Technical Data

PR-1770C faying surface sealant

Description

PR-1770C is a two-part, high temperature resistant, faying surface sealant for use over a temperature range of -55°C to +180°C, with outstanding resistance to aircraft fuels and lubricating oils and resistance to degradation by phosphate ester type hydraulic oils.

PR-1770C is a manganese dioxide cured sealant based on Permapol® P-5 liquid polymers, a chemically modified, improved class of polysulphide polymers covered by US Patent 4,623,711. The uncured sealant is a thick liquid suitable for application by brush or roller. The cured sealant maintains excellent elastomeric properties after prolonged exposure to aircraft fuels.

The following tests have been run in accordance with AIMS 04.05.001

Application properties (typical)

Colour

Part A	Black
Part B	Light grey
Mixed	Dark grey

Mixing ratio

Part B: Part A, by weight 10:1

Viscosity of base compound, Pa-s(poise) (Brookfield # 7 @ 2rpm)

280(2800)

Application life and cure time @ 25°C

	Application time in Life (Hours)	Assembly time faying surface (Hours)	Cure (Days)
C-12	12	20	14
C-24	24	80	40
C-36	36	120	TBA

Non-volatile content,% by weight

95

C-8 to Eurofighter SP-J-513-M-0020

Application Life (Hours)	Tack Free Time (Hours)	Cure time in faying surface (Days)
8	96	14

Performance properties (typical)

Cured 14 days @ 25°C,50%RH

Hardness, °Shore A Durometer

55

Mixed S.G.

1.60

Peel strength,N/25mm(pli),100% cohesive failure

Dry	
Stainless steel	240(55)
Titanium	230(52)
Epoxy primer	235(53)
Type III fuel (168 hours @ 60°C)	
Stainless steel	230(52)
Titanium	215(49)
Epoxy primer	220(50)
3% NaCl solution (168 hours @ 60°C)	
Stainless steel	235(53)
Titanium	230(52)
Epoxy primer	235(53)

Tensile strength, MPa(psi)

Standard cure

3.38(522)

JRF @ 60°C

2,29(334)

Elongation, % at break

Standard cure	413
JRF @ 60°C	550

Resistance to hydrocarbons

JRF immersion

Weight loss, % 4.8

Flexibility - no cracks over mandrel

Low temperature flexibility - no cracking, checking or loss of adhesion.

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NOTE: The application and performance property values are typical for the material but are 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 to metallic, chemically treated, or painted substrates, the surfaces should be cleaned with solvents to remove contamination such as dirt, grease, and/or processing lubricants.

A progressive cleaning procedure should be employed using the appropriate solvents and new lint-free cloth (reclaimed solvents or tissue paper should not be used).Always pour the solvent on to 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 re-deposition of contaminants on to 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.

For information on specific substrate treatment please
refer to the Surface Treatment leaflet that is available on request.

Storage life

The storage life of PR-1770 C-8,C-12, C-24, C-36 is 6 months when stored at temperatures between 5℃ and 25℃ in its original unopened containers.

Health precautions

These products are safe to use and apply when recommended precautions are observed. Before using
these products read and understand the Material Safety Data Sheets which provide 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 exposure.

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