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TECHNICAL BULLETIN

FLASHBOND™ UV-2910DC

UV/LED CURE EPOXY ADHESIVE

FLASHBOND™ UV-2910DC is an innovative light cure epoxy adhesive. It has unique features that allow for fast processing and fixturing of parts. Once the adhesive has been activated with UV light, it has set open time that allows for assembly of parts. The product continues to cure at room temperature or rapidly cures when exposed to low temperature heat. The cured product exhibits low shrinkage and excellent thermal, water and chemical resistance. Typical applications include bonding of optics, connectors, fibers, lenses, prisms and other electronic components where low shrinkage and low outgassing are required.

TYPICAL HANDLING PROPERTIES:

Chemical Type	Cationic Epoxy
Viscosity at 25°C, cps	2500-5000
Specific Gravity, 25°C	1.12

Recommended Curing Conditions:

Pre-activated @ 100-150 mW/cm², measured @ 405 nm or 365 nm for 6-8 seconds resulting in an open time of 45-60 seconds. Full cure will follow in 24 hrs @ 25°C or 30 minutes @ 60°C.

For full cure (no open time), increase cure time to 20-30 seconds or increase intensity to 250 mW/cm^2 and cure for 10 seconds.

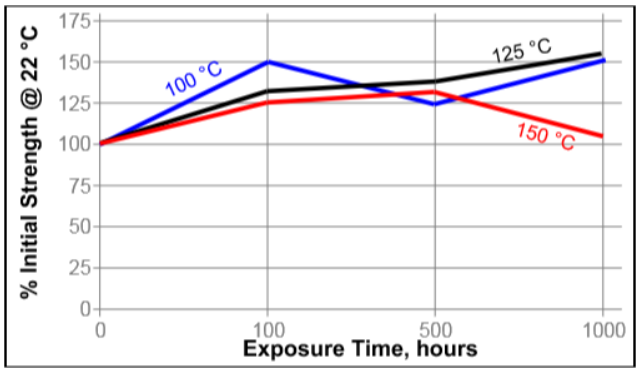
TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

(Tested @ 25°C unless otherwise indicated)

Color	Translucent
Hardness, Shore D	75
Water Absorption (24 hr @ RT), %	0.15
Linear Shrinkage, %	0.8
Elongation at break, %	7.6
Lap Shear Strength Al/Al, psi	2500
Tensile Strength, psi	3000
Service Temperature range, °C	-55 to 150
Glass Transition Temperature, °C	45
Coefficient of Linear Thermal Expansion, 10^{-6}/°C	
Below Tg	59
Above Tg	>120
Dielectric Strength, Volts/mil	420
Dielectric Constant at 1 kHz	4.14
Dissipation Factor at 1 kHz	0.02
Volume Resistivity (ohm-cm)	1.0×10^{14}

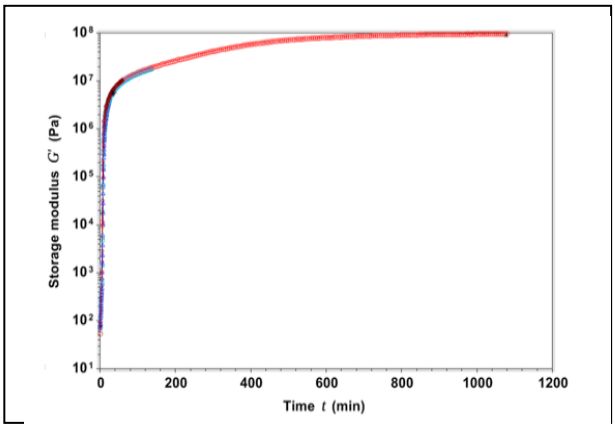
Heat aging

Aged at temperature indicated and tested at 25°C



Strength Testing

Strength build up over time and tested at 25°C



INSTRUCTIONS FOR USE:

1. This product is light sensitive. Exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. Product should be dispensed from applicators with black feed-lines.
2. Bond surfaces should be clean and free from grease.
3. UV cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bond line gap and light transmission of the substrate through which the light must pass.
4. For the best activation time, the epoxy can be spread into a film over the bond area.
5. Post-assembly bond line gaps of less than 5 mils (0.127 mm) will give the best strength results.
6. Over-activated product will form a semi-hard surface and may turn dark brown before the two parts have been assembled. If this occurs, reduce the lamp irradiance or the activation exposure time, or both, on subsequent parts.
7. Cooling should be provided for temperature sensitive substrates such as thermoplastics.
8. Plastic grades should be checked for risk of stress cracking when exposed to liquid adhesive.
9. Excess adhesive can be wiped away with isopropanol solvent.
10. Bonds should be allowed to cool before subjecting to any service loads.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet (SDS). This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling. Optimal Storage: 10°C to 25°C. Storage below 10°C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Epoxyset Inc. cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact Epoxyset at +1-401-726-4500 or by email at info@epoxyset.com.

MATERIAL SPECIFICATION

Test reports for each batch are available for the indicated properties. test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated with Quality Control and may require additional fees.

DISCLAIMER

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose 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. Considering the foregoing, Epoxyset Inc specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Epoxyset Inc's products. Epoxyset Inc. specifically disclaims any liability for consequential or incidental damages of any kind, including lost 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 Epoxyset Inc. patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.