

Cyberbond

U305

TECHNICAL DATA SHEET

The Power of Adhesive Information
cb
 Cyberbond™

Cyberlite U305 is a medium-to-high viscosity, medical-grade UV-curable adhesive designed for bonding a wide variety of plastics in a multitude of configurations. It is strong, flexible and well-suited to bonding dissimilar substrates. Cyberlite U305 is certified to the ISO standard 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	850 +/- 200 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*	< 8 seconds		
Full Cure Time	24 hours		
Appearance	Colorless Solid		
Tack-Free Surface?	Yes		
Elongation	400%		
Shore Hardness	70 (Shore A)	34	(Shore D)
Optimal Wavelength	320 to	420	nm

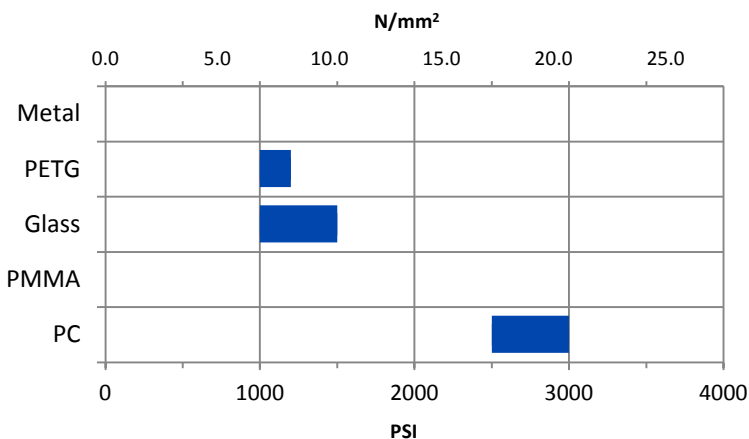
*Polymerized @ 395nm @ 50mW/cm²

Performance of Cured Adhesive

Substrate	N/mm ²			PSI		
	n/r	to	n/r	n/r	to	n/r
Metal	n/r	to	n/r	n/r	to	n/r
PETG	6.9	to	8.3	1000	to	1200
Glass	6.9	to	10.3	1000	to	1500
PMMA	n/r	to	n/r	n/r	to	n/r
PC	17.2	to	20.7	2500	to	3000

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

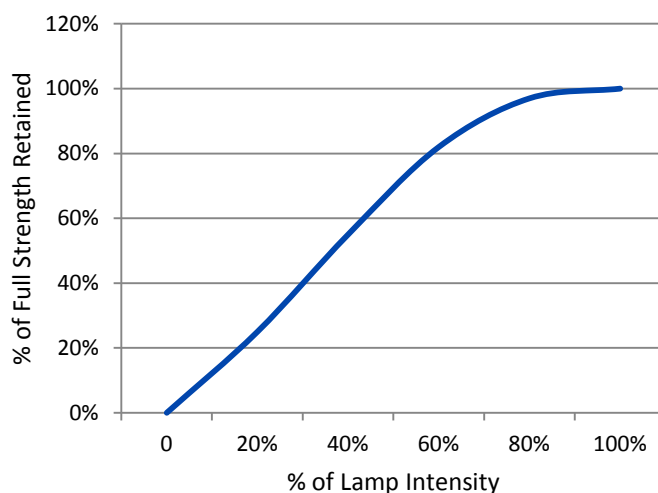
Performance Range, by Substrate



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)

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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