

PR-1574 potting and molding compound

Description

PR-1574 is a high hardness potting and molding compound. It has a service temperature range from -80°F (-62°C) to 300°F (149°C). This material is designed for applications where high retention of electrical properties after exposure to high humidity and temperature is required.

PR-1574 is a two-part, polyol curing system based curing polyurethane compound. The product requires elevated temperature for cure to obtain optimal performance properties.

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

Application properties (typical)

Color			
Part A	Light straw or Black		
Part B	Straw		
Mixed	Amber or Black		
Mixing ratio			
By weight	Part A:Part B 18:100		
Viscosity (Brookfield #7 @ 10 rpm),Poise (Pa-s)			
two-part unit	140 (14)		
premixed and frozen (PMF)	400 (40)		
Application life to 2500 poise (250 Pa-s) @ 75°F (24°C), hours			
two-part unit	90		
premixed and frozen (PMF)	30		
	Tack free time (hours)	Mold release time (hours)	Cure time to 70 A Durometer (hours)
180°F (82°C)	—	6	8

Performance properties (typical)

Cured 16 hours @ 180°F (82°C)		
Cured specific gravity	0.98	
Nonvolatile content, %	99	
Ultimate cure hardness, Durometer A	90	
Volume shrinkage, %	3.5	
Tensile strength, psi (KPa)	2500 (17240)	
Ultimate elongation, %	425	
Tear strength (Die C), lbs./in.	300	
Fungus resistance (MIL-E-5272)	Non-nutrient	
Flame resistance overload	No ignition	
Peel strength, pli (N/25 mm)		
Aluminum alloy*	72 (320)	
Cadmium plate*	53 (234)	
Neoprene**	20 (89)	
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)	2.8	
1 MHz @ 75°F (24°C)	2.6	
Power factor		
1 KHz @ 75°F (24°C)	0.02	
1 MHz @ 75°F (24°C)	0.01	
Volume resistivity, ohm-cm		
@ 75°F (24°C)	1 X 10 ¹⁵	
@ 250°F (121°C)	1 X 10 ¹²	
Surface resistivity, ohms		
@ 75°F (24°C)	1 X 10 ¹⁶	
Insulation resistance, megohms		
@ 75°F (24°C)	1 X 10 ⁸	
Dielectric strength, volts/mil		
125 mils	330	
Water vapor permeability		
@75°F (24°C) , g-cm/ (cm ² -hr-mmHg) (ASTM E 96, Procedure B)	9 X 10 ⁸	
Sound velocity in sea water		
@ 67°F (19°C), 200 KHz frequency meters/second	1581	
Humidity resistance		
	158°F (70°C) @ 95% RH (Durometer A)	200°F (93°C) @ 95% RH (Durometer A)
initial	93	93
30 days	93	92
60 days	93	90
90 days	93	86
120 days	90	86

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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.

Surface preparation

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

Packaging options

PR-1574 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-1574 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-1574 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).

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