KRYLEX® Adhesives and sealants

KR206

High Temperature Anaerobic Retainer

Document No: KX-01-600-2521
Issue: 1
Amendment: a
Date: 29.02.2012
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TECHNICAL DATA

PRODUCT DESCRIPTION

KRYLEX® KR206 is a single component high viscosity, thixotropic anaerobic retaining compound. KR206 is designed to give high temperature service. KR206 cures when confined in the absence of air between close-fitting metal surfaces.

TYPICAL APPLICATIONS

KRYLEX® KR206 is formulated for bonding cylindrical parts, to give high strength bonds. KR206 is designed to augment the strength of slip fit assemblies and for use on loose-fitting or worn parts, where larger gap fill is required. KR206 is designed for high service temperature applications. KR206 prevents corrosion of assembled parts.

PROPERTIES OF MATERIAL

			Value
Chemical type			Dimethacrylate
Appearance			Yellow/Green
Specific Gravity			~1.13
Viscosity[1] cPs		(Range)	10,000 – 30,000
		(Typical Value)	20,000
Viscosity[2] cPs		(Range)	5,000 – 10,000
		(Typical Value)	7,500
BreakawayTorque[3]	N/m	Range	25 - 42
		Typical	34
Prevail Torque[3]	N/m	Range	25 - 42
		Typical	32
Shear Strength[4]	N/mm^2	Range	15 - 32
		Typical	24
Initial Fixture Time[5]		(mins)	15
Full Cure		(Hrs)	24
Flash Point		(°C)	> 100
Max Gap Fill		(mm)	0.4
Shelf Life @ 20°C		(Months)	12
Temp Range °C		Continuous	-50 to +230

1 Brookfield RVT spindle 4, 2.5rpm
2 Brookfield RVT spindle 4, 20rpm
3 On M10 black oxide steel bolt and M10 bright steel nut, ISO 10964
4 On mild steel pin and collar, ISO10123
5 ISO 10964

CHEMICAL / SOLVENT RESISTANCE

KRYLEX® anaerobics exhibit excellent chemical resistance to most oils and solvents including motor oil, leaded petrol, brake fluid, acetone, ethanol, propanol and water. Anaerobic adhesives and sealants are not recommended for use in pure oxygen or chlorine lines.

TYPICAL ENVIRONMENTAL RESISTANCE

Hot strength

KRYLEX® KR206 is suitable for use at temperatures up to 230°C. At 200°C the bond strength will be ~50% of the strength at 21°C. To achieve optimum high temperature performance, the product should be exposed to a temperature of 175°C for 30 minutes.

Heat ageing

KRYLEX® KR206 retains over 90% full strength when heated to 100°C for 90 days then cooled and tested at 21°C.

CURE SPEED VS. TEMPERATURE

All figures relating to cure speed are tested at 21°C. Lower temperatures will result in slower cure. Heating the assembled parts accelerates the curing process.

Activator KP6497 should be used when the temperature is less than 5°C.

CURE SPEED VS. SUBSTRATE

Cure speed and strength vary according to the substrates. 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

KRYLEX® KP6497 activator may be used to accelerate cure speed.

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

CURE SPEED VS. ACTIVATOR

Where speed of cure is too slow or the bond gap is very large, ***KRYLEX®*** KP6497 Anaerobic Activator may be used to accelerate cure speed. The use of an accelerator may reduce bond strength by up to 30%.

Chemence recommends testing on the parts to measure the effect.

CURE SPEED VS. BOND GAP

The size of the bond gap greatly affects the speed of cure of anaerobic adhesives. The larger the gap between surfaces, the slower the cure speed. Maximum recommended gap for KR206 is 0.40mm, however this will give a slower cure schedule than detailed in the properties table.

CURING PERFORMANCE

Typical curing speed[4] as % of final strength

40 mins	~10% strength
3 hours	~50% strength
24 hours	100% strength

DIRECTIONS FOR USE

KRYLEX® KR206 is suitable for high strength retaining applications that require large gap filling

Ensure parts are clean and dry and free from oil or grease.

Apply adhesive to all the engaged area. Assemble parts and allow to cure. Wipe excess adhesive from outside of joint.

Product is normally hand applied from the bottle or tube. Dispensing systems are available for high volume assembly applications. Please contact your ***KRYLEX®*** representative for further advice on dispensing solutions.

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GENERAL INFORMATION

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

LIMITATIONS

KRYLEX® KR206 is not recommended on certain plastics as stress cracking can sometimes result. 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.

KRYLEX® KP6497 Activator may be required on plated parts.

PRESENTATION

Bottles: . . . .50ml and 250ml.

Available in bulk for use with dispensing systems.

Please Note: When packed an air space above the product is vital to maintain stability.

STORAGE

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

DATA RANGES

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

NOTES

The information contained herein is produced in good faith and is believed to be reliable but is for guidance only. Chemence Ltd. and its agents cannot assume liability or responsibility for results obtained in the use of its product by persons whose methods are outside or beyond our control. It is the user's responsibility to determine the suitability of any of the products and methods of use or preparation prior to use mentioned in our literature and furthermore the user's responsibility to observe and adapt such precautions as may be advisable for the protection of personnel and property in the handling and use of any of our products.

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