

Chemosil® 342 Elastomer Bonding Agent

Description

LORD Chemosil® 342 elastomer bonding agent is a one-coat, heat-activated bonding agent used to bond NBR elastomers to metals and other rigid substrates during the vulcanization process. It is composed of a mixture of polymers and heat-reactive components in an organic solvent system.

Features and Benefits

Convenient – requires only a single coat application to bond NBR elastomers to a wide variety of metals and other rigid substrates.

Environmentally Resistant – provides high resistance to water and many technical oils.

Application

Surface Preparation – Thoroughly clean metal surfaces prior to adhesive 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.

- **Chemical Cleaning**

Chemical treatments are readily adapted to automated metal treatment and adhesive application lines. Chemical treatments are also used on metal parts that would be distorted by blast cleaning or where tight tolerances must be maintained. Phosphatizing is a commonly used chemical treatment for steel, while conversion coatings are commonly used for aluminum.

- **Mechanical Cleaning**

Grit blasting is the most widely used method of mechanical cleaning. However machining, grinding or wire brushing can be used. Use steel grit to blast clean steel, cast iron and other ferrous metals. Use aluminum oxide, sand or other nonferrous grit to blast clean stainless steel, aluminum, brass, zinc and other nonferrous metals.

For further detailed information on surface preparation of specific substrates, refer to Chemlok/Chemosil Adhesives application guide. Handle clean metal surfaces with clean gloves to avoid contamination with skin oils.

Typical Properties*

Appearance	Gray Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	50-300
Density @ 20°C (68°F) g/cm ³ (lb/gal)	0.90-0.94 (7.51-7.84)
Solids Content by Weight, % Dry residue, 30 min @ 130°C (266°F)	23-26
Flash Point, °C (°F) Pensky-Martens	9 (48)
Solvents	Methyl Ethyl Ketone (MEK), Methyl Isobutyl Ketone (MIBK)

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

LORD TECHNICAL DATA

Mixing – Thoroughly stir Chemosil 342 bonding agent before use, and agitate sufficiently during use to keep dispersed solids uniformly suspended.

If needed, proper dilution for the various application methods is best achieved by experience. Use MEK or MIBK as a diluent to reduce viscosity. Diluent must be slowly added to the bonding agent while continuously mixing.

Applying – Apply bonding agent by brush, roll coat, dip or spray methods. Avoid applying thick coats which result in poor drying and may lead to film displacement during molding.

- Brushing/Roll Coating
Apply full strength.
- Dipping
Dilute bonding agent with up to 20% of MEK or MIBK.
- Spraying
Dilute bonding agent to a viscosity of 10-15 seconds (4 mm DIN cup) using 50-200% MEK or MIBK.

Regardless of application method, recommended dry film thickness of Chemosil 342 bonding agent is 3-15 micron (0.1-0.6 mil) on blasted substrates.

Drying/Curing – Allow applied bonding agent to air-dry for at least 30 minutes at room temperature. Drying time can be shortened by using hot air drying ovens or tunnels up to 90°C (194°F).

Dried films of Chemosil 342 bonding agent are non-tacky; therefore, coated parts can be stacked and stored in a dry, grease-free environment for up to three months without affecting bond performance.

Cleanup – Use MIBK or MEK for clean up.

Shelf Life/Storage

Shelf life is six months from date of manufacture when stored below 25°C (77°F) in original, unopened container.

Cautionary Information

Before using this or any 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.

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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