



Technical Data Sheet

Solution 40 Flexible Flange Sealant

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Property	Value
Coefficient of thermal expansion, ASTM D696 (K ⁻¹)	80 x 10 ⁻⁶
Coefficient of thermal conductivity, ASTM C 177, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3

Product Description

Solution 40 Flexible Flange Sealant is a single component room temperature cure gel-like anaerobic gasketing compound formulated to provide instant sealing capabilities. Once cured between mating metal flanges and filling voids in the surface, **Solution 40 Flexible Flange Sealant** provides a thin, flexible, solvent and temperature resistant seal.

Typical Applications

- Vacuum pump flanges
- Fuel tanks on chain saws
- Fuel and water pumps
- Gearbox covers
- Automotive and truck axle covers

Product Benefits

- Instant sealing
- Provides reliable seal
- No shrinkage due to solvent evaporation
- Excellent chemical resistance
- Eliminates need for retorquing

Typical Properties (Uncured)

Property	Value	
Resin	Methacrylate ester	
Appearance	Purple liquid	
Viscosity at 25°C, cP	TB @ 0.5 rpm	700,000 to 1,700,000
	TB @ 5.0 rpm	150,000 to 375,000
Specific gravity	1.10	
Flash point	See MSDS	

Typical Cured Performance

Shear strength, ISO 10123, Steel pins and collars

Cure	N/mm ² (psi)
1 hour at 22°C	≥ 5.0 (≥ 725)
24 hours at 22°C	≥ 6.0 (≥ 870)

Lap-shear strength, ISO 4587, Steel (grit blasted)

Cure	N/mm ² (psi)
24 hours at 22°C	≥ 6.0 (870)
24 hours at 90°C, tested at 22°C	≥ 6.9 (≥ 1000)

Tensile strength, ISO 6922, Steel (grit blasted)

Cure	N/mm ² (psi)
24 hours at 22°C	≥ 14.0 (2030)

Typical Environmental Resistance

Cured for 1 week @ 22°C
Lap-shear strength, ISO 4587
Steel (grit blasted)

Chemical/Solvent Resistance

Aged under conditions indicated and tested at 22°C.

Chemical/Solvent	Temp (°C)	% of Initial Strength	
		500 h	1000 h
Motor oil	125	160	165
Gasoline	22	20	15
Water Glycol 50/50	87	80	80

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

Directions for use

1. For best performance bond surfaces should be clean and free from grease.
2. The product is designed for close fitting flanged parts with gaps up to 0.25 mm.
3. Apply manually as a continuous bead or by screenprinting to one surface of the flanges.
4. Low pressures (<0.05 MPa) may be used when testing to confirm a complete seal immediately after assembly and before curing.
5. Flanges should be tightened as soon as possible after assembly to avoid shimming.

Storage

Solution 40 Flexible Flange Sealant should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

General Information

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

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

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. MRO SOLUTIONS LLC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. MRO Solutions's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO 9001 Quality Standard.

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