



MEGUM™ 3351 Solvent-Based Adhesive

DESCRIPTION

MEGUM 3351 is a solvent-based primer, used in combination with MEGUM or THIXON™ cover-coats. Due to the formation of comparatively flexible films, MEGUM 3351 is especially suitable for rubber-metal parts which are being shaped after vulcanization.

MEGUM 3351 can also be used as a one-coat adhesive for bonding polar elastomers.

Product Typical Properties

MEGUM 3351	
Appearance	Grey, liquid
Dry solid content (Non-volatile solids by weight)	23-27%
Viscosity, Brookfield (LV #2 spindle at 30 rpm)	130-280 mPa.s (cP)
Density (20°C)	0.92-0.97 g/cm ³
Specific gravity (20°C)	0.95 g/cm ³
Weight per gallon	7.95 lbs
Volume solids	14.0% (calculated)
VOC content per gallon	5.8 lbs (calculated)
Dry film density	1.70 g/cm ³ (calculated)
Flash point (Seta)	+18°C/64°F
These properties are typical and are not to be used for specifications purposes.	

Main Features

Composition : MEGUM 3351 consists of reactive polymers and pigments in methyl isobutyl ketone (MIBK) and Xylene. It is formulated without reportable levels of lead or other toxic heavy metals.

Elastomers (one-coat) : NBR, HNBR, ACM, etc.

Materials : MEGUM 3351 adheres to hot and cold rolled steel, stainless steel, aluminium, brass, as well as thermoplastics such as polyamides and polyesters.

Molding and Curing : MEGUM 3351 can be used with all common molding and curing methods. Cure temperatures between 120°C and 205°C (250°F and 400°F) are recommended.

Environmental Resistance : Rubber-to-metal bonding systems using MEGUM 3351 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 : Use ketones like MEK and MIBK, or 1:1 mixtures of ketones and aromatic solvents such as toluene or xylene.

First, thoroughly mix MEGUM 3351 with a propeller-type agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly.

Continue to mix MEGUM 3351 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

MEGUM 3351 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.

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 + 0.4-1.0 p.b.w. diluent.

Viscosity : at 20°C/68°F.

10-40 mPa.s (cP) [Brookfield, LV#1 spindle at 60 rpm].

12-16 seconds [DIN-4-cup].

14-18 seconds [Ford-4-cup].

16-22 seconds [Zahn #2 cup].

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 30 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.

Suggested Dry Film Thickness

Apply MEGUM 3351 at a dry film thickness of 5 to 15 microns (0.2 to 0.6 mil.).

Dry Film Stability

MEGUM 3351 has excellent dry film stability. Inserts coated with MEGUM 3351 can be stored for several weeks, if protected from contamination.

Theoretical Coverage

Applied at a dry film thickness of 10 microns (0.4 mil.), MEGUM 3351 will cover approximately 15 m²/kg (570 square feet/gallon).

Pre-bake Resistance

Adhesive-coated inserts can be pre-baked for up to 5 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 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

MEGUM 3351 has a shelf life of at least 24 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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