



# TECHNICAL DATA SHEET

A NEW FORCE IN CHEMICAL MANUFACTURING

AEROSOLS | WELDING CHEMICALS | ADHESIVES & THREADLOCKERS | ANTI-SEIZE & GREASES | CLEANING CHEMICALS & SOLVENTS | ELECTRICAL & ELECTRONICS

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## Rapidstick™ 8406 Cyanoacrylate Adhesive

PART NUMBER	AVAILABLE SIZE
8406-10	10g Brush Bottle
8406-20	25ml Bottle
8406-50	50g Bottle
8406-500	500g Bottle

### PRODUCT DESCRIPTION

Chemtools® Rapidstick™ 8406 Cyanoacrylate Adhesive is ideal for a wide variety of manufacturing and repair applications requiring a reliable, high strength, industrial bond. It is specifically formulated for tight-fitting insensitive surfaces which are rough, porous, or acidic.

8406 is commonly used for bonding wood, cardboard, rubbers, plastics, metals, ceramics, and leather.

### DIRECTIONS (READ LABEL BEFORE USE)

All surfaces must be clean, dry, and free of dust and grease. Best results will be achieved with surfaces that have been lightly abraded immediately prior to bonding. Thin bond lines favour high cure speed. Increasing the bond gap will slow down the rate of cure.

Apply a thin film of adhesive to both surfaces to be bonded. If using an Accelerator, apply to one component surface only, and apply a thin film of adhesive to the other. Bring the pieces together immediately. Hold for up to 6 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.

**BONDING TIMES:** Under normal conditions, surface moisture initiates the curing process. Functional strength develops very quickly, but the curing process continues for at least 24 hours before full chemical/solvent resistance is developed. The rate of cure will depend on substrates used.

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



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### TECHNICAL DATA

#### LIQUID PROPERTIES:

Composition	Ethyl Cyanoacrylate
Appearance	Colourless liquid
Viscosity @ 25°C, Brookfield LVF, Spindle 1, 30 rpm	20 cps

#### CURED ADHESIVE PROPERTIES:

Gap Filling	Up to 0.05 mm
Tensile Shear Strength	18- 28 N/mm <sup>2</sup>
Service Temperature Range	-60°C to +80°C
Full Cure	24 hours
Melting Point Temperature	160°C to 170°C

#### MECHANICAL PROPERTIES:

Glass Transition Temperature, ASTM E228	122°C
Dielectric Strength, ASTM D149, V/mil	27
Coefficient of Thermal Expansion, ASTM D696, K <sup>-1</sup>	75 x 10 <sup>-6</sup>
Coefficient of Thermal Conductivity, ASTM C177, W.m <sup>-1</sup> .K <sup>-1</sup>	0.1
Volume Resistivity, ASTM D257, Ohm.cm	1 x 10 <sup>-16</sup>
Dielectric constant, 25°C, ASTM D150	2.7

#### Shear Strength (ASTM D 1002/DIN 53283)

Grit Blasted Steel	> 20 N/mm <sup>2</sup>
Etched Aluminium	> 18 N/mm <sup>2</sup>
Rubbers	> 22 N/mm <sup>2</sup>
Wood	> 25 N/mm <sup>2</sup>
Polycarbonate	> 12 N/mm <sup>2</sup>
ABS	> 10 N/mm <sup>2</sup>

#### CHEMICAL RESISTANCE PROPERTIES:

Chemical	Temperature	% Initial Strength Retained	
		500 hours	1,000 hours
Isopropanol	22°C	85	85
Petrol	22°C	80	75
Motor Oil	40°C	90	90
Mineral Spirit	22°C	90	90



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### FIRST AID & SAFETY PRECAUTIONS

Please refer to Safety Data Sheet (SDS) before use. Use with adequate ventilation and avoid breathing fumes. Avoid contact with eyes and skin. This product may produce adverse health conditions, ranging from minor skin irritation to serious systemic effects. It should not be used, stored, or transported until the handling precautions and recommendations as stated in the Safety Data Sheet (SDS) for this product have been fully understood by all persons who will work with the material.

### STORAGE

Keep out of reach of children. Store in a sealed container in a cool, dry place (between -2°C and 8°C). Do not return any unused material to its original container.

Containers must be secured and stored upright during transit.

### DISCLAIMER

Chemtools® has made every effort to ensure the information provided in this Technical Data Sheet is accurate at the time of publication. Chemtools® expressly recommends that the user make his/her own assessment to determine the suitability of the product for its intended purpose prior to application. Chemtools shall not be responsible for loss, damage, or injury, resulting from the reliance upon, or failure to adhere to, any recommendations or information contained herein; nor from abnormal use of the material; nor from any hazard inherent in the nature of the material.

### FURTHER INFORMATION

Please visit Chemtools® online at [www.chemtools.com.au](http://www.chemtools.com.au) for product photos, marketing materials, Technical Data Sheets, Safety Data Sheets, contact details, and other company/business related information.