

OPTOCAST 3663-5K is a single component thermal cure epoxy system designed for use in micro-electronic and opto-electronic applications. It has a low viscosity, excellent flow and wicking properties combined with excellent adhesion to many plastic, glass and metal substrates.

Properties Uncured

Appearance: Translucent
Viscosity: 3000-5000 cps
Shelf Life: 12 months at 0°C or less
6 months at 5°C or less
Pot Life: 8 days at 20-25°C

Properties Cured

Appearance: Clear to Amber
Hardness: Rex 82-84 D
Tg: 95°C
Operating Temperature: -40-150°C
CTE: 40-50 ppm/°C

Suggested Cure Schedule:

80-100°C	30 minutes
100-120°C	20 minutes
130-150°C	10 minutes

OPTOCAST 3663-5K will start to cure slowly at room temperatures; however, ultimate properties will not develop at temperatures below 80°C.

Mass size, time and temperature will affect cure speed and adhesion, therefore experimentation is necessary to determine the best conditions for any particular application.

Handling and Storage

OPTOCAST 3663-5K is shipped and stored frozen for maximum shelf life.

- ◆ Shelf life is 6 months at 5°C or less, 12 months at 0°C or less
- ◆ Place the material in the freezer as soon as it is received.
- ◆ Once thawed, the material should not be used for more than 8 days at 20-25°C
- ◆ Avoid prolonged exposure to elevated temperatures before curing.
- ◆ Liter packaging must be thawed and used immediately, or broken down into smaller containers. Do not exceed the 8 day pot life, total exposure to 20-25°C, including initial thaw times.

Shipping and Unpacking Procedure

This material is shipped on Dry Ice and **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.

- ◆ 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.
- ◆ Thaw time varies by package style, size, and ambient temperature, but is typically 30 to 120 minutes.
- ◆ 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.

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