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## Technical Data Sheet Titan 7518

### Product Description

Titan 7518 is a single component, thixotropic anaerobic sealant which develops medium strength. The product cures between close fitting metal parts where there is an absence of air.

### Typical Applications

Used to seal close fitting joints between rigid metal assemblies such as differential cases, transmissions, and oil pans. Offers superior chemical and heat resistance while maintaining flexibility for proper gasketing.

## Physical Properties

### Monomer (Liquid)

Base Compound	Dimethacrylate Ester
Appearance	Red paste
Viscosity (cP @ 68°F)	110,000 cP
Specific Gravity (g/cc)	1.12
Gap Fill	.016"
Flash Point (TCC)	>200°F
Shelf Life @40°F	1 year unopened

### Military Specifications

None

### Curing Properties

The rate of cure will depend on environmental conditions and the substrates used. 7518 will offer an instant seal while still uncured when subjected to a low on-line pressure test.

### Setting Time (68°F, 65% R.H.)

#### Substrate Set time/Full Cure

Steel	30-60 min/24 hrs
Aluminum	30-60 min/24 hrs

### Curing Performance

The gap of the bond line will affect set speed. Smaller gaps tend to increase the speed. Activators can be applied to improve set speed but may also impair overall adhesive performance.

### Polymer (Cured)

Appearance	Red Solid
Hardness	47(JIS D)
Elongation	100%
Service Temperature Range	-58°F to 302°F
Full Cure Time	24 Hours
Tensile Strength	18.6 Mpa (190Kgf/cm <sup>2</sup> )
Shear Strength	6.1 Mpa (62Kgf/cm <sup>2</sup> ) (A2024P 25°Cx725h)

### Performance of Cured

#### Materials

#### Pressure Resistance

Specification:	JIS-K-6820
Bolt Type:	M10 Number Samples 8
Fastening Force:	150 Kgf-cm
Blow Out Test:	5 Minutes Post Assembly
Heat Cycle:	-30°C x 1Hr. →25°C x 30 min.→130°C x1 Hr. Cycle Repeated 100 Times
Pressure Conditions	0.98 Mpa/min. (Kgf/cm <sup>2</sup> )
Blow out	6.0 Fe/Al Flange JIS-K-6820-
Blow out after heat cycle	6.0 Fe/Al Flange JIS-K-6820-

### Temperature Resistance

% Retained strength when tested at temperature

#### Lap Shear at Varying Time and Temperature

Test Piece: Al(A2024P) Size:

1.6x25x100mm

15 Min 30 Min 1 Hr. 3 Hr. 8 Hr.

5°C 13.6 24.5 31.3 43.8 49.7

25°C 32.0 36.2 53.5 58.2 60.4

### Chemical Resistance

Shear strength on steel after 500 hours

Solvent	% Strength Retained
Motor Oil	100
Unleaded Gasoline	95
Brake Fluid	100
Ethanol	100
Acetone	95
Water/Glycol Mix	80

### Oil Resistance

Lap Shear (Kgf/cm <sup>2</sup> )	Conditions
ATF	96.4 120°C x 240h D-III
Engine Oil	119.1 150°C x 240 h 5W-30SH
Gear Oil	75.7 120°C x 240h 75W-90

### General Instructions

Surfaces to be bonded should be clean and dry and free of grease.

Product should be applied in enough quantity to fill all engaged threads. The product performs best in thin bond gaps. Very large gaps may create gaps which will affect the cure speed and overall strength.

Good contact is essential. An adequate bond develops in 15 to 45 minutes and maximum strength is attained in 24 hours.

This product is not recommended for use in pure oxygen environments and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

This product is not designed for plastics, particularly thermoplastics where stress cracking of the plastic could result. It is recommended to confirm compatibility of the product with all substrates prior to use.

### Storage

Products should be stored unopened in a cool, dry place out of direct sunlight.

Products can be refrigerated for improved

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS)

### NOTE

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shelf life but should be brought back to room temperature before use.

