

Technical Datasheet

OPTOCAST

AC-3761 Series

The OPTOCAST AC-3761 family of products consists of acrylated epoxy one-component liquid adhesive that will polymerize to a hard polymer in seconds when exposed to ultraviolet light and/or heat. They exhibit excellent adhesion to a variety of substrates including metal, ceramic, glass, and certain polymers. All are recommended for an extremely fast and efficient way to fasten, tack, fill, coat, encapsulate or seal precision electronic/optoelectronic components.

Viscosity Variations Available:

AC-3761B	250-550 cps	AC-3761T	140,000-200,000 cps
AC-3761V	2,000-3,000 cps	AC-3761-1K	650-1,100 cps
AC-3761L	7,000-9,000 cps	AC-3761-20K	18,000-23,000 cps
AC-3761M	75,000-90,000 cps	AC-3761-40K	35,000-45,000 cps

Uncured Properties

Appearance:	Clear
Specific Gravity:	1.10-1.15
Shelf Life:	6 months at 0°C or less
Pot Life for B, V, L:	Approx. 2 weeks at 20-25°C
Pot Life for M, T, -1K -20K, -40K:	Approx. 40 hours at 20-25°C

*Pot Life times are mass dependent. EMIUV makes no guarantee of accuracy. Your results may vary.

Cured Properties

Appearance:	Clear-Translucent	Young's Modulus:	225,000 psi
n_D^{20} :	1.515	Tensile Strength:	12,000 psi
Hardness:	90 Rex D	Elongation:	<10%
Tg:	95°C	24 hr. Water Soak:	1.5%
Temperature Range:	-40°C to 150°C		
Linear Shrinkage:	2.8%		

Cure Profile

The OPTOCAST AC-3761 Series products may be cured by UV, UV and heat, or heat alone. Use UV cure wavelengths 320 to 400 nm.

◆ Minimum UV intensity is 50 mW/cm² for a flood type lamp, 600 mW/cm² for a spot cure system. Minimum UV exposure times are 2-10 seconds.

◆ Minimum heat cure temperature is 125°C. Minimum heat cure time is 5 minutes depending upon substrate heat up.

◆ These materials can be cured under an inert atmosphere or between two solid substrates for a tack free surface.

◆ Always wear proper eye protection when working with UV light.

Handling and Storage

Domestic US shipping of B, V, and L can be at ambient temperatures.

M, T, -20K, and -40K must be shipped frozen on dry ice.

International shipping for all products must be frozen on dry ice.

◆ All products should be kept frozen when not in use. The 40 hour pot life is the total time out of the freezer, i.e. 40 hours continuous or five 8 hour work days. Do not thaw and refreeze more than 5 times.

◆ Shelf life at 0°C or less is 6 months.

Shipping and Unpacking Procedure

Whether this material is shipped on Dry Ice or shipped at ambient temperatures IT MUST BE PLACED IN THE FREEZER UPON RECEIPT. The material must be kept frozen until use.

◆ It is critical that the shipping container is not opened in transit and is expedited to its final destination.

◆ DO NOT ALLOW THE SHIPMENT TO BE LEFT ON LOADING DOCKS, IN CUSTOMS WAREHOUSES, OR ON FREIGHT TRUCKS FOR EXTENDED TIME PERIODS.

◆ Maintaining temperature at 0°C or less upon receipt is critical to maintain the functionality and performance of the material.

◆ Failure to maintain these temperatures will void any warranties and will adversely affect the materials performance.

◆ Upon receipt, the syringes should be transferred from the shipping container to a freezer at 0°C or less.

◆ Care must be taken during this step as a sudden increase in temperature can cause irreversible air voids due to the thermal expansion of the syringe barrels.

Storage and Thawing

Prior to application, the material must be allowed to thaw naturally to room temperature (ideally 20-25°C) by placing the syringes in a vertical position with dispense tip facing downward. This is a critical step for obtaining optimum dispensing performance.

Thaw times at 20-25°C for all frozen product:	3cc	15-20 min
	5cc	20-30 min
	10cc	20-30 min
	30cc	30-40 min

◆ Under no circumstance should artificial heat sources be used to increase thaw speed.

◆ Do not place the syringes in, or near, any heat source including ovens, hot plates, hot air guns, etc. to speed thawing.

◆ Do not attempt to dispense the material before it reaches ambient temperature.

◆ Wipe all excess moisture or condensation from the syringes prior to use.

◆ A small amount of air in the tip area is normal. Carefully remove the tip cap and manually extrude a small amount of material. This will displace any air that may be in the tip area.

◆ A small amount of air may accumulate at the rear of the syringe near the piston. This is also normal and this air can easily be removed by manually placing a light amount of pressure on the piston near the location of the visible air with the tip cap in place. This will force the air to by-pass the piston and exit the rear of the syringe. Mount the syringe onto the dispense equipment and purge material through the system until an unbroken flow of material is extruded.

IMPORTANT NOTICE

Good housekeeping rules are always important. Provide ample ventilation in all areas of handling, and use. Avoid prolonged breathing of possible fumes. Minimize skin contact. Use of goggles, rubber gloves, and protective creams is recommended. Always wash exposed areas immediately using warm water and soap followed by rinsing with clear water. If material comes in contact with eyes, flush with clear water for fifteen minutes and consult a physician immediately.

All data in this bulletin are based on our own research and the research of others. They are believed to be accurate. However, no guarantee of accuracy is made. Product description is sold without warranty except conformity to specification and on condition that the purchasers shall determine suitability for their particular purpose.