

**TECHNICAL
DATA SHEET**

GASKET G-431

anaerobic based gasketing sealant
general purpose gasketing
good flexibility
for flanges with minor movement

PRODUCT DESCRIPTION

FOTOPOLYMER GASKET G-431 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-431** is formulated with good flexibility for sealing of flanges with minor movements or vibrations. Flanges sealed with **GASKET G-431** are resistant to low pressures immediately after assembly. **GASKET G-431** is best suited for general purpose sealing of flexible flanges.

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
- Provides immediate sealing up to 200-500 psi after assembly
- Withstands most industrial solvents & chemicals
- Resilient at high temperature

TYPICAL APPLICATIONS

FOTOPOLYMER GASKET G-431 is primarily used for gasketing of flexible flanges and flanges with minor movements or vibrations such as pumps, thermostats, compressors, transmission housing, axle covers and oil. **GASKET G-431** is used as dressing for precut gaskets.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Base	Dimethacrylate
Appearance	Purple gel
Viscosity @ 25 °C	275,000-950,000 Thixo
Specific gravity	1.10
Flash point, °C	>100

TYPICAL CURING PERFORMANCE

GASKET G-431 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: 1-2 hours Primed: 30-60 minutes
Maximum gap fill, mm	Unprimed: 0.25 Primed: 0.50
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/mm² (psi) 6.0 (870)

THERMAL PROPERTIES

Thermal conductivity, W/mK 0.1
Suggested temperature range, °C -55 to 150

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	20	15
Ethanol @ 25°C	90	85
Brake fluid @ 25°C	95	95
Water/Glycol @ 85°C	80	80
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) For medium strength assemblies, loosen with hand tools or a press machine.
- 2) For high strength assemblies, apply localised heat of more than 250°C on cured adhesive and pressed 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.

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.

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