

**TECHNICAL  
DATA SHEET**

**GASKET G-436**

anaerobic based gasketing sealant  
excellent chemical resistance  
high service temperature  
for severe service

**PRODUCT DESCRIPTION**

**FOTOPOLYMER GASKET G-436** is a single component anaerobic gasketing sealant that cures with sealing capability when confined in the absence of air between close fitting metal surfaces. **GASKET G-436** is formulated with excellent chemical and temperature resistance. **GASKET G-436** is best suited for sealing of rigid flanges used in severe conditions and evaluated temperatures.

**KEY FEATURES**

- Ensures positive seal within the flanges
- Strengthens assembly with adhesion to flanges.
- Flexes with flanges during pressure or thermal cycling & withstands vibrations.
- Prevents loosening of threaded assemblies
- Improves assembly accuracy with uniform clamping on direct metal to metal contact
- Seals surface imperfections to prevent corrosion
- Withstands most industrial solvents & chemicals
- Resilient at high temperature up to 200 °C

**TYPICAL APPLICATIONS**

**FOTOPOLYMER GASKET G-436** is primarily used for gasketing of rigid flanges such as engine castings, gearbox housings, pipe flanges, etc.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Base	Dimethacrylate
Appearance	Red gel
Viscosity @ 25 °C	188,000-500,000 Thixo
Specific gravity	1.09
Flash point, °C	>100

**TYPICAL CURING PERFORMANCE**

**GASKET G-436** commences curing when confined in the absence of air between close fitting metal surfaces. The rate of cure depends on the activeness of substrate, the thickness of bondline and the ambient temperature. The rate of cure will increase with thinner bondline and higher ambient temperature. The rate of cure is higher on active metals. When cure rate is unacceptably long due to passive metals, large gaps or low ambient temperature, applying **START-UP** primer to the surface will improve rate of cure. However, this can reduce ultimate strength of the bond and testing is recommended for verification.

Handling speed @ 25 °C,	Unprimed: 2-4 hours Primed: 30-60 minutes
Maximum gap fill, mm	Unprimed: 0.25 Primed: 0.51
Full cure @ 25 °C, hours	24

## CURING SPEED BY SUBSTRATES

Substrates are divided into active metals and passive metals. Active metals provide higher catalytic effect which increases the curing speed of adhesive. Passive metals decrease the curing speed of adhesive and use of **START-UP** primer might be required.

### Active substrates

Zinc phosphate  
Steel  
Iron  
Copper  
Brass  
Bronze  
Titanium  
Magnesium alloys  
Nickel  
Manganese

### Passive substrates

Zinc  
Cadmium  
Zinc dichromate  
Stainless steel  
Gold  
Silver  
Platinum  
Anodized surfaces  
Passivated surfaces  
Pure magnesium  
Aluminium

## TYPICAL PROPERTIES OF CURED MATERIAL

### PERFORMANCE PROPERTIES

Tested on steel lapshears, 24 hours @ 25°C

Shear strength, N/mm<sup>2</sup> (psi) 5.0 (725)

### THERMAL PROPERTIES

Thermal conductivity, W/mK

0.1

Suggested temperature range, °C

-55 to 204

### CHEMICAL RESISTANCE

Cured on steel lapshears, 24 hours @ 25°C

Aged at stated condition and tested @ 25°C

Chemical/Solvent	% of Initial Strength	
	500 hours	1,000 hours
Acetone @ 25°C	100	95
Gasoline @ 25°C	75	75
Ethanol @ 25°C	90	85
Brake fluid @ 25°C	95	95
Water/Glycol @ 85°C	100	100
Motor oil @ 125°C	100	100

## HANDLING

**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.**

When using water based cleaning solution, it is important to check for compatibility of the cleaning solution with product. Some cleaning solutions could affect the curing and performance of the product. This product is not recommended for use on plastics.

**Directions for assembly**

- 1) For best performance, ensure bonding surfaces are clean and free from grease. Remove old gasketing materials.
- 2) Dispense sealant by moving nozzle forward in direction of use.
- 3) For optimum sealing, apply in a continuous bead or screen print on one surface only. Circle all bolt holes for improved sealing.
- 4) Assemble with minimum sliding movement and tighten flanges immediately to avoid shimming. Sealant is not meant for use as a spacer or a shim.
- 5) Low pressure could be used to check for sealing integrity.
- 6) Allow sufficient time for parts to cure before further handling, processing or testing. Excess sealant outside joint would remain as paste.

**Directions for disassembly**

- 1) Loosen flanges with hand tools by prying and tapping carefully. Do not damage or scratch surface of flanges.
- 2) Break apart gasketed flanges by loosening with twist motion and knocking on sides.
- 3) For high strength assemblies, apply localised heat of more than 250°C on cured sealant and loosen at high load while parts are still hot. Use extreme caution when working with hot parts and heat sources such as heat gun, flames, etc.
- 4) Allow flanges to cool down once disassembled.
- 5) Use **CLEAN-UP** solvent to remove old gasketing material.

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

**STORAGE**

Adhesive shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of adhesive, do not return used adhesive to its original container.

**CAUTION**

- 1) Minimise skin contact. Uncured resin may irritate sensitive skin. In case of skin contact, flush with water for at least 15 minutes.
- 2) In case of eye contact, flush with water for at least 15 minutes and seek medical attention.

**FOR INDUSTRIAL USE ONLY. KEEP AWAY FROM CHILDREN.**

The data contained herein may be reported as a typical value and/or range. Values based on actual test data are verified on periodic basis. These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. FOTOPOLYMER PTE LTD. 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.

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