

KS655 Thread Sealant

Description

KS655 is a single component, low strength, anaerobic pipe sealant. KS655 is a very high viscosity, thixotropic pipe sealing paste possessing high lubricity. KS655 cures when confined in the absence of air between close-fitting metal surfaces.

KS655 is formulated to lock and seal medium to coarse straight and tapered pipe threads on pipes of diameter from 15mm to 80mm. KS655 prevents vibration loosening and leakage through the pipe threads. KS655 gives low strength break and prevail torque on assembled joints, thus enabling easier disassembly and servicing, which is further helped by the lubricity of KS655. KS655 will give an almost instant low pressure seal (upto 2 bar after 20mins.) and when fully cured will seal upto the bursting pressure of the pipe (e.g. 10,000psi).

Typical Properties of Uncured Material

| | | |
|----------------------|------------------------------|----------------|
| Chemical Type | | Dimethacrylate |
| Appearance | | White Paste |
| Specific Gravity | | 1.17 |
| Viscosity cPs | (Range) | 150,00-450,000 |
| | (Typical Value) | 300,000 |
| | (Range) ² | 30,000-130,000 |
| | (Typical Value) ² | 80,000 |
| Breakaway Torque | range | 2-8 |
| (N.m) | typical | 3.5 |
| Prevail Torque | range | 0.545 |
| (N.m) | typical | 1.5 |
| Fixture Time | (mins) | 120 |
| Full Cure @20°C | (hours) | 24 |
| Flash Point | (°C) | >100 |
| Max Gap Fill | (mm) | .50 |
| Operating Temp Range | (°C) | -50 to +150 |

Typical curing speed % of final strength:

| | |
|-----------|---------------|
| <120 mins | Finger tight |
| 6 hours | ~25% strength |
| 24 hours | 100% strength |

Cure Speed Influence

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 Activators may be used to accelerate cure speed.

The size of the bond gap greatly affects the speed of cure of anaerobic adhesives. Bond gap varies with tread type and size of the fastener. The larger the gap between threads, the slower the cure speed.

All figures relating to cure speed are tested at 22°C. Lower temperatures will result in a slower cure. Heating the assembled parts accelerates the curing process. Krylex Activators should be used when the temperature is less than 5°C.

When speed of cure is too slow or the bond gap is very large, Krylex Activators 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.

Typical Environmental Resistance

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

Hot strength

KS655 is suitable for use at temperatures up to 150°C. At 130°C the bond strength will be ~30% of the strength at 21°C.

Heat ageing

KS655 retains ~85% full strength when heated to 100°C for 90 days then cooled and tested at 21°C.



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KS655

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Instructions for Use

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

Apply adhesive to all engaged threads. Assemble parts and allow curing. Wipe excess adhesive from outside of joint.

Product is normally hand applied from the container. Dispensing systems are available for high volume assembly applications. Please contact your Krylex representative for further advice on dispensing solutions.

Storage

Store in a cool area out of direct sunlight. Refrigeration to 5° gives optimum stability.

General Information

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

Anaerobic adhesives only cure in the absence of air and with metal part activation. Adhesive outside the joint will remain uncured and may be wiped away with a cloth.

Anaerobic adhesives are not recommended on certain plastics as stress cracking can sometimes result. Some anticorrosion chemicals inhibit the cure system in this type of anaerobic. Trials are recommended to establish whether cleaning of the parts are necessary. Krylex Activators may be required on plated parts and inactive metals

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 area verified on a regular basis.

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