Aerospace

Issued: 01/2012

PR 1782 Class A

FUEL TANK SEALANT
LOW DENSITY
FAST CURE

USE

A **low gravity and fast cure** sealant for integral fuel tank and pressurized cabins.
PR 1782 class **A** was especially developed for use over a temperature range of -55°C to + 120°C, with outstanding resistance to aircraft fuels (aviation gasoline or jet fuel).

DESCRIPTION

PR 1782 class **A** is a two-part, low gravity and fast cure, fuel tank and fuselage sealant, based on Polysulfide liquid polymers. The mixed compound is of fluid concistancy which can be applied by brush, once applied around fasteners will not drip or flow from vertical or overhead surfaces. Sealant has excellent adhesion to aluminium, titanium, stainless steel, and other metals.

SPECIFICATION

AIMS 04-05-001
. 04-05-012
04-05-014
04-05-015

PRODUCT DESIGNATION

PR 1782 A - 1/2
(Application time mini : 30 mn)
PR 1782 A - 1
(Application time mini : 1hour)
PR 1782 A - 2
(Application time mini : 2 hour)

PACKAGING

KITS :

	Base Volume	Number of kits/carton
KIT 10	100 ml	12
KIT 25	250 ml	12
KIT 50	500 ml	12

SEMKITS® :

	Mix Volume	Number of semkits/carton
Semkit 655	55 ml	24
Semkit 654	100 ml	24
Semkit 654 B	130 ml	24

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HUTCHINSON® aerospace

APPLICATION PROPERTIES (typical)

23+/-1°C and 50+/-5% HR

Couleur	
Base	Blue
Accelerator	Dark Grey
Mixing ratio	
Base / Accelerator	100:12 (by weight) 100:7 (by volume)
Nonvolatile content (mixed compound)	> = 88 %
Brookfield Base Viscosity spindle 7 to 10 r/pm	90 - 135 Pa.s

Vertical Flow : AITM 2-0033	Initial		50 mm
	50 mn		50 mm
	90 mn		40 mm

Application Life and Cure Time

	Application Life (hours)	Pa.s	Tack Free Time (hours)	To 30 Shore A (hours)*
spindle 7 to 10 r/pm				
A 1/2	1/2 h	<350	3h	5h
A 1	1h	<350	4h	6h
A 2	2h	<350	5h	12h

*Instantaneous hardness mesurement

PERFORMANCE PROPRERTIES (typical)

Color	Grey
Density	< = 1,15
Shore A	45
Low temperature Flexibility	- 55° C

Adhesion - Peel strength (N/mm)

	Initial
Alclad 2024	5,5
Stainless steel	5,5
Titanium	5,5
P 60 A	5,5
F 70 A	5,5

100% cohesive

Shear strenght (MPa)

100% cohesive

	Initial
Alu 2024	1,6 MPa
Stainless steel	1,6 MPa
Titanium	1,6 MPa
P 60 A	1,6 MPa
F 70 A	1,6 MPa

Tensile Strength and Elongation :

	Tensile Strength	Ultimate Elongation
14 days 23°C	1,7 MPa	350 %

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 (PR 1776, PR 1771, PR 1422)

SURFACE PREPARATION

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.

In harsh environment, optimum adhesion can be obtained by the use of **PR 148 AF** primer

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.

A) KIT
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).

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

B) 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.

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 temperatureand 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 1782 A** is **6 months** when stored in the original, unopened containers at temperature below 25°C.

HEALTH PRECAUTIONS

PR 1782 A 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.

For additional health and safety information consult a
Material Safety Data Sheet
which is available upon request on
www.ljfm.com

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.

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