



KB5002

Product Description:

KRYLEX® KB5002 is a rubber-toughened cyanoacrylate adhesive. KB5002 displays excellent peel and impact strength and is well suited to applications involving vibration, thermal shock, temperature cycling and high humidity.

Typical Applications

KRYLEX® KB5002 is specially formulated to provide more flexible bonds compared to standard cyanoacrylate. The material has solid performance up to 100°C, with intermittent temperature resistance up to 120°C. Use it to bond a wide variety of substrates including metals, plastics and rubbers.

Product Features

- Low Viscosity
- Fast curing
- ISO10993 approved
- Excellent multi-substrate adhesion
- Flexibility
- Solvent Free

Compatible Accelerator/Primer

Activators can be used for fillet cure or for priming absorbent surfaces. Accelerators may craze certain substrates.

Primer to the Cure speed vs. Substrate

The speed of cure of cyanoacrylates varies according to the substrates to be bonded. Acidic surfaces such as paper and leather will have longer cure times than most plastics and rubbers. Some plastics with very low surface energies, such as polyethylene, polypropylene and Teflon® require the use of KRYLEX® KP77 or AP100 Primer.

Cure Speed and Bond gap

KRYLEX® cyanoacrylates give best results on close fitting parts. The product should be applied in a very thin line to ensure rapid polymerization and a strong bond. Excessive bond gaps will result in slower cure speeds. KRYLEX® KP113 and KP12 Cyanoacrylate Activators may be used to greatly increase cure speeds.

Activators KRYLEX® KP113 and KP127 may be used in conjunction with KRYLEX® cyanoacrylates where cure speed needs to be accelerated. Cure speeds of less than 2 seconds can be obtained with most KRYLEX®. The use of an activator can reduce the bond strength up to 30%. Testing to determine full effect is suggested.

UNCURED PROPERTY	VALUE	TEST METHOD
Chemical Type	Ethyl	N/A
Appearance	Clear	N/A
Viscosity (cps)	300-500	Brookfield LVF, spindle 3, 30rpm
Specific Gravity	1.04	ASTM D1875
Impact Strength (J/cm ²)	12.7	Modified Charpy side impact

Adhesive Performance Testing

SUBSTRATE	OVERLAP SHEAR (psi)	SUBSTRATE	Fixture Time (sec)
Steel (grit blasted)	3,700	Steel	20 to 30
AL	3,400	AL	20 to 30
PMMA	1,200	ABS	5 to 10
PC	1,100	Acrylic	30 to 45
ABS	910	PC	30 to 40
PVC	800	PVC	14 to 45
PE (+KP77)	470		
PE (KP100)	484		

Typical Environmental Resistances

Hot Strength

KRYLEX® KB5002 cyanoacrylate adhesive is suitable for use at temperatures up to 100°C continuously, and intermittently up to 120°C. At 100°C the bond will be approximately 40% of the strength at 23°C.

Heat Aging

KRYLEX® KB5002 cyanoacrylate adhesive retains over 90% of its strength when heated up to 100°C for 90 days and tested at 23°C. Heating the bond to 23°C and then testing at 23°C demonstrates bond strength retention greater than 50% compared to initial strength.

Chemical/Solvent Resistance

KRYLEX® KB5002 cyanoacrylate exhibits excellent chemical resistance to most oils and solvents including motor oil, lead petrol, ethanol, propanal and freon. The adhesive is not resistant to high levels of moisture or humidity over time.

General Information

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

Removal of Cured Cyanoacrylate

Cured cyanoacrylate may be removed from most substrates, and parts disassembled, with KRYLEX® KP687 Debonder. It is not possible to fully remove cyanoacrylate from fabrics.

Directions for Use

Bond speed is very fast so ensure that parts are properly aligned before bonding.

KRYLEX® Activators may be required if there are gaps or porous surfaces. Some plastics may require application of KRYLEX® KP1901 Primer. Ensure parts are clean, dry and free from oil and grease.

Product is normally hand applied from the bottle.

Apply sparingly to one surface and press parts firmly together until handling strength is achieved. As a general rule, as little cyanoacrylate as possible should be used – over application will result in slow cure speed and lower bond strength.

Please contact your KRYLEX® representative for further advice on dispensing solutions.

Storage

Store in a cool area out of direct sunlight. Refrigeration to 40° F gives optimum storage stability.

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

All the test data, recommended procedures and other statements contained herein are furnished for information only for this experimental material and accuracy of the information is not guaranteed. Chemence cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, Chemence specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Chemence products. Chemence specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Chemence patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.