assemblies from the mold and allow molded assemblies to layover for 24 hours before testing.

Cleanup – Use ketone or aromatic type solvents for clean up of uncured adhesive. Thoroughly cured adhesive may require solvent immersion for extended periods of time, followed by mechanical abrasion.

Shelf Life/Storage

Shelf life is six months from date of shipment when stored at 21-27°C (70-80°F) in original, unopened container.

Chemlok 487 adhesive is moisture sensitive; cap the head space of container holding this adhesive with dry air, or nitrogen. Replacement air to the enclosed vessel should pass through a desiccant column. This allows dry air to return to the container while making it easier to remove the material and maintain adhesive stability.

To help prevent the formation of a gel-like consistency, store Chemlok 487A component above 21°C (70°F). If, however, a gel-like consistency does develop, heat Chemlok 487A component to temperature above 49°C (120°F) and shake the adhesive until it returns to a homogeneous liquid.

LORD TECHNICAL DATA

Cautionary Information

Before using this or any LORD product, refer to the Material Safety Data Sheet (MSDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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