



ECCOBOND[®] UV 9110

Light Curing Adhesive for Medical Plastic Bonding

Key Feature:	Benefit:
• UV and visible light curing	• Cures through UV stabilized plastic
• Excellent adhesion and flexibility	• Bonds to many substrates
• USP Class VI requirements	• Low toxicity
• Cures in seconds	• Quick processing

ECCOBOND UV 9110 is designed specifically for bonding rigid and semi-rigid plastic substrates in medical applications. It has excellent adhesion to a number of engineering plastics and will cure through UV stabilized plastics.

Instructions For Use:

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

To ensure the long term performance of the bonded assembly, complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt, and oils which can cause poor adhesion or corrosion in a bonded part. For information on proper substrate preparation, refer to the reprint "Good Adhesive Bonding Starts With Surface Preparation" available from Henkel Corporation.

ECCOBOND UV 9110 can be applied by dispensing equipment using small 15-25 gauge needles at low pressure (5-10 psi) and will flow to fill gaps, but does not run or drip.

Product Description:

ECCOBOND UV 9110 is a one component, solvent-free, light curable adhesive which meets the USP Class VI toxicity requirements. Cure can be achieved utilizing a broad range of light sources such as spot, pulsed and high intensity lamps.

ECCOBOND UV 9110 maintains its adhesion and appearance characteristics after exposure to gamma sterilization. Superior adhesion and flexibility of ECCOBOND UV 9110 provides an excellent mechanical bond.

Applications:

Properties of Material As Supplied:

Property	Test Method	Unit	Value
Chemical Type			UV acrylate
Appearance	Visual		Clear light amber
Density	ASTM-D-792	g/cm ³	1.07
Brookfield Viscosity	ASTM-D-2393 20 rpm # 3 Model HAT	Pa.s cP	2 2,000
Time to stress craze @7mPa (1000 psi)	ASTM D 3929	minutes	>20

Cure Schedule:

ECCOBOND UV 9110 will cure within 3-10 seconds when exposed to a 200 watt per inch arc or H type UV lamp. Lower intensity UV sources or sources with different spectral output may be used, but the cure schedule will differ. UV stabilized and tinted plastics may require longer cure schedules.

Properties of Material After Application:

Property	Test Method	Unit	Value
Appearance <1.25 mm (50 mil)	Visual	-	Clear - colorless
USP Class VI Toxicity 50°C	USP 23	-	Pass
Cytotoxicity - Agar Diffusion	-	-	Pass
Tack Free Time	-	seconds	5
Depth of Cure (5 second exposure to a 200 Watt/inch mercury arc lamp)	-	mm mil	>3.17 >125
Hardness	ASTM-D-2240	Shore D	55
Tensile Lap Shear Strength PC to PC @ 25°C (cured 15 seconds with 200 Watt/inch arc lamp)	ASTM-D-1002	mPa psi	13.8 2000
% of original value after conditioning:			
Water immersion, 7 days @ 49°C (125°F)		%	60
90% Isopropyl alcohol immersion, 24 hours		%	95
Humidity aging, 7 days @ 38°C/95% RH		%	75
Heat aging, 121°C			
7 days		%	80
14 days		%	60
Gamma sterilization, 5-6 Mrads		%	100

Storage and Handling:

The shelf life of ECCOBOND UV 9110 is 9 months at 25°C. Store in tightly covered, original container in a cool, dry area. Avoid exposure to heat and moisture. Care must be taken to avoid repeated or prolonged exposure to light.

Health and Safety:

This product, like many industrial compounds, possesses the ability to cause severe skin and eye irritation upon contact. Certain individuals may also develop an allergic reaction after exposure (skin contact, skin absorption, inhalation of vapors, etc.) which may manifest itself in a number of ways, including skin rashes and an itching sensation. Handling this product at elevated temperatures may generate vapors irritating to the respiratory system. This product must also be treated as a combustible material.

Good industrial hygiene, ventilation and safety practices must be followed when handling this product. Proper eye protection and appropriate chemical resistant clothing must be worn to prevent direct contact and possible skin absorption. Consult the Material Safety Data Sheet (MSDS) for detailed

recommendations on the use of engineering controls and personal protective equipment. Keep this product away from heat, sparks and open flame sources.

This information is only a brief summary of the available safety and health data. Thoroughly review the MSDS for more complete information before using this product.

Ultraviolet Equipment:

Ultraviolet radiation is emitted by the lamp. Proper precautions to protect eyes and skin are required.

Ultraviolet equipment may generate ozone.

Consult your UV lamp systems supplier for recommended precautions regarding proper installation, use and operation.

Attention Specification Writers:

The values contained herein are considered typical properties only and are not intended to be used as specification limits. For assistance in preparing specifications, please contact Henkel Corporation Quality Assurance for further details.

Medical Implantable Disclaimer

"In the event this product is intended by you for use in implantation in the human body, you are hereby advised that Henkel Corporation has not performed clinical testing of these materials for implantation in the human body nor has Henkel Corporation sought, nor received, approval from the FDA for the use of these material in implantation in the human body. It is YOUR responsibility, as a manufacturer of any such device, to ensure that all materials and processes relating to the manufacture of any medical device fully comply with all applicable federal, state and local laws, rules, regulations and requirements as well as any such laws, rules, regulations, directives or other orders of any foreign country where such product is sold. If you have not undertaken the necessary investigations to ensure compliance you are advised NOT TO USE this product in the manufacture of any device which is to be implanted in the human body. No representative of ours has any authority to change the foregoing provisions."

Note

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