HERNON®
Formulating Solutions

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Quantum 150 UV

Hernon® Quantum 150 UV is a single component, solventless, room temperature curing cyanoacrylate adhesive with light curing property. The presence of surface moisture and/or light (UV or Visible light) commence the cure of the adhesive.

Quantum 150 UV develops handling strength within seconds and full functional strength within minutes.

Quantum 150 UV can bond a wide variety of surfaces including thermoplastics, elastomers.

Product Benefits

- Rapid Cure: forms a strong bond by moisture curing at room temperature in less than a minute with contact pressure.
- Light curing property: can be easily cured by irradiation with light. Blushing can be also prevented by UV curing.
- Surfaces: will bond almost any combination of similar or dissimilar materials.
- Easy Use: single component feature, eliminates any mixing.
- Due to low viscosity, it can penetrate gaps between surfaces.

Typical Properties (Uncured)

Property	Value
Chemical Type	UV curable and cyanoacrylate based
Appearance	Clear yellow liquid
Viscosity @ 77ºF (25ºC), cP	1-20
Specific gravity	1.05
Flash point	See SDS

Typical Properties (Cured)

Cured 24 Hours @ 22ºC

Physical Properties

Property	Value
Temperature range, ºC, (ºF)	-55 to 82 (-65 to 180)
Glass Transition temperature	124 ºC
Volume resistivity (Ω.m)	$5.4x10^{13}$
Surface resistivity (Ω)	$1.2 x10^{13}$
Dielectric Voltage (kV/mm)	27.0

Typical Curing Performance

Adhesive Properties

This product is cured when exposed to UV radiation of 365nm. The speed of cure will depend on the UV intensity as measured at the product surface.

Tack Free Time

Measured @ 365 nm, using medium pressure, mercury arc lamp: US 1000, at ½ inch distance: ≤10 seconds
By using LED9, at ¼ inch distance: ≤10 seconds

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. Fixture time is defined as the time to develop a shear strength of 0.1 N/mm

Substrate	Fixture Time (seconds)
Steel	≤30
Aluminum	≤20
Glass	≤5
Glass/Steel	≤5
Glass/Aluminum	≤5
ABS	≤15
FR-4	≤10
Phenolic	≤20
PVC	≤25
Nitrile Rubber (Buna-N)	≤5

Typical Cured Performance

Shear Strength

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

Substrate	Shear Strength N/mm² (psi)
Steel (grit blasted)	6.9 (≥ 1000)
Aluminum (grit blasted)	6.9 (≥ 1000)
ABS	2.1 (≥ 300)
FR-4	6.9 (≥ 1000)
Phenolic	10.3 (≥ 1500)
PVC	4.1 (≥ 600)
Nitrile Rubber (Buna-N)	6.9 (≥ 1000)

Block- Shear Strength on different specimens
Cured with US 1000, at ½ inch distance
Tested at RT, according to ASTM D4501

Specimen	Cure Conditions	Value, psi
Glass to Glass	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	≥ 300
Glass to Steel	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	≥ 100
Glass to Aluminum	UV-cured for 30 sec, post-cured for 24 hours at 22 ºC	≥ 100

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 at 5ºC to 10ºC. 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.