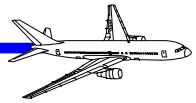
Aerospace Products



PRC

Issued : 01 / 2001

PR 1776 Class B

FUEL TANK SEALANT
LOW GRAVITY

USE

A filleting compound **low gravity** for sealing integral fuel tank and pressurized cabins.
PR 1776 class **B** was especially developed for use over a temperature range of -55°C to + 160°C and with outstanding resistance to aircraft fuels (aviation gasoline or jet fuel) and petroleum base lubrificating oils.

DESCRIPTION

PR 1776 class **B** is a two-part, hight temperature resistant low gravity, fuel tank and fuselage sealant, based on **Permapol P-5** liquid polymers, a chemically modified improved class of polysulfide polymers.The mixed compound is a thixotropic paste, readily applied by extrusion or injection gun,which does not flow from vertical or overhead surfaces. Sealant has excellent adhesion to aluminium, titanium, stainless steel, and other metals.

SPECIFICATION

The following tests have been run in accordance with the requirements of :
ASNA 4157/A / BMS-5 45 / AMS 3281 / DMS 2427 Specifications.

PURCHASING

PRODUCT DESIGNATION

When ordering this product, designate PR number, class letter, and dash number as follows :

PR 1776 B-1/2 (application life : 1/2 h.)
PR 1776 B-2 (application life : 2 h.)
PR 1776 B-4 (application life : 4 h.)

STANDARD PACKAGING

DESIGNATION

KITS :

	Base Volume	Container	Number of Kits per case
KIT n° 10	0,10 liter	1/4 l. Can	12
KIT n° 25	0,25 liter	1/2 l. Can	12
KIT n° 50	0,50 liter	1 liter Can	12
KIT n° 100	1,00 liter	2 liters Can	6

SEMKITS :

	Total Content	Number per Case
655	55 cc	24
654	100 cc	24

LE JOINT FRANCAIS
SEALANTS ADHESIVES & COATINGS
84/116 rue Salvador Allende, 95870 Bezons - Tél 01.34.23.34.23 - Télécopie 01.34.23.34.99
http : \\www.ljfm.com

HUTCHINSON WORLDWIDE

APPLICATION PROPERTIES (typical)

- Couleur Base White
  Accelerator Black
- Mixing ratio
  Part A / Part B 10 : 1 by weight

- Nonvolatile content
  (mixed compound) 96 %

- **Viscosity**
  (Brookfield # 7 @ 2 rpm) 1300 Pa.s

- Vertical Flow :
  Initial 4 mm
  50 mn 2 mm
  90 mn 2 mm

- **Application Life and Cure Time**

	Application Life (hours)	Tack Free Time (hours)	To 30 Shore A (hours)
B 1/2	1/2	7	12
B 2	2	8	24
B4	4	20	40

PERFORMANCE PROPRERTIES (typical)

- Color Grey
- Specific Gravity 1,25
- Hardness, Shore A 50
- Low temperature flexibility - 55° C

- **Adhesion - Peel strength (N/mm)**

	Initiale + 7days 60°/B Fluid
Alclad 2024	7,5 / 6,5
Stainless steel	8 / 6,5
Titanium	6 / 6,5
PAC 33 NV	7,5 / 6,5
PU 66 Abraded	9 / 6,5

100% cohesive

- **Tensile Strength and Elongation** :

	Tensile Strength	Ultimate Elongation
- Initial	1,8 MPa	400 %
- 7 days / 60°C in JP1	1,5 MPa	450 %

- **Resistance to other Fluids** :

Excellent resistance to water, alcohols, petroleum-base and synthetic lubrificating oils, and petroleum-base hydraulique fluids.

- **Réparability** :

Excellent to both fresh sealant and heat/fuel-abraded fillets

For maximum adhesive strength between **PR 1776** and the material to which it is bonded, **PR 148 AF** is recommended.

SURFACE PREPARATION

To obtain good adhesion to metallic surface, part shall be cleaned with solvents to remove dirt, grease, and processing lubricants used in manufacturing.
Wash one small aera at a time, then dry with a clean cloth before solvent evaporates to prevent redeposition of oil, wax or other surface contaminents. To maintain a clean solvant supply, always pour the solvent on the washing cloth.

NOTE : The above 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.

MIXING INSTRUCTIONS

Proper mixing and correct proportions are extremely important if optimum results are to be obtained. Mixing by experienced personnel at a central location is recommended.

CAUTION: Do not mix accelerator with compound until ready to use.

1° Thoroughly stir accelerator in its container until an even consistancy is obtained.
2° Thoroughly stir base compound in its container until an even consistancy is obtained.
3° Slowly stir the accelerator into the base compound and thoroughly mix approximately 7 to 10 minutes. Be sure to scrape the sides and bottom of the container in order to include all the compound in the mixture and to assure uniform blending. Scrape mixing paddle periodically to remove unmixed compound. Slow mixing by hand is recommanded.
FRACTIONAL USE OF UNIT :

When it is desired to use only part of the kit, after homogenization, remove the required quantity.
(§ APPLICATION PROPERTIES).

SEMKIT TWO-PART SEALANT CARTRIDGES

1° Wear safety glasses.

2° Hold cartridge and pull back dasher rod one fourth.

3° Pull back the dasher rod as injecting as proportionnaly as possible the contents accelerator into the base.

4° Mix material, rotate dasher rod 90° in aspiral clockwise motion; with each stroke turn the dasher rod 90°.

5° When two-parts are mixed thoroughly, pull dasher rod back to the neck of cartridge, grasp cartridge firmly at neck, unscrew dasher rod counterclockwise and remove.

6° Screw nozzle into cartridge, material is ready for extrusion.

For all informations, consult the Technical Services of
LE JOINT FRANCAIS.

APPLICATION INSTRUCTIONS

Application life is the period of time that the mixed compound remains at a consistency suitable for application with injection or extrusion guns. Application life is always based on standard conditions at 23° C and 50 % relative humidity. For evry 5°C rise in temperature, application life is reduced approximatelty by half, and for evry 5°C it is approximatly doubled. High humidity at the time of mixing shortens application life.

Apply the sealant with an extrusion gun equipped with 3 to 6 mm tip. Hold gun nearly perpendicular so that extruded sealant will be forced into the lip of seam.
On most application, the fillet should be 3 to 5 mm thick, but heavier fillets can be applied in a single operation, if necessary.

CURING

The lenght of the cure depends on the ambient temperature and relative humidity. The temperature/time relation ship is approximately the same for curing as it is for application life . Low humidities may extend the cure several times. Cure may hastened by applying heat up to 55° C.

CLEANING EQUIPEMENT

Equipment should be cleaned immediately after use with methylethylketone. Cured material may be removed with commercial product.

STORAGE LIFE

The storage life of **PR 1776 B** is 6 months when stored in the original, unopened containers at temperature below 25°C.

HEALTH PRECAUTIONS

PR 1776 B is a safe material to handle when reasonable care is observed. Ordinary hygienic principles, such as washing the compound from hands before eating or smoking, should be observed. Avoid prolonged contact with skin, contact with open breaks in the skin, and ingestion. In case of contact with skin, wipe off excess then wash with soap and water. Obtain medical attention in case of extreme exposure or ingestion.

For additional health and safety information consult a
Material Safety Data Sheet
which is available upon request

GUARANTEED

We guarantee all our products against faulty materials or preparation. Our sole responsability shall be to replace, free of charge, those products which prove to be defective, the user being entitled to no indemnity for any reason whatsoever. All recommendations contained herein as to the choise of materials or of certain methods of operation are of an informative character and are based on tests and experiments we belive to be reliable and correct, but accuracy and completeness of such tests are not guaranteed and are not to be construed as a warranty, either express, or implied.
Neither our company, nor any of its collaborators shall be liable to the user for any injury, loss or damage directly or indirectly resulting from the use of, or inability to use, the products, which does not comply with the application instructions as specified in our information manual.
Recommendations or statements other than those contained in a written document signed by an officer of our company shall not be binding upon the company.