



THIXON™ 814-2 Solvent-Based Adhesive

Transportation Adhesives – European Region

Description

THIXON 814-2 is a solvent-based cover-coat adhesive used with THIXON P-6-EF adhesive primer for bonding EPDM, IIR, and EPM to metal substrates.

THIXON 814-2 is also a splice adhesive for bonding cured and uncured EPDM and IIR compounds to themselves and to other elastomers.

THIXON 814-2 is also a primer for EPDM rubber which is being coated with flock adhesives or coating.

Product Typical Properties

Appearance	Black, liquid
Dry Solid Content (Non-Volatile Solids by Weight)	18 – 22%
Viscosity, Brookfield (LV #2 spindle at 30 rpm)	200 – 600 mPa.s (cP)
Density (20°C)	0.82 g/cm ³
Specific Gravity (20°C)	0.80 – 0.83 g/cm ³
Weight per Gallon	6.84 lbs.
Volume Solids	9.24% (calculated)
VOC Content per Gallon	5.54 lbs. (calculated)
Dry Film Density	1.67 g/cm ³ (calculated)
Flash Point (Seta)	-4°C/25°F

These properties are typical and are not to be used for specification purposes.

Main Features

Composition: THIXON 814-2 consists of reactive polymers and pigments in heptane, xylene, toluene and isoparaffinic hydrocarbons. It is formulated without reportable levels of lead or other toxic heavy metals, chlorinated solvents and ozone-depleting chemicals.

Elastomers: EPDM, IIR, EPM

Materials: THIXON or MEGUM primers adhere to hot and cold rolled steel, stainless steel, aluminum, brass and zinc plated metals prior to applying THIXON 814-2. These same primers can be used to adhere to thermoplastics such as polyamides and polyesters.

Molding and Curing: THIXON 814-2 can be used with all common molding and curing methods. Cure temperatures between 140°C and 205°C (284°F and 401°F) are recommended.

Environment Resistance: Rubber-to-metal bonding systems using THIXON 814-2 adhesive display resistance to severe environmental exposures such as humidity and corrosion. Properly prepared bonds will also resist heat, salt fog, oil and water exposures.

Directions for Use

Preliminary Surface Preparation: Properly preparing the metal surface is essential to obtaining consistent, high quality bonds.

A mechanical or chemical pre-treatment should follow degreasing. Common pre-treatments are grit blasting and phosphating. Further details are provided in our "Substrates Preparation Guide." Please contact your Dow Automotive Systems commercial representative should you need a copy of this guide.

Mixing and Diluting: Diluents – Use isoparaffinic hydrocarbons (ISOPAR E) or/and aromatic solvents such as toluene or xylene.

First, thoroughly mix THIXON 814-2 with a shear blade-type (Cowles disk) agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly. Continue to mix THIXON 814-2 while spraying or dipping to keep the dispersed solids from settling to the bottom. This will assure that a homogeneous mixture of the adhesive is applied.

Applying the Adhesive: THIXON 814-2 can be applied by brushing, dipping, spraying or other application methods. For spray application, the viscosity can be reduced by either dilution and/or heating, e.g., to 40°C/105°F.

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Application Methods	
Brushing	
Dilution Ratio	Use undiluted
Dipping	
Dilution Ratio	1 p.b.w. bonding agent + 0.1 – 0.3 p.b.w. diluent
Spraying with Air	
Dilution Ratio	1 p.b.w. bonding agent + 0.5 p.b.w. diluent
Spray Gun	Most spray equipment can be used
Nozzle	e.g., 1.0 mm/0.04 in.
Air Pressure	2 – 4 bar/30 – 60 psi

Drying Time: The drying time is approximately 45-60 minutes at 20°C/68°F.

Drying at higher temperatures will reduce drying time accordingly, e.g., 5 minutes force drying at 80°C/176°F. Heated circulating air will further accelerate drying.

Do not dry at temperatures above 120°C/250°F.

Suggested Dry Film Thickness: Apply THIXON 814-2 at a dry film thickness of 10 to 12 microns (0.4 to 0.5 mil.).

Dry Film Stability: THIXON 814-2 has excellent dry film stability. Inserts coated with THIXON 814-2 can be stored for several weeks, if protected from contamination.

Theoretical Coverage: Applied at a dry film thickness of 12 microns (0.5 mil.), THIXON 814-2 will cover approximately 9 m²/kg (361 square feet/gallon).

Pre-Bake Resistance: Depending on the rubber formulation, inserts coated with THIXON 814-2 can be pre-baked for up to 10 minutes at 160°C/320°F without adversely affecting bond quality.

Cleaning: Cleaning should be done using recommended dilution solvents. Further details are given in our "General Guide to Use." Please contact your local Dow Automotive Systems commercial representative should you need a copy of this guide.

Storage and Handling: Keep containers tightly closed. Store them in a cool, dry, well-ventilated area away from heat, direct sunlight and sources of ignition. Containers should be supported and grounded before opening, dispensing, mixing, pouring or emptying.

Shelf Life: THIXON 814-2 has a shelf life of 12 months if stored unopened at temperature below 25°C/77°F. If the material is kept beyond its recommended shelf life, a quality control evaluation should be performed prior to use. This check should include bond testing as well as evaluation of typical physical properties.

Safety Information: Material Safety Data Sheets (MSDS) are available for all Dow Automotive Systems products. These sheets contain important information that you may need to protect your employees and customers against any known health and safety hazards associated with our products. We recommend that you obtain copies of our MSDS from your local Dow Automotive Systems technical representative before using our products in your facilities. We also suggest that you contact your suppliers of other materials recommended for use with our products for appropriate health and safety precautions before using them.

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