



TECHNICAL DATA SHEET

A NEW FORCE IN CHEMICAL MANUFACTURING

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

Issued: August 2020

Rapidstick™ 8414 Cyanoacrylate Adhesive

PART NUMBER	AVAILABLE SIZE
8414-20	25ml Bottle
8414-50	50g Bottle
8414-500	500g Bottle

PRODUCT DESCRIPTION

Chemtools® Rapidstick™ 8414 Cyanoacrylate Adhesive offers an enhanced performance bond on a wide range of vinyl and other plastics. It is specially formulated for adhering vinyls and plastics to themselves, or to metal.

8414 is typically used for optical goods and medical devices, as well as toys, telephones, and cameras.

Recommended bonding surfaces include:

Acrylic	PVC	Polycarbonate	Polysulfone	Polyimide	PET
PEEK	Latex	PETG	ABS	Rubber	Metals

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.



TECHNICAL DATA SHEET

A NEW FORCE IN CHEMICAL MANUFACTURING

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

TECHNICAL DATA

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.

Steel	15 – 30 seconds	Aluminium	2 – 10 seconds
Polycarbonate	15 – 50 seconds	ABS	2 – 10 seconds
Neoprene	< 5 seconds	Phenolics	5 – 15 seconds
PVC	2 – 10 seconds	Nitrile Rubber	5 – 7 seconds

LIQUID PROPERTIES:

Composition

Ethyl Cyanoacrylate

Appearance

Colourless liquid

Viscosity @ 25°C, Brookfield LVF, Spindle 1, 60 rpm

70 - 100 cps

CURED ADHESIVE PROPERTIES:

Gap Filling

Up to 0.20 mm

Tensile Shear Strength

15 - 18 N/mm²

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

125°C

Dielectric Strength, ASTM D149, V/mil

625

Coefficient of Thermal Expansion, ASTM D696, K⁻¹

90 x 10⁻⁶

Coefficient of Thermal Conductivity, ASTM C177, W.m⁻¹.K⁻¹

0.1

Shear Strength (ASTM D 1002/DIN 53283)

Neoprene Rubber

10 - 15 N/mm²

PVC

6 - 9 N/mm²

Acrylic

10 - 15 N/mm²

Polycarbonate

5 - 10 N/mm²

ABS

8 - 14 N/mm²

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



TECHNICAL DATA SHEET

A NEW FORCE IN CHEMICAL MANUFACTURING

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

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 for product photos, marketing materials, Technical Data Sheets, Safety Data Sheets, contact details, and other company/business related information.