Chemosil® 310 Elastomer Bonding Agent

Composition

Polymers and heat reactive components in organic solvents.

Description

LORD Chemosil[®] 310 is a special heat activated bonding agent which will bond a variety of polar rubber compounds to metal and plastic substrates.

Chemosil 310 may be used as a single coat system to bond elastomer compounds based e.g. on 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 moulding processes are 130-180°C.

Chemosil 310 may also be used as metal primer in combination with other bonding agents such as Chemosil 222, 225, 231 G 411, NL 411 and X 6025.

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 phosphatizing agents.

Chemosil 310 contains dispersed solids and must be thoroughly stirred before and at frequent intervals during use. Chemosil 310 can be applied undiluted by brush or roller coating. For spray or dip applications, Chemosil 310 must be diluted.

Delivery Specifications

Solids content Viscosity at manufacturing Density

*) 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

22.5 - 26.5 weight % 140 - 300 mPas 0.90 - 0.96 g/ml **Method *)** 970074 950055 950014

black liquid



LORD TECHNICAL DATA

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

Brushing/rolling:	undiluted
Dipping:	up to 30% xylene or toluene
Spraying:	60 - 90 % xylene or toluene (4 mm cup 14-16 sec., air pressure 3-4 bar, nozzle Ø 1-2 mm, distance ~50 cm)
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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 (sweep) during molding. At ambient temperature, allow 30 minutes drying time after coating. Elevated temperatures (up to 90°C) in hot air ovens or drying tunnels will reduce the drying time required. Chemosil 310 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, 23 kg or 175 kg

Shelf Life

At least 12 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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