A NEW FORCE IN CHEMICAL MANUFACTURING

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TECHNICAL DATA SHEET

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PRODUCT NAME

8454 Cyanoacrylate Adhesive

Refer to MSDS for product safety guidelines

PACKAGING OPTIONS

Part Number	Available Size
8454-20	20g
8454-300	300g

8454 Surface Insensitive Ethyl Gel Cyanoacrylate Adhesive

Chemtools® 8454 is an ethyl cyanoacrylate adhesive of gel consistency for non-drip and non-run applications. It is specially formulated for difficult to bond surfaces.

APPLICATIONS:

- Suitable for bonding porous or absorbent materials such as wood, paper, leather and fabric.
- Excellent adhesion to metal, plastic and elastomeric compounds.

BONDS:

Acrylic	Polycarbonate	Paper	PVC
Leather	Fabric	Polysulfone	Wood
Latex	Steel	Aluminium	Zinc Dichromatic

BONDING TIMES:

Under normal conditions, the surface moisture initiates the curing process. Functional strength develops in a short time but curing continues for at least 24 hours before full chemical/solvent resistance is developed. The rate of cure will depend on substrate used.

Stainless Steel	5 - 20 seconds	Aluminium	2 - 10 seconds
Polycarbonate	10 - 40 seconds	PVC	2 - 10 seconds
Neoprene	> 5 seconds	Wood	2 - 10 seconds
Polycarbonate	2 - 10 seconds	Nitrile Rubber	> 5 seconds

LIQUID PROPERTIES:

Composition	Surface Insensitive Ethyl Cyanoacrylate
Appearance	Colourless liquid
Viscosity @ 25°C (Brookfield LVF, Spindle 1 - 60 rpm)	Gel

CURED ADHESIVE PROPERTIES:

Gap Filling	0.75 mm
Tensile Shear Strength	15 - 26 N/mm^2
Service Temperature Range	-40 to +85°C
Full Cure	24 hours
Melting Point Temperature	160 to 170°C

MECHANICAL PROPERTIES:

Shear Strength (ASTM D1002/DIN 53283)

Woods	25 - 27 N/mm^2
Grit Blasted Steel	18 - 28 N/mm^2
Neoprene Rubber	10 - 18 N/mm^2
PVC	3 - 9 N/mm^2
Etched Aluminium	11 - 19 N/mm^2
Polycarbonate	5 - 20 N/mm^2

PHYSICAL PROPERTIES:

Coefficient of Thermal Conductivity, ASTM C177, $W.m^{-1}.K^{-1}$	0.1
Coefficient of Thermal Expansion, ASTM D696, K^{-1}	80 x 10^{-6}
Glass Transition Temperature, ASTM E228	120°C
Dielectric Strength, ASTM D149, V/mil	625

APPLICATION INSTRUCTIONS:

- All surfaces must be clean, dry, dust and grease free. Best result will be achieved with surfaces that have been lightly abraded immediately prior to bonding.
- If using accelerator apply to one component surface only. Apply thin film of adhesive to the other surface and bring the pieces together immediately. Hold for few seconds without disturbing the joints.
- Thin bond lines favour high cure speed. Increasing the bond gap will slow down the rate of cure.

STORAGE:

Anaerobic adhesives shall be ideally stored in a cool, dry place in unopened containers at a room temperature between 7°C to 28°C. Please do not return any unused material to its original container.

PRECAUTIONS:

This product is capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the material.

WARRANTY:

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