

## Technical Data Sheet

# KG105

## High Temperature Gasket Maker

### Description

KG105 is a single component, thixotropic, low-medium strength, high temperature anaerobic gasket compound.

KG105 cures rapidly when confined in the absence of air on close-fitting metal surfaces.

KG105 will give an almost instant low-pressure seal (up to 0.5 Bar after 20 mins.) to allow on-line pressure testing.

### Typical Applications

KG105 is a 'form-in-place' gasket product designed for multi-purpose applications on rigid metal flanges and surfaces.

Krylex KG105 is designed to withstand higher service temperatures than standard anaerobic gasketing products.

Typical applications include: gearbox casings, engine thermostat housings and split crank cases on engines.

### Technical Features

Chemical type:	Dimethacrylate
Appearance:	Orange-Red
State:	Thixotropic Paste
Specific Gravity:	~1.15
Viscosity <sup>1</sup> :	250,000 - 600,000 cPs
Viscosity <sup>2</sup> :	40,000 - 80,000 cPs
Tensile Shear Strength <sup>3</sup> :	2 - 8 N/mm <sup>2</sup>
Initial Fixture Time <sup>4</sup> :	≤20 minutes
Max. Gap Fill:	0.50 mm
Full Cure:	24 hours
Flash Point:	> 100 °C
Shelf Life:	12 months @ 20 °C
Operating Temp. Range:	-50 to +200 °C

<sup>1</sup> Brookfield RVT, 'T' spindle D, Speed 2.5 rpm

<sup>2</sup> Brookfield RVT, 'T' spindle D, Speed 20 rpm

<sup>3</sup> ASTM D1002, on grit blasted mild steel

<sup>4</sup> To achieve 0.2 N/mm<sup>2</sup> in ASTM D1002, on grit blasted mild steel

### Typical Curing Performance

Typical curing speed as % of final strength.

Time	Value %
20 Minutes (Fixture time):	5
1 hour:	~30
24 hours (Full cure):	100

If used on threaded parts, KG105 will give a break torque of 18-33 Nm\* and a prevail torque of 8 -19 Nm\*

\* Tested to ISO10964 on M10 black oxide steel bolt and M10 bright steel nut

### Factors Affecting Cure Speed

Cure speed can be negatively influenced by very large gaps, low temperatures and can be dependent on the substrates being bonded.

Heating the assembled parts accelerates the curing process.

When used on mild steel and brass components, anaerobic adhesives will reach full strength more rapidly than more inert materials such as stainless steel and zinc dichromate.

Anaerobic adhesives only cure in the absence of air and with metal part activation.

Anaerobic activator KP6497 should be used on plated parts or when the temperature is less than 5°C. The use of an activator can reduce bond strength.

Some anti corrosion chemicals inhibit the cure system in this type of anaerobic. Trials are recommended to establish whether cleaning of the parts is necessary.

All figures relating to cure speed are tested at 20°C.

Chemence recommends testing the suitability of Krylex products for any specific application.

### Chemical / Solvent Resistance

KG105 has good environmental resistance to water and other organic solvents including motor oil, ethanol and glycols.

KG105 is not recommended for use in pure Oxygen or Chlorine lines.



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### Typical Environmental Resistance

**Hot strength:** KG105 is suitable for use at temperatures up to 200°C. At 150°C the bond strength will be ~25% of the strength at 21°C.

**Heat ageing:** KG105 retains ~90% full strength when heated to 125°C for 90 days then cooled and tested at 21°C.

### Limitations

KG105 is not recommended on certain plastics as stress cracking can sometimes result.

### Instructions For Use

For best results, ensure parts are clean, dry and free from oil and grease.

KG105 adhesive should be applied manually as a continuous bead or by screen printing to one surface.

Assemble parts and allow to cure.

Wipe excess adhesive from outside of joint.

Product is normally hand applied from the bottle.

KG105 is suitable for use in dispensing systems for high volume assembly applications.

### Storage

Optimal storage conditions are between 8°C and 21°C. Storage outside this temperature range can adversely affect product properties and may reduce the stated shelf life.

Please Note: When packed, KG105 requires an air space above the product to maintain stability.

**Important:** Product packed in bulk (>5kg) has a shelf life of 6 months. The material must be filled into smaller bottles / tubes within this time period.

### General Information

For safe handling of this product consult the Safety Data Sheet.

### Presentation

Tottles: ..... 50ml and 250ml.

Cartridges: ..... 270ml

Available in bulk for use with dispensing systems.

### Notes

The data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.

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