HERNON®
Formulating Solutions

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Instantbond 123

Product Description

Hernon® Instantbond 123 is a medium viscosity, state-of-the-art, single component, solventless, room temperature curing cyanoacrylate adhesive that polymerizes rapidly when pressed into a thin film between parts. The presence of surface moisture commences the cure of the adhesive. **Instantbond 123** develops handling strength within seconds and full functional strength in a few hours. **Instantbond 123** can bond a wide variety of surfaces including metals, thermoplastics, elastomers, ceramics, leather, cork, and paper. Notwithstanding the superior bonding capability of **Instantbond 123**, it is NOT recommended for long-term glass to glass bonding applications.

Typical Applications

Bonding
Rubber bumpers
Permanent locking of plastic Fasteners
Speaker components
Shock mounts
Gears to shaft
Wiper blades
Acrylic windows
Name plates
Catheters
Honing stones
Security collars
O-rings
insulation pads

Fixturing
Filter caps
Jumper wires
Heat sinks
Gaskets
Golf club parts
Tennis racquet parts
P.C. boards
Wire tacking

Potting
Transistors
Tamper proofing
Adjustable components
Fiberglass molds

Product Benefits

- Rapid Cure - forms a strong bond at room temperature in less than a minute with contact pressure.
- Surfaces - will bond almost any combination of similar or dissimilar materials.
- Easy Use - single component feature, eliminates any mixing.

Performance Requirements

Instantbond 123 meets the requirements of CID A-A-3097 Type II Class 2, and MIL-A-46050C Type II Class 2 (retired).

Typical Properties (Uncured)

Property	Value
Chemical Type	Ethyl Cyanoacrylate
Appearance	Clear liquid
Viscosity @ 77ºF (25ºC), cP	100-120
Specific gravity	1.07

Typical Properties (Cured)

Cured 24 Hours @ 22ºC

Physical Properties

Property	Value
Temperature range, ºC, (ºF)	-55 to 82 (-65 to 180)

Typical Curing Performance

Cure Speed vs. Substrate
The rate of cure will depend on the substrate used. The table below shows the fixture time achieved on different materials at 22ºC / 50% relative humidity. Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Substrate	Fixture Time (seconds)
Phenolic	20 to 40

Cure Speed vs. Bond Gap
The rate of cure will depend on the bond-line gap. Thin bond lines result in high cure speeds, increasing the bond gap will decrease the rate of cure.

Typical Cured Performance

Shear Strength
Cured 24 Hours @ 22ºC - tested according to ASTM D1002

Substrate	Shear Strength (psi)
Steel (grit blasted)	2000-3000
Aluminum (grit blasted)	2000-3000
PVC	500-1500

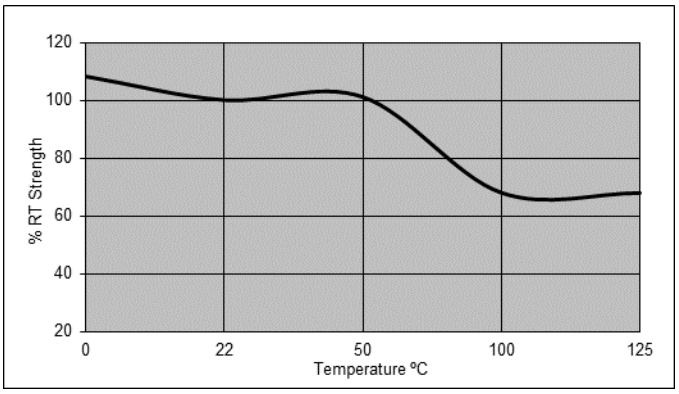
Tested according to ASTM D2095

Substrate	Cure Time at 22ºC	Shear Strength (psi)
Steel	24 hours	1750 - 3650

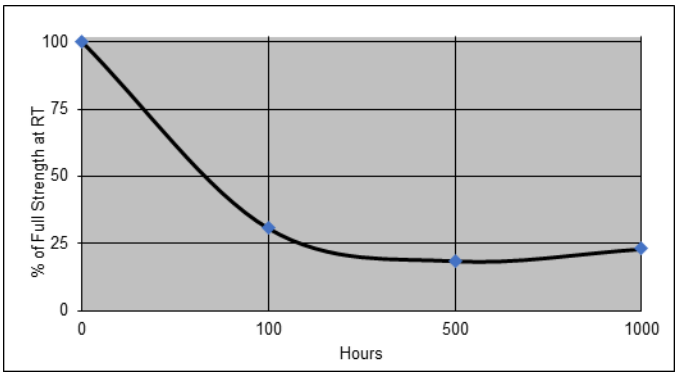
Typical Environmental Resistance

Cured for 1 week @ 22ºC
Shear Strength, ASTM D1002
Steel lap-shear specimens (grit blasted)

Hot Strength
Tested at temperature



Heat Aging
Aged at 100ºC indicated and tested at 22°C



Chemical/Solvent Resistance
Aged under condition indicated - Tested at 72ºF (22ºC).

Chemical/Solvent	Temp (ºC)	% of Initial Strength		
		100h	500h	1000h
Motor Oil	40	109	93	86
Gasoline	22	102	109	109
Isopropanol	22	108	107	94

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Directions for Use
For best performance bond surfaces should be clean and free from grease. This product performs best in thin bond gaps (0.05 mm).

Disassembly and Cleanup
Liquid Cyanoacrylate should not be wiped with rags or tissue. The fabric will cause polymerization and large quantities of adhesive will heat or cure causing smoke and strong irritating vapors. Always flood with excess water to clean up spill conditions.

Storage
Cyanoacrylate adhesives must be stored under refrigeration at a temperature of 40ºF ± 5ºF for extended shelf life. Before opening, the containers must be warmed to room temperature, otherwise, water may condense into the bottle and cause hardening of the adhesive. To prevent contamination of unused adhesive, do not return product to its original container.

Dispensing Equipment
Hernon® offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® Sales** for additional information.