

# Cyberbond

U303

TECHNICAL DATA SHEET



Cyberlite U303 is a high viscosity, medical-grade UV-curable adhesive that bonds well on a wide variety of plastics. Its strength and flexibility make it particularly well-suited to bonding dissimilar substrates. Additionally, its thixotropic viscosity makes it ideal for applications in which migration must be avoided. Cyberlite U 303 has been tested to ISO 10993 part 5 for cytotoxicity.

## Physical Properties - Monomer (Uncured)

Base Compound	Modified Acrylate
Appearance	Light Straw Liquid
<b>Viscosity</b>	<b>3000 +/- 1000 cps</b>
Specific Gravity	1.1 g/cc
Flash Point	> 95°C
Shelf Life	6 months
Storage Condition	8°C to 21°C in darkness
RoHS-Compliant	Yes

## Physical Properties - Polymer (Cured)

<b>Setting Time*</b>	<b>&lt; 4 seconds</b>
Full Cure Time	24 hours
Appearance	Colorless solid
Tack-Free Surface?	Yes
Elongation	400%
Shore Hardness	86 (Shore A) 57 (Shore D)
Optimal Wavelength	300 to 420 nm

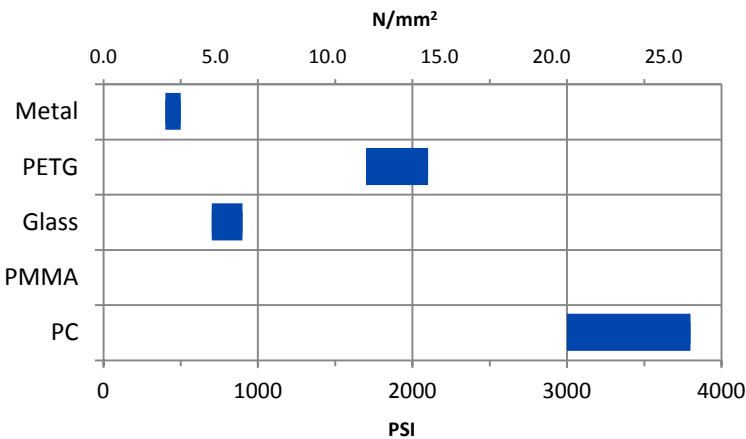
\*Polymerized @ 395nm @ 50mW/cm<sup>2</sup>

## Performance of Cured Adhesive

Substrate	N/mm <sup>2</sup>			PSI		
	Min	Max	Range	Min	Max	Range
Metal	2.8	3.4	to	400	500	to
PETG	11.7	14.5	to	1700	2100	to
Glass	4.8	6.2	to	700	900	to
PMMA	n/r	n/r	to	n/r	n/r	to
PC	20.7	26.2	to	3000	3800	to

\* n/r = not recommended for use on this substrate

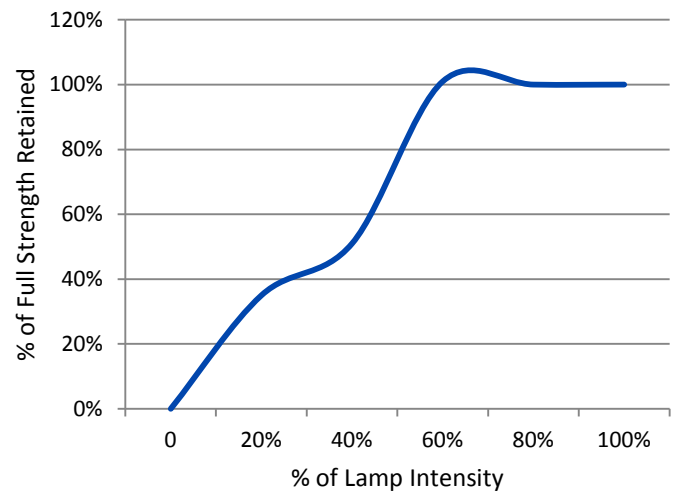
### Performance Range, by Substrate



## Specifications and Approvals

10993-5

## % Strength Retained @ Given Dosage



## Solvent Resistance

Solvent	Example	Resistance
Alcohol	Ethanol, Methanol	+++
Ester (aromatic)	Ethylacetate	---
Ketone (aromatic)	Acetone, Benzophenone	---
Aliphatic hydrocarbon (alkanes)	Petrol, Heptanes, Hexane	++-
Aromatic hydrocarbons	Benzyl, Toluol, Xylol	++-
Halogenated hydrocarbons	Methylenchloride, Chloroform, Chlorobenzol	---
Weak aqueous acid	Nitrite, muriatic acid, sulphuric acid, phosphoric acid	+++ (--- if concentrated)
Weak aqueous base	sodium hydroxide solution, caustic potash	+++ (--- if concentrated)

## General Instructions

Surfaces to be bonded should be clean and dry. Dispense a drop or drops to one surface only. Apply only enough to leave a thin film layer after compression. Press parts together and expose to UV dose when ready. An adequate bond should develop rapidly, depending on UV dose efficacy, and maximum strength is attained in 24 hours. Wipe off excess adhesive from the top of the container and recap. Cyberlite products, if left uncapped or exposed to sunlight, may deteriorate or cure prematurely.

## Curing Performance

Photoinitiation initiates the curing process. Handling strength is reached in a short time, and will vary based on UV dose efficacy, environmental conditions, bond line gap, and other factors. Product will continue to cure for at least 24 hours before full strength and solvent resistance is developed.

## Storage

Products should be stored unopened in a cool, dry place out of direct sunlight. Products should be kept at room temperature away from direct light. Protect from extreme heat or cold, do not refrigerate.

## Note

The data contained herein are furnished for information only and are believed to be reliable. Cyberbond cannot assume responsibility for the results obtained by others over whose method Cyberbond does not control. It is the user's responsibility to determine suitability for the product or of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, Cyberbond specifically disclaims all warranties of merchantability or fitness for a particular purpose arising from sale or use of Cyberbond products. Cyberbond specifically disclaims any liability for consequential or incidental damages of any kind, including loss of profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Cyberbond patents which may cover such processes or compositions. We recommend that each prospective user test the proposed application to determine its suitability for the purpose intended prior to incorporating any product or application in its manufacturing process using the data as a guide.

## For safe handling information on this product, consult the Material Safety Data Sheet (MSDS)

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