TECHNICAL DATA

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#612
QUICK-WELD #1
Low Viscosity
Cyanoacrylate Adhesive

QUICK-WELD #1 is a low viscosity, fast cure speed, surface insensitive cyanoacrylate. It is specifically formulated to bond difficult surfaces with high industrial strength. Used mainly for bonding close fitting parts or where penetration is needed.

APPLICATIONS:

- Ideal for bonding rough, porous and acidic surfaces including wood, cardboard, balsa wood, rubbers, plastics, metals, leather, etc.
- Wide variety of industrial manufacturing and repairing applications.
- Meets Military specification MLLA 46050 Type II Class II.

PHYSICAL PROPERTIES:

LIQUID

Composition	Surface insensitive Ethyl Cyanoacrylate
Appearance	Colorless Liquid
Viscosity @ 77°F (25°C) *Brookfield LVF, Spindle 1-60 rpm*	90-120 cps

CURED ADHESIVE

Gap Filling	0.2 mm
Tensile Shear Strength	18-28 n/mm^2 (2610-4060 psi)
Service Temperature Range	-76 to 176°F (-60 to +80°C)
Full Cure	24 hours
Melting Point Temperature	320 to 338°F (160 to 170°C)

Shear Strength ASTM D 1002/DIN 53283

Grit Blasted Steel	>20 n/mm^2 (>2900 psi)
Etched Aluminum	>18 n/mm^2 (>2610 psi)
Rubbers	>22 n/mm^2 (>3190 psi)
Wood	>25 n/mm^2 (>3625 psi)
Polycarbonate	>12 n/mm^2 (>1740 psi)
ABS	>10 n/mm^2 (>1400 psi)

ADDITIONAL PHYSICAL PROPERTIES:

Coefficient of thermal conductivity, ASTM C177, W.m^{-1} k^{-1}	0.1
Glass Transition Temperature, ASTM E228	248°F (120°C)
Coefficient of thermal expansion, ASTM D696, K^{-1}	75x10^{-6}

ELECTRICAL PROPERTIES:

Dielectric strength, ASTM D149, kV/mm	25
Volume resistivity, ASTM D257, Ohm.cm	1x10^{16}
Dielectric constant, 77°F (25°C), ASTM D150	2.7

BONDING TIMES:

Plastics	2-5 seconds
Wood	1-5 seconds
Metals	8-10 seconds
Rubbers	<3 seconds
Leather	5-15 seconds
Ceramics	12-18 seconds

APPLICATION INSTRUCTIONS:

- All surfaces must be clean, dry, dust and grease free. Best results will be achieved with surfaces that have been lightly abraded immediately prior to bonding.
- If using IES #650 accelerator, apply to one surface only. Apply a thin film of adhesive to the other surface and bring pieces together immediately. Hold for a few seconds without disturbing the joints.
- When bonding “O” rings, cut a fresh surface onto each end of the rubber to gain the best possible strength.

STORAGE:

- Avoid direct sunlight which causes polymerization.
- Store in a dry place. Small amounts of moisture (contained in the air) can cause polymerization. Keep cap tightly closed when not in use.
- Maintain temperature below 80°F. Refrigeration storage (40°F) will extend shelf life. Allow product to attain room temperature before using.