

Technical Data Sheet Quantum[®] 129

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Product Description

Hernon[®] Quantum[®] 129 is a single-component cyanoacrylate adhesive formulated for impact, thermal shock and peel resistance.

Product Benefits

- Single-component: no mixing
- Good shock and impact resistance
- Cures at room temperature
- Easy to apply

Typical Applications

- For bonding parts that require a higher humidity resistance than regular cyanoacrylates
- For parts subjected to shock and vibration
- For parts subjected to thermal cycling
- For most rubber, plastic or metal substrates

Quantum[®] 129 meets the requirements of MIL-A-46050C, Type II Class 3, and CID A-A-3097 Type II Class 3.

Typical Properties (Uncured)

Property	Value
Chemical Type	Ethyl Cyanoacrylate
Appearance	Blue
Viscosity, cP	1600 to 2300
Specific gravity	1.05
Flash point	See MSDS

Typical Properties (Cured)

Cured 24 Hours @ 22°C

Physical Properties

Property	Value
Temperature range, °C (°F)	-55 to 125 (-65 to 255)
Gap Fill, mm (in.)	0.203 (0.008)

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 22°C / 50% relative humidity. Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Substrate	Fixture Time (seconds)
Steel, degreased	60 - 120
Aluminum	30 - 60
ABS	30 - 60
Polycarbonate	30 - 60
Phenolic	30 - 40

Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. Thin bond lines result in high cure speeds, increasing the bond gap will decrease the rate of cure.

Cure Speed vs. Accelerator

Where cure speed is unacceptably long due to large gaps, applying accelerator to the surface will improve cure speed. However, this can reduce ultimate strength of the bond and therefore testing is recommended to confirm effect.

Typical Cured Performance

Shear Strength

Cured 24 Hours @ 22°C - tested according to ISO 4587

Substrate	Shear Strength N/mm ² (psi)
Steel, gritblasted	≥15.2 (≥2200)
Aluminum, gritblasted	≥15.2 (≥2200)
ABS	≥7 (≥1000)
Polycarbonate	≥7 (≥1000)

General Information

**Shelf life, (stored at 10 – 20°C) 12 months.
Product should be refrigerated**

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 Material Safety Data Sheet (MSDS).

Directions For Use

Surface Preparation

For best results the surface must be clean and free of rust inhibitors, dust, grease, oil and other contaminants. Use of an Alcohol wipe is suitable for most surfaces. Bond strength on painted parts may be determined by how well the paint adheres to the substrates.

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.

Polyolefin Bonding

Hernon® Primers are recommended for bonding to polyethylene, polypropylene, PTFE or silicone with **Quantum®** adhesives. Primer may be applied by spraying, brushing or dipping. Excess primer should be avoided. When polyolefin substrates are bonded to other substrates, only the polyolefin should be primed.

Clean-Up/Debonding

Equipment may be cleaned by flushing with **Hernon® Equipment Flushing Solvent 11**. Excess adhesive can be dissolved with **Hernon® CA Remover 14**, nitromethane or acetone.

Storage

Cyanoacrylate adhesives must be stored under refrigeration at a temperature of 40°F ± 5°F 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.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING®, INC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Hernon's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO 9001:2008 Quality Standard.