

PR-1547 potting and molding compound

Description

PR-1547 is a high hardness potting and molding compound. It has a service temperature range from -70°F (-57°C) to 300°F (149°C). This material is designed for applications where resistance to cold flow, high tensile strength and excellent electrical properties are required.

PR-1547 is a two-part, chemically curing polyurethane compound. It cures at 180°F (82°C) to a tough, semiflexible, cold flow-resistant rubber. The material has very good electrical properties, especially dielectric strength and volume resistivity, in thin films.

The following tests are in accordance with MIL-M-24041 and MIL-S-8516 specification test methods.

Application properties (typical)

Color	
Part A	Amber or Black
Part B	Straw
Mixed	Amber or Black

Mixing ratio	Part A:Part B
By weight	32:100

Viscosity	
(Brookfield #5 @ 10 rpm), Poise (Pa-s)	
two-part unit	250 (25)
premixed and frozen (PMF)	450 (45)

Application life to 2500 poise (250 Pa-s) @ 75°F (24°C), hours	
two-part unit	2
premixed and frozen (PMF)	1

	Tack free time (hours)	Mold release time (hours)	Cure time to 55 A Durometer (hours)
180°F (82°C)	2	3	7

Performance properties (typical)

Cured 16 hours @ 180°F (82°C)	
Cured specific gravity	1.05
Nonvolatile content, %	99
Ultimate cure hardness, Durometer A	80
Volume shrinkage, %	2.5
Tensile strength, psi (KPa)	3000 (20690)
Ultimate elongation, %	600
Tear strength (Die C), lbs./in.	250
Compression set (ASTM D 395, Method B), %	54
(ASTM D 395, Method A), %	7
Fungus resistance (MIL-E-5272)	Non-nutrient

Peel strength, pli (N/25 mm)	
Aluminum alloy*	66 (292)
Cadmium plate*	95 (424)
Neoprene**	25 (111)
Polyvinyl chloride***	20 (89)

*Primed with PR-425 Primer
 ** Buffed and primed with PR-1523-M Adhesion promoter
 *** Tackified with methyl ethyl ketone (MEK) and primed with PR-1543 Adhesion promoter

Dielectric constant	
1 KHz @ 75°F (24°C)	5.8
1 MHz @ 75°F (24°C)	4.7

Power factor	
1 KHz @ 75°F (24°C)	0.050
1 MHz @ 75°F (24°C)	0.065

Volume resistivity, ohm-cm	
@ 75°F (24°C)	1 X 10 ¹³
@ 150°F (66°C)	5 X 10 ¹¹
@ 300°F (149°C)	5 X 10 ⁹

Surface resistivity, ohms	
@ 75°F (24°C)	1 X 10 ¹³

Insulation resistance, megohms	
@ 75°F (24°C)	200,000
@ 150°F (66°C)	10,000
@ 250°F (121°C)	500

Dielectric strength, volts/mil	
125 mils	300

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

PR-1547 potting and molding compound

Surface preparation

Prepare surfaces according to the PR-1500 Series Potting/Molding Application Guide.

Packaging options

PR-1547 is supplied as a two-part unit or premixed and frozen in Semco® cartridges.

Mixing instructions

Mix according to the PR-1500 Series Potting/Molding Application Guide.

Storage life

The storage life of PR-1547 in a two-part unit is at least 12 months when stored at temperatures below 80°F (27°C) in original, unopened containers. The storage life of PR-1547 in premixed and frozen Semco® cartridges is at least 30 days when stored at temperatures below -40°F (-40°C) in original, unopened containers.

Health precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

For emergency medical information call

1-800-228-5635.

Additional information can be found at:

www.ppgaerospace.com

For sales and ordering information call

1-800-AEROMIX (237-6649).

Semco is a trademark of PRC-DeSoto International, Inc., registered with the U.S. Patent Office

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

©2022 PPG Industries, Inc. All right reserved.

This document has been reviewed by the PPG's Aerospace Export Control Department and has been determined to contain only EAR99 controlled data.

PRC-DeSoto International, Inc.
12780 San Fernando Road
Sylmar, CA 91342
Telephone (818) 362-6711
Toll Free (800) AEROMIX
www.ppgaerospace.com

Issue Date: 02/22
Supersedes: 02/16
Lit: 0390