

Description

Anaerobic/UV high strength retainer for metal cylindrical assemblies. Curing is effected in seconds by UV light and in few minutes by anaerobic polymerisation. The fast cure avoids heavy press fits. The cured adhesive is a thermo set plastic suitable for exposure to most solvents and it stands temperatures up to +150°C.

Physical properties

Composition : methacrylate ester
 Colour : blue
 Viscosity (+25°C - mPa s) : 3.000 - 4.000
 Specific weight (+25°C - g/ml) : 1,1
 Fluorescence : under blue light
 Flash point : > +93°C
 Shelf life +25°C : 1 year in original unopened packaging

Curing properties at +25°C

UV light 365 nm (intensity 60 mmwatt/cm²) : 10 - 15 sec.
 Anaerobic curing on steel (gap < 0,10 mm)
 Handling time : 5 - 10 min.
 Functional cure time : 1 - 3 hours
 Full cure time : 12 - 24 hours

Properties of cured product (typical value)

Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C
 Breakaway torque (ISO 10964) : 30 - 40 N m
 Prevail torque (ISO 10964) : 50 - 60 N m
 Shear strength (ISO 10123) : 20 - 25 N/mm²
 Temperature range : -55°C/+150°C
 Coefficient of thermal expansion (ASTM D696) : 0,1 mm/(m.K)
 Coefficient of thermal conductivity (ASTM C177) : 0,1 W/(m. K)
 Specific heat : 0,3 KJ/(Kg.K)

Chemical resistance

Aged at indicated temperature under conditions below after 24 hours from polymerisation.

Substance	°C	Resistance after 100 h	Resistance after 500 h	Resistance after 1000 h
-----------	----	------------------------	------------------------	-------------------------

Motor oil	125	excellent	excellent	excellent
Gear box oil	125	excellent	excellent	excellent
Gasoline	25	excellent	excellent	excellent
Water/glycol 50%	87	excellent	good	discrete
Brakes oil	25	excellent	excellent	excellent

For information on resistance with other chemicals, contact Loxeal Technical Service

Directions for use

Anaerobic curing occurs by coupling of two metal surfaces, as metal acts as a catalyst for the polymerisation. The use of specific Activator is necessary to effect full cure on passivized metallic surfaces and oxide coatings, in case of lower temperatures or large gaps, or on non metallic surfaces.

Note: avoid contact with some thermoplastic materials (ABS, Polystyrene, Methacrylate, PC and others) as they effect stress cracking. UV curing is effected in seconds by exposing the edge fillets to UV light intensities above 60 milliwatts/cm².

In product application the following parameters must be considered: cleanliness of surfaces is very important to develop the max chemical adhesion and mechanical strength, oily or dirty substrates will give low ultimate strength.

The ideal adhesive curb thickness is between 0.01mm - 0.12 mm; wide gaps concur to decrease the adhesive strength and in this case take in consideration the concentricity keeping. Best environmental conditions are over +18°C, as lower temperatures increase the fixturing time.

Use conventional tools for the eventual disassembling. When possible heating at +150°C/+250°C helps the disassembly operations. Mechanically remove the cured product and finish up the cleaning using Acetone solvent.

Storage

Keep product in a cool and dry room at no more than +25°C.
To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service

Safety and handling

Consult Material Safety Data Sheet before use.

Note

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department. Loxeal ensures abiding quality of supplied products according to its own specifics. Loxeal cannot assume responsibility for the results obtained by others which methods are not under Loxeal control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Loxeal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxeal products. Loxeal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.