



# TECHNICAL DATA SHEET

## A NEW FORCE IN CHEMICAL MANUFACTURING

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

Issued: January 2021

### Rapidstick™ 8116 UV Curable Adhesive

PART NUMBER	AVAILABLE SIZE
8-116-50	50ml Bottle

#### PRODUCT DESCRIPTION

Chemtools® Rapidstick™ 8116 UV Curable Adhesive is a low viscosity, high wetting, 100% solids liquid glue which provides an 'on demand' bond, eliminating drying and heat curing. It offers many advantages in bonding where the adhesive can be exposed to ultraviolet (UV) light with a remarkably fast, almost instant cure, due to its maximum UV absorption range of between 350 and 380 nanometers.

8116 exhibits good resistance to temperature extremes and high humidity, with excellent clarity, low shrinkage, and slight flexibility. It is superior to other adhesives when bonding glass to glass or glass to metal, and is ideal for wicking and low bubble formation.

8116 is designed to give the best possible clear adhesion to glass surfaces, metals, wood, and other glass filled materials. It is highly recommended for bonding glass furniture, sculptures and trophies, crystal assemblies, glass tops, and optical items.

#### DIRECTIONS (READ LABEL BEFORE USE)

Surfaces should be clean, dry, and free of all grease and contaminants. Chemtools® Kleanium™ IPA/Isopropanol may be used to degrease most surfaces. Some metals such as aluminium, copper and its alloys, will benefit from a light abrasion to remove the oxide layer.

*Note: If the bonding surface is glass, and a silicone-based agent was previously used to clean the surfaces, it is highly recommended to clean the surface again using Chemtools® Rapidstick™ 8-SRM Silicone Remover.*

Apply directly from the bottle. Expose the joint to ultraviolet light for the appropriate time to ensure full cure. Ensure parts are undisturbed and held firmly together during cure.

*Note: It is important to try to prevent air entrapment within the joint as this could be detrimental to the finished appearance of the adhesive.*

Cure time depends upon the power of the UV lamp, its spectral output, the distance between the lamp and the components, and the transmission characteristics of the substrates.

HINT: Extend the shelf life of the product by minimising exposure to ambient light when in storage.



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### TECHNICAL DATA

#### LIQUID PROPERTIES:

Composition	Urethane Methacrylate
Appearance	Colourless, clear liquid
Viscosity @ 25°C (20-rpm Brookfield)	80 – 120 cps
Specific Gravity	1.20
Flash Point	>95°C
Toxicity	Low

#### CURED ADHESIVE PROPERTIES:

Refractive Index	1.509
Tensile Modulus (ASTM D882)	39,975 psi
Tensile Strength (ASTM D882)	2,450 psi
Elongation @ break	12%
Hardness – Shore D (ASTM D2240)	70
Tg (ASTM D3418-82)	45°C
Water Absorption (ASTM D570)	5.8%
Temperature Range	–55°C to +125°C
Shrinkage On Cure	3.4%
Young Modulus	1.6 x 10 <sup>5</sup> psi
Shear Strength (ASTM D4501)	Steel to Glass: 3,550 psi Aluminium to Glass: 3,450 psi Glass to Glass: 4,000 psi

#### UV CURING SYSTEM:

LAMP TYPE	5" X 5" FLOOD	3/16" SPOT	1" X 6" FOCUSED
Max lamp intensity @ 365nm	300 mW/cm <sup>2</sup>	4,000 mW/cm <sup>2</sup>	8,000 mW/cm <sup>2</sup>
Adhesive Absorption Range (nm)	300 – 500	300 – 500	300 – 500
Cure Speed (seconds) – Glass to Glass – Surface Cure Speed	3 7	6 7	< 1 < 1

nm = nanometers



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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.

### 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.