

PRC Rapid Seal[®] 901

Description

PRC RAPID SEAL[®] 901 is a rapid-cure, low-odor, high performance, fuel-resistant sealant. It has a service temperature range from -65 °F (-54 °C) to 302 °F (150 °C), with intermittent excursions up to 360 °F (182 °C). This material is designed for fillet sealing or other general sealing applications in chemical storage tanks where there will be exposure to a variety of organic fuels. Other uses include in the chine areas of chemical storage tanks to prevent water migration between the steel and concrete base.

The cured sealant maintains excellent elastomeric properties after prolonged exposure to various types of fuels.

PRC Rapid Seal 901 is a two-part, epoxy-cured PERMAPOL[®] P-3.1 polythioether compound. The uncured material is a low-sag, thixotropic paste, suitable for application by extrusion gun or spatula. Unlike standard polysulfide sealants, it can cure at low temperatures and is unaffected by changes in relative humidity. It cures to form a resilient sealant having excellent adhesion to properly prepared common metallic substrates.

Application properties (typical)

Tested at 77 °F (25 °C), 50% RH

Color		
Part A		Black
Part B		White
Mixed		Light gray
Mixing ratio		Part A:Part B
By weight		18.5:100
Base viscosity		
(Brookfield #7 @ 2 rpm),		
Poise (Pa-s)		13,700 (1,370)
Slump, inches (mm)		
Initial	50-min.	90 min.
0.10 (2.54)	0.10 (2.54)	0.10 (2.54)
Application time, minimum		2 hours
Tack-free time		<8 hours
Cure time to 35 durometer A		9 hours
Non-volatile content		98%

Performance properties (typical)

Cured 14 days @ 77 °F (25 °C), 50% RH	
Cured specific gravity	1.45
Final cure hardness, Durometer A	48
Peel strength, pli (N/25 mm), 100% cohesion	
Fuel immersion, 7 days @ 140 °F (60 °C)	
Stainless steel*	41 (182)
Titanium*	32 (142)
3% NaCl(aq)/fuel immersion, 7 days @ 140°F (60 °C)	
Stainless steel*	45 (200)
Titanium*	45 (200)
*substrates primed with RS 748 adhesion promoter	
Tensile strength, psi (KPa) and elongation (%)	
Standard cure, 14 days @ 77 °F (25 °C), 50% RH	
407 (2804)	268%
7-day fuel immersion @ 140 °F (60 °C)	
434 (2990)	262%
Low-temperature flexibility @ -65 °F (-54 °C)	
No cracking, checking, or loss of adhesion	
Resistance to hydrocarbons, 7-day fuel immersion @ 140 °F (60 °C)	
Weight loss, %	3.55
Flexibility, 7-day fuel immersion @ 140 °F (60 °C) + 24 hrs @ 120 °F (49 °C) in air.	
No cracks after being bent 180 degrees around a 0.125 inch (3.18 mm) mandrel.	
Repairability to itself	
Excellent to both freshly cured as well as fuel-aged and abraded fillets	
Resistance to other fluids	
Excellent resistance to water, alcohols, petroleum-based and synthetic lubricating oils, and petroleum-based hydraulic fluids.	
Thermal rupture resistance	
Retains pressure of 10 psi with only negligible deformation, both before and after fuel immersion	

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Corrosion resistance

No corrosion, adhesion loss, softening, or blistering after 20-day immersion in 3% NaCl(aq)/fuel immersion @ 140 °F (60 °C)

Fungus resistance

Non-nutrient

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

Immediately before applying sealant or to prime substrates, the surfaces should be cleaned well with solvents to remove dirt and grime. Contaminants such as dirt, grease, and/or processing lubricants must be removed prior to sealant application.

A progressive cleaning procedure should be employed using appropriate solvents and a new lint-free cloth. (Reclaimed solvents or tissue paper should not be used.) Always pour solvent on the cloth to avoid contaminating the solvent supply. Wash one small area at a time.

It is important that the surface is dried with a second clean cloth prior to the solvent evaporating to prevent the redeposition of contaminants on the substrate.

Substrate composition can vary greatly. This can affect sealant adhesion. It is recommended that adhesion characteristics to a specific substrate be determined prior to application on production parts or assemblies.

Concrete surfaces need to be sanded or mechanically abraded to obtain a rough surface profile approximately equal to #60 grit sandpaper. All dust and dirt should be removed by vacuum and/or brushing the surface before sealant application.

Joints to be sealed with *PRC Rapid Seal 901* should have a backer rod installed to control sealant depth to match typical joint design guidelines. Sealant should be tooled after application to ensure good contact of the sealant with the sides of the joint.

Packing options

PRC Rapid Seal 901 is supplied in a two-part SEMKIT® package. *RS 748* adhesion promoter is included in the kit. See container for sealant mixing instructions.

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Printed in the U.S.A.

Storage life

The storage life of *PRC Rapid Seal 901* is at least 9 months when stored at temperatures between 60 °F (15 °C) and 80 °F (27 °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 Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS 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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Issue Date: 01/20
Supersedes: 05/17
Lit: 4545