

Chemosil® 222 Elastomer Bonding Agent

Composition

Polymers and heat reactive components in an organic solvent system.

Description

LORD Chemosil® 222 is a versatile, heat activated bonding agent which will bond a variety of rubber compounds to metal and plastic substrates.

In some circumstances Chemosil 222 may be used as a single coat. For general use it should be used in combination with an appropriate metal primer such as Chemosil 211. When used with Chemosil 211, the in-service environmental resistance of the final bond will be very much improved.

Chemosil 222 bonds elastomer compounds based on natural rubber (NR), butadiene (BR), isoprene (IR), styrene butadiene (SBR), butyl (IIR), nitrile (NBR) and chloroprene (CR) rubber to most metals, alloys and polar polymeric substrates.

Bonding occurs during the vulcanization of the rubber. Typical cure temperature ranges for molding processes are 130-180°C. Lower temperatures of around 100°C with extended cure times of many hours may also be used for tank lining applications.

Processing

A properly prepared substrate surface is essential to achieve consistent elastomer bond performance. All oil, grease and other soluble contamination should be removed by solvent degreasing or alkaline cleaning. Rust, scale and other non-soluble contaminants should be removed by mechanical or chemical methods. Grit blasting is the most commonly used mechanical method. A second degreasing stage after the mechanical treatment is strongly recommended to remove residual grease, oil and abraded dusts. Chemical treatments for ferrous substrates usually involve the use of phosphating agents.

Chemosil 222 contains dispersed solids and must be thoroughly stirred before and at frequent intervals during use. Chemosil 222 can be applied undiluted by brush or roller coating. For spray or dip applications, Chemosil 222 must be diluted.

For a recommended dry film thickness of 10-15 microns, the following dilution is recommended:

Brushing/rolling:	undiluted
Dipping:	up to 10% xylene or toluene
Spraying:	40-60% xylene (4 mm cup 18-20 sec., air pressure 3-4 bar, nozzle Ø 1-2 mm, distance ~ 50 cm)

Delivery Specifications

		Method *)
Solids content	24.0 - 28.0 weight %	970074
Viscosity at manufacturing	120 - 250 mPas	950055
Density	0.95 - 1.01 g/ml	950014

*) Methods

970074: Determination of Dry Residue, 30 min @ 130°C

950055: Brookfield Viscometer, Model LVT Spindle 2, 30 rpm, @25°C

950014: Determination of Density @ 20°C

Properties

Appearance: black liquid

LORD TECHNICAL DATA

Dilution will accelerate settling, maintain sufficient agitation to ensure product uniformity. A thin uniform coating gives best results. Avoid applying thick coats which can give poor drying and may lead to film displacement during molding. At ambient temperature, allow 30 minutes drying time after coating. Elevated temperatures in hot air ovens or drying tunnels will reduce the drying time required. Chemosil 222 will dry to a hard, non-tacky film.

Coated components can be stacked or loaded into bins for transport and storage. Clean cotton gloves should be worn when handling coated components. Coated components can be stored for up to 3 months before bonding without adversely affecting the bond performance. Coated components should be protected from dust, moisture and other contamination during storage.

Safety/hazard Information

See Health and Safety Data Sheet

Delivery Form

Containers 10 kg, 25 kg or 190 kg

Shelf Life

At least 24 months in closed containers below 25°C.

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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