Cyberbond

U301 TECHNICAL DATA SHEET

Cyberlite U301 is a versatile, low-viscosity UV-curable with an affinity for bonding glass to metal. Its wicking viscosity also makes it an ideal needle bonder, and it adheres well on various plastics. Cyberlite U 301 has been tested to ISO 10993 part 5 for cytotoxicity, making it suitable for use in medical devices.

Physical Properties - Monomer (Uncured)

Base Compound	Modified Acrylate
Appearance	Light Straw Liquid
Viscosity	**40 +/- 10 cps**
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)

Setting Time*	**< 3 seconds**
Full Cure Time	24 hours
Appearance	Colorless solid
Tack-Free Surface?	Yes
Elongation	150%
Shore Hardness	62 (Shore A) 52 (Shore D)
Optimal Wavelength	300 to 420 nm

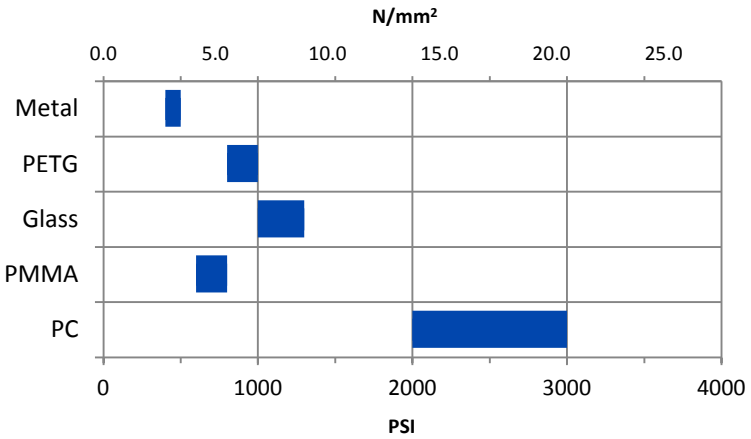
*Polymerized @ 395nm @ 50mW/cm²

Performance of Cured Adhesive

Substrate	N/mm²			PSI		
Metal	2.8	to	3.4	400	to	500
PETG	5.5	to	6.9	800	to	1000
Glass	6.9	to	9.0	1000	to	1300
PMMA	4.1	to	5.5	600	to	800
PC	13.8	to	20.7	2000	to	3000

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

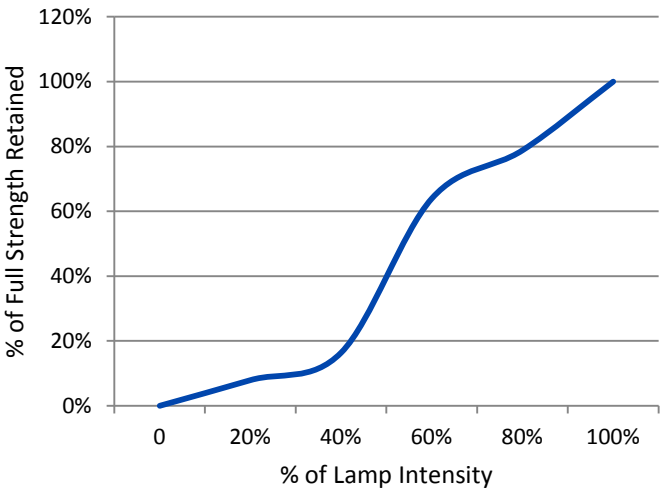
Performance Range, by Substrate



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)

Cyberbond LLC
630.761.8900

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)

Cyberbond, LLC
401 N Raddant Road
Batavia, IL 60510
630.761.8900 tel
www.cyberbond1.com

Cyberbond Europe GmbH
Werner-von-Siemens Straße 2
D - 31515 Wunstorf
Germany
49 / 50 31 / 95 66 - 0 tel
www.cyberbond.de

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Updated 1/20/2012