THIXON™ 300-EF/301-EF

Description
THIXON™ 300-EF/301-EF is a two component solvent based one-coat vulcanizing adhesive for bonding fluorocarbon elastomers to metal. THIXON™ 300-EF/301-EF is formulated without reportable levels of lead (or other heavy metals), chlorinated solvents and ozone-depleting chemicals.

Benefits & Features
Durable bonding, excellent environmental resistance including heat aging, salt exposure, fog, oil, and water immersion.

Uncured Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Amber</td>
<td></td>
</tr>
<tr>
<td>Solids Content</td>
<td>36</td>
<td>%</td>
</tr>
<tr>
<td>Dry Film Density</td>
<td>1.0 to 1.3</td>
<td>g/cm³</td>
</tr>
<tr>
<td>VOC Content</td>
<td>5.00</td>
<td>lb/gal</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-6.67</td>
<td>°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.020</td>
<td>Pa·s</td>
</tr>
<tr>
<td>Theoretical Coverage</td>
<td>0.300</td>
<td>m²/l</td>
</tr>
<tr>
<td>Recommended Film Thickness</td>
<td>3.8 to 13</td>
<td>µm</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>18</td>
<td>month</td>
</tr>
</tbody>
</table>

Elastomer
Fluorocarbon based elastomers

Substrate
CRS, Phosphate pretreated CRS, Aluminum and Stainless Steel

Surface Prep
Review Dow’s rubber to bonding agent guide or contact your account manager.

Mix Instructions
Diluent - Use methyl ethyl ketone as the diluent. Thoroughly mix both THIXON™ 300 and THIXON™ 301. Combine equal volumes of each into a clean container. Shake them well or stir them with a clean spatula or rod. The two liquids will mix readily within one or two minutes. The mixture will turn violet with no undissolved solids at room temperature. The shelf life of mixture diluted 1:1 with methyl ethyl ketone is two weeks.

Application Technique
THIXON™ 300-EF/301-EF can be applied by dipping, brushing, or spraying.

Brush - Dilute 1 part of the THIXON™ 300-EF/301-EF blend with 1 part MEK.

Dip - To obtain a dry film thickness of 0.3 to 0.4 mil, dilute 1 part of the THIXON™ 300-EF/301-EF, blend with 1 to 1-1/2 parts diluent.

Conventional air spray - Dilute 1 part THIXON™ 300-EF/301-EF blend with 2 parts diluent. This will give the blend a viscosity of 28-30 seconds, #1 G.E. Zahn cup.

Equipment: Binks DeVilbiss
Gun models: 62 or 18 JGA 502 or MBC 510
Fluid nozzles: 63A - 0.040" FX - 0.042" 63B - 0.046" FF - 0.055" 63C - 0.052"
Air caps: 63PB or 66SD 704 or 777 Pressure tanks: Pressure tanks must be equipped with an agitator and be ASME rated for industrial use.
Flow rate: 160 to 200 cc/minute
Atomization pressure: 20 to 40 psi

Drying the Film
Thoroughly dry the film of THIXON™ 300-EF/301-EF before continuing, approximately 30 to 45 minutes at room temperature (60 to 80°F). At lower temperatures, dry longer. To shorten dry time, force dry approximately 3-5 minutes at 180°F. You can force dry at temperatures up to 212°F.

Molding and Curing
THIXON™ 300-EF/301-EF can be used with all common molding and curing methods. Use a cure temperature between 370 and 400°F.
Pre-Bake Resistance

You can prebake inserts coated with THIXON™ 300-EF/301-EF for up to 10 minutes at 350°F without affecting the bond quality. THIXON™ 300-EF/301-EF film shows some tendency to sweep during transfer and injection molding. If the film does sweep, reduce the film thickness or prebake the coated inserts for 5 to 10 minutes at 350°F before molding.

Dry Film Stability

THIXON™ 300-EF/301-EF has good dry film stability. Parts coated with THIXON™ 300-EF/301-EF can be stored for one week before use, if they are protected from airborne contaminants.

Clean-up

Equipment clean up should be done using recommended dilution solvents.

Packaging/Sizes Available

Phenolic lined steel cans, pails or drums.

Storage & Stability

The shelf life of this material is assured for 24 months (from the date of manufacture) at temperatures below 78°F in an unopened container.

Toxicity and Safety Information

Read the Safety Data Sheet before using this material. Toxicity and safety information is included in the SDS.

Food Contact Applications

Dow Automotive products are not approved for direct or indirect food contact or drinking water applications. If your applications include food contact or drinking water requirements, please contact your Dow representative. For more information on the regulatory status of this product, please refer to the SDS for this product.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

1 Clear & Amber, Violet when combined
2 1 gram, 2 hrs @ 100°C
3 Seta
4 20 cps combined
   Viscosity, Brookfield, #1 @ 100 rpm
5 One gallon of THIXON™ 300-EF/301-EF applied at a dry film thickness of 0.3 mil will cover approximately 1,385 square feet.
6 Magnetic induction probe

7 18 for uncombined components.
   Combined component under normal conditions is 14 days.
   Product History/Store in a cool (<70°F), dry, well-ventilated area away from heat, ignition source and direct sunlight.
Product Stewardship

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products — from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Medical Applications Policy

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: Dow will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:

a. long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 72 continuous hours;
b. use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
c. use as a critical component in medical devices that support or sustain human life; or
d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted. Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use. DOW MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS.

Disclaimer

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the Customer is responsible for determining whether products and the information in this document are appropriate for the Customer’s use and for ensuring that the Customer’s workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Dow assumes no obligation or liability for the information in this document. NOWARRANTIESAREGIVEN;ALLIMPLIEDWARRANTIESOFMERCHANTABILITYORFITNESSFORAPARTICULARPURPOSEAREEXPRESSLYEXCLUDED.

NOTICE: If products are described as “experimental” or “developmental”: (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Dow to change specifications and/or discontinue production; and (4) although Dow may from time to time provide samples of such products, Dow is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

NOTICE: This data is based on information Dow believes to be reliable, as demonstrated in controlled laboratory testing. They are offered in good faith, but without guarantee, as conditions and method of use of Dow products are beyond Dow’s control. Dow recommends that the prospective user determine the suitability of these materials and suggestions before adopting them on a commercial scale.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability for the accuracy and completeness of such information.

Additional Information

North America

U.S. & Canada: 1-800-441-4369
1-989-832-1426
Mexico: +1-800-441-4369

Europe/Middle East

Italy: +800-783-825

Latin America

Argentina: +54-11-4319-0100
Brazil: +55-11-5188-9000
Colombia: +57-1-219-6000
Mexico: +52-55-5201-4700

South Africa

+800-99-5078

Asia Pacific

+800-7776-7776
+603-7965-5392

www.dowautomotive.com

This document is intended for use within Asia Pacific, Europe, Latin America, North America

Published: 2016-10-05

© 2018 The Dow Chemical Company