Chemlok® 218 Adhesive

OBSOLETE

Technical Data Sheet

Chemlok® 218 adhesive is a one-coat adhesive used to bond castable and millable polyurethane elastomers to metals and other rigid substrates. It is composed of a mixture of polymers and resins dissolved in an organic solvent system.

Features and Benefits:

Environmentally Resistant – provides excellent resistance to water, salt spray, a variety of solvents and other environmental conditions.

Convenient – requires no primer, reducing labor and costs.

Elastomers:

- Castable Urethane
- Millable Urethane
- Thermoplastic Urethane (TPU)
- Hytrel TPE only

Application:

Surface Preparation – Thoroughly clean metal surfaces prior to application. Remove protective oils, cutting oils and greases by solvent degreasing or alkaline cleaning. Remove rust, scale or oxide coatings by suitable chemical or mechanical cleaning methods.

For further detailed information on surface preparation of specific substrates, refer to Chemlok Adhesives application guide.

Mixing – No agitation is required before or during use. If dilution is needed, use either a 1:1 isopropanol:toluene blend (by volume) or glycol ether solvents. Note proper dilution for the various application methods is best achieved by experience.

Applying – Apply adhesive by brush, dip, spray, roll coat or any method that gives uniform coating and avoids excessive runs and tears.

Regardless of application method, the dry film thickness of Chemlok 218 adhesive should be 19.05-31.75 micron (0.75-1.25 mil).

Chemlok 219 adhesive is an excellent primer to use with Chemlok 218 adhesive. For castable urethane, the properties of Chemlok 219 and Chemlok 218 adhesives are complimentary – Chemlok 219 adhesive provides excellent protection as a primer for the metal; Chemlok 218 adhesive bonds well to castable polyurethanes. Chemlok 218 adhesive is also tolerant of processing conditions such as long prebakes. Together, they increase resistance to a variety of environmental elements.

When using Chemlok 219 adhesive as a primer, first apply Chemlok 219 adhesive and allow it to air-dry. Then apply Chemlok 218 adhesive and allow to air-dry. The combination is then prebaked at 121°C (250°F) for the desired time.

Typical Properties*	
Appearance	Clear to Slightly Hazy Amber Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 3, 60 rpm	750 - 1050
Density kg/m^3 (lb/gal)	 950.0 - 990.0 (7.9 - 8.3)
Solids Content by Weight, %	18 - 21
Flash Point (Seta), °C (°F) Pensky-Martens Closed Cup	2 (36)
Solvents	Toluene, Trichloroethylene, Isopropanol, Ethanol

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

Drying/Curing – Allow coated parts to air-dry for at least 60 minutes at room temperature for complete solvent evaporation prior to the bonding operation. The adhesive film may be force dried at higher temperatures for shorter periods of time. Drying for 15 minutes at 121°C (250°F) has no harmful effect on adhesion.

To ensure optimum adhesion to the prepared metal surface, bake Chemlok 218 adhesive coated inserts a minimum of 2 hours at 121°C (250°F). Large inserts will require longer baking time at 121°C (250°F) to negate the heat sink effect.

Parts coated with Chemlok 218 adhesive may be vulcanized immediately after air-drying.

Molding procedures that are used with heat vulcanizing urethane elastomers can be used with Chemlok 218 adhesive. The cure time and temperature for bonding is the same as that required to vulcanize the urethane compound being molded. Best results are obtained with curing temperatures above 71°C (160°F).

Cleanup – Use alcohol, such as isopropanol, or a chlorinated solvent, such as trichloroethylene, to clean up small spills.

Shelf Life/Storage:

Shelf life is one year from date of shipment when stored by the recipient at 21-27°C (70-80°F) in original, unopened container. Do not store or use near heat, sparks or open flame.

Cautionary Information:

Before using this or any Parker Lord product, refer to the Safety Data Sheet (SDS) 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.

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