



# ROBOND™ TR-7021-D

**Description** ROBOND™ TR-7021-D is a waterborne-based seal adhesive for bonding NBR, HNBR, and XNBR compounds.

**Benefits & Features** Excellent general purpose seal adhesive.

Uncured Properties	Nominal Value	Unit	Test Method
Color	Grey		
Solids Content			
-- 1	23	%	
-- 2	27 to 35	%	ASTM D2369
Density	1.07 to 1.14	g/cm <sup>3</sup>	ASTM D1475
Dry Film Density	1.4	g/cm <sup>3</sup>	
VOC Content	2.60	lb/gal	
Viscosity <sup>3</sup> (25°C, Brookfield RVT)	0.030 to 0.10	Pa·s	ASTM D1084
Viscosity (25°C)	15 to 30	sec	Zahn Cup 2
Theoretical Coverage <sup>4</sup>	20.6	m <sup>2</sup> /l	
Recommended Film Thickness	5.1	µm	
Recommended Film Thickness Range	2.5 to 15	µm	
Shelf Life <sup>5</sup> (25°C)	12	month	

**Elastomer**

NBR, HNBR, AEM, ACM rubber compounds.

**Substrate**

CRS, Phosphate pre-treated CRS, Aluminum, Stainless Steel, etc.

**Surface Prep**

Review Dow 's rubber-to-substrate bonding agent application guide or contact your account manager.

**Mix Instructions**

Diluents: Deionized or distilled water

Thoroughly stir ROBOND™ TR-7021-D before using to assure the ingredients are uniformly distributed. Do not stir the adhesive so vigorously that air is beaten in. This will cause the adhesive to foam and make it difficult to apply. Measure the specific gravity using a Hydrometer or other instrument to assure the adhesive is properly mixed. When needed, a mixture of at least four parts diluent to one part ammonium hydroxide should be used to adjust the pH.

Continue to mix ROBOND™ TR-7021-D while spraying to keep the dispersed solids from settling to the bottom. This will assure that a homogenous mixture of the adhesive is applied.

**Application Technique**

Can be applied by brushing, dipping or spraying.

Brushing: apply without dilution.

Spraying: use undiluted.

Dipping: dilute 1 part product with up to 3 parts diluent for tumble dip applications.

**Drying the Film**

Product should be applied onto the metal inserts which have been heated to 48°C (120°F), then immediately force dried for 3 to 5 minutes at 82°C (180°F), or dry 10 minutes at 65°C (150°F). Do not dry at temperatures above 121°C (250°F).

**Molding and Curing**

Can be used with all common molding and curing methods. Cure temperatures between 100°C and 205°C (250 and 400°F) are recommended.

**Dry Film Stability**

Excellent dry film stability. Inserts coated with product can be stored for several weeks if protected from contaminants.

---

**Clean-up**

Equipment clean up should be done using recommended dilution solvents.

---

**Packaging/Sizes Available**

Drums, pails and cans.

---

**Storage & Stability**

The shelf life of this material is assured for 6 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.

---

<sup>1</sup> By volume

---

<sup>2</sup> Non-volatile solids by weight

---

<sup>3</sup> Spindle #2, @ 100 RPM

---

<sup>4</sup> Applied at a dry film thickness of 0.4 mil

---

<sup>5</sup> Unopened

## 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:

- long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 72 continuous hours;
- 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);
- use as a critical component in medical devices that support or sustain human life; or
- 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. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

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

<b>North America</b>		<b>Europe/Middle East</b>	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
<b>Latin America</b>		<b>South Africa</b>	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	<b>Asia Pacific</b>	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

[www.dowautomotive.com](http://www.dowautomotive.com)

This document is intended for use within North America

Published: 2015-05-15

© 2018 The Dow Chemical Company

