



THIXON™ 547-EF Solvent-Based Adhesive

DESCRIPTION

THIXON 547-EF is a solvent-based adhesive formulated for use with the THIXON P-7-6 solvent-based primer on pre-treated metal.

Product Typical Properties

THIXON 547-EF	
Appearance	Black
Dry solid content (Non-volatile solids by weight)	30-32%
Viscosity (Zahn 4)	37 sec.
Viscosity, Brookfield #3 RVT spindle at 100 rpm	500 mPa.s (cP)
Specific gravity (20°C)	1.01 g/cm ³
Weight per gallon	8.4 lbs
Volume solids	20-21% (calculated)
VOC content per gallon	5.8 lbs (calculated)
Flash point (Seta)	+24°C/75°F
Auto-ignition point	189°C/372°F
These properties are typical and are not to be used for specifications purposes.	

Main Features

Composition : THIXON 547-EF consists of reactive polymers and pigments in xylene and toluene. It is formulated without reportable levels of lead or other heavy metals.

Elastomers : NR, NBR, SBR, EPDM, etc.

Materials : THIXON 547-EF, when used as a one-coat adhesive (without THIXON P-7-6), adheres to galvanized pre-treatment, aluminum and cold rolled steel for some forming applications.

Molding and Curing : Metals coated with THIXON 547-EF can be baked to quickly remove solvent using a peak metal temperature up to 104°C (220°F) for a short duration (up to 1 minute is typically adequate). This bake assures proper solvent removal from THIXON 547-EF prior to slitting, forming and molding the adhesive coated metal.

Environmental Resistance : Rubber-to-metal bonding systems using THIXON 547-EF and THIXON P-7-6 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 usual Rohm and Haas commercial representative should you need a copy of this guide.

Mixing and Diluting

Diluents : THIXON 547-EF is formulated to be used without dilution. Should you need to adjust the viscosity/solids during application, the use of xylene and/or toluene is recommended.

First, thoroughly mix/agitate THIXON 547-EF with a propeller-type agitator. The amount of mix time depends on the size of the container. For example, a gallon container of THIXON 547-EF should be mixed at 20 to 40 rpm for at least 10 minutes prior to use, whereas a drum of THIXON 547-EF should be mixed at least 30 minutes prior to use. Continue to mix or recirculate while dispensing THIXON 547-EF from its application reservoir to keep the dispersed solids from settling to the bottom of the container. This will assure that a homogeneous mixture of the adhesive's contents is applied.

Applying the Adhesive

THIXON 547-EF is typically applied by reverse roll coating on a coil coating line. Set-up depends on customer's line and equipment. Final line parameters also depend on the customer's needs.

Assistance with selecting line parameters to optimize both primer and adhesive performance can be acquired by working with your usual Rohm and Haas commercial representative.

Drying Time

Unlike other rubber-to-metal primers, THIXON 547-EF is typically applied using reverse roll coating methods and then dried rapidly using an oven set at extreme temperatures. This can be done because the coated metals typically do not reach the oven set temperature, but rather reach a peak metal temperature that rapidly drives off the solvents to hasten the entire primer application process.

Metals coated with THIXON 547-EF can be baked to remove solvent using a peak metal temperature up to 104°C (220°F). Peak metal temperatures exceeding 220°F can activate the adhesive and compromise its performance.

Suggested Dry Film Thickness

Apply THIXON 547-EF at a dry film thickness of 5 to 8 microns (0.2 to 0.3 mil.).

Dry Film Stability

THIXON 547-EF displays exceptional dry film stability on a rolled-up metal coil protected from any plant contamination. Coils coated and stored for up to 1 year have displayed acceptable results after being slit, formed and molded. Results may vary and testing must always be done to assure required performance. It is always recommended that adhesive-coated inserts or metal be molded as soon as time permits to assure optimal adhesive performance.

Theoretical Coverage

Applied at a dry film thickness of 5 microns (0.2 mil.), THIXON 547-EF will cover approximately 495 m²/kg (1626 square feet/gallon).

Pre-bake Resistance

Inserts coated with both THIXON P-7-6 and THIXON 547-EF have displayed pre-bake resistance

for up to 5 minutes at 160°C (320°F) without adversely affecting the bond quality depending on the rubber compounds and adhesive selection. Pre-bake resistance is dependent on the elastomer being bonded. Testing must always be done to assure required performance. Dried films of THIXON P-7-6 and THIXON 547-EF show no tendency to sweep during transfer or injection molding.

Cleaning

Cleaning should be done using recommended dilution solvents. Further details are given in our "General Guide to Use", please contact your usual Rohm and Haas 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 547-EF has a shelf life of 4 months if stored unopened at temperatures 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 Rohm and Haas 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 Rohm and Haas 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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Rohm and Haas Company - 10 South Electric Street, West Alexandria, OH 45381, USA - Phone: +1 800 348 8846 - Fax : +1 937 839 1343

Rohm and Haas France - Z.I. Le Pressoir Vert, 45400 SEMOY, FRANCE - Phone: +33(0)2 38 61 81 00 - Fax : +33(0)2 38 83 88 96

Rohm and Haas Deutschland - In der Kron 4, 60489 Frankfurt am Main, GERMANY - Phone: +49(0)69 7 89 96-0 - Fax : +49(0)69 97 84 24 44

