



# PR 1910

## HIGH TEMPERATURE SEALANT

### USE

**PR 1910** is silicone sealant designed for use in a temperature range of  $-75^{\circ}\text{C}$  to  $+375^{\circ}\text{C}$  with outstanding resistance to aging.

### DESCRIPTION

**PR 1910** is a two-part, silicone, liquid polymer compound. The mixed compound is a thixotropic paste which can be readily applied by spatula or extrusion gun.

It does not flow from vertical or overhead surfaces.

Cure takes place at room temperature and without shrinkage, to form a resilient sealant possessing excellent resistance against aging, ozone and humidity.

With primer PR 1903 M it gives excellent adhesion to aluminium, magnesium, titanium, steel, and numerous other materials.

After curing at ambient temperature it will resist  $150^{\circ}\text{C}$ .

With heat treatment it will resist  $375^{\circ}\text{C}$  and for short periods even temperature between  $1100^{\circ}\text{C}$  and  $2800^{\circ}\text{C}$ .

### SPECIFICATION

Conform to:

ASN A 4180 specification.

### PURCHASING

#### PRODUCT DESIGNATION

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

**PR 1910-2** (application life : 2 h. )

**PR 1910-4** (application life : 4 h. )

### STANDARD PACKAGING

#### DESIGNATION

#### KITS :

	Base Volume	Container	Number of Kits per case
KIT n° 15	0,15 liter	1/4 l. Can	12
KIT n° 35	0,35 liter	1/2 l. Can	12
KIT n° 75	0,75 liter	1 liter Can	6

**LE JOINT FRANCAIS**

**SEALANTS ADHESIVES & COATINGS**

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**APPLICATION PROPERTIES** (typical)

- Couleur Base	Red
Accelerator	Green
- Mixing ratio (by weight) Base / Accelerator	10 : 1
- Nonvolatile content (mixed compound)	98 %
- Viscosity (Brookfield # 7 @ 2 rpm)	1200-1600Pa.s
- Application Life	

	Application Life (hours)	Tack Free Time (hours)
PR 1910-2	2	5
PR 1910-4	4	12

**-Cure Time**

For use at 150°C

24 h at 23°C or 6 h at 60°C

For use at 230°C

Cure as for 150°C and 2 weeks at 23°C  
or 1 h at 150°C and 4 h at 200°C

For use at 375°C

Cure as for 150°C and 230°C  
with 2h steps of 30°C till the desired  
temperature

**PERFORMANCE PROPERTIES** (typical)

- Color	Red
- Specific Gravity	1,50
- Hardness, Shore A (after 5 sec.)	
Cured for 120°C	55
Cured for 135°C	45
- Low temperature flexibility	- 75° C

**- Adhesion - Peel strength (N/mm)  
with PR 1903 M primer**

	Initial
Alclad 2024	700 N/mm

**- Shear strength :  
with PR 1903 M primer**

Alclad 2024	2,5 MPa 100% Cohesion
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**- Tensile Strength and Elongation :**

	Tensile Strength	Ultimate Elongation
- Initial	2,5 MPa	75 %

**- Fuel résistance**

Mediocre

**- Skydrol resistance**

Excellent

**- Ozone resistance**

Excellent

**- Auto inflammation:**

After 10 mn exposure + 480°C

**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.

**SURFACE PREPARATION**

To obtain good adhesion the surface must be cleaned with an oil-free solvents which will dissolve to remove dirt, grease, and processing lubricants used in manufacturing.

Wash one small area at a time, then dry with a clean cloth before solvent evaporates to prevent redeposition of oil, wax or other surface contaminants. To maintain a clean solvent supply, always pour the solvent on the washing cloth.

After the surface has been cleaned apply **PR 1903 M** Adhesion Promoter (metallic surface) with a clean brush or by wiping on with a gauze pad. Care must be taken with either a brush or gauze to obtain a uniform thin coat - one that is thin enough to cover, but not heavy enough to run.

At standard temperature, allow the adhesion promoter to dry 1 hour. At lower temperature allow a proportionally longer time to dry.

The sealant may be applied up to 24 hours after the application of the adhesion promoter. After 24 hours, the surface should be recleaned and adhesion promoter reapplied. The surface should show a slight gloss adhesion promoter when it is done properly.

**CARE:**

The adhesion promoter should not have particles or precipitate in it.

## 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 consistency is obtained.

2° Thoroughly stir base compound in its container until an even consistency 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 recommended.

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.

## 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 length of the cure depends on the ambient temperature and relative humidity.

The temperature/time relationship is approximately the same for curing as it is for application life.

Low humidities may extend the cure several times.

Cure may be hastened by applying heat up to 60° C.

## CLEANING EQUIPEMENT

Equipment should be cleaned immediately after use with methylethylketone. Cured sealant on accessible portions of equipment will be peeled off by hand.

## STORAGE LIFE

The storage life of <b>PR 1910</b> is	120 days at -20°C
	75 days at 0°C
	45 days at 20°C
	10 days at 50°C

when stored in the original, unopened containers.

## HEALTH PRECAUTIONS

**PR 1910** 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 responsibility 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 choice of materials or of certain methods of operation are of an informative character and are based on tests and experiments we believe 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.

XP/01/1996

