



## CRYSTALLIZATION OF EPOXY RESINS

Crystallization is defined as the formation of solid crystals from a uniform liquid solution. It occurs naturally with foods such as honey, with snowflakes and with minerals. This is the same phenomenon that can occur with epoxy resins and some curing agents.

### The Cause

Epoxy resin crystallization can be caused by high purity resins, moisture, temperature changes, low viscosity resins or impure additives. In a clear resin, it could appear as tiny specks dispersed throughout, cloudiness or a complete solid. Black or filled resins make it harder to detect. As crystals form, they tend to settle to the bottom of the container since they are denser than the liquid. Eventually, this can lead to the entire contents turning solid.

Crystallization is not an indication of defective material. It can occur in random containers from the same batch. It is impossible to predict or eliminate.

### The Cure

There should not be any attempt to use crystallized resin until it has been re-heated as it will likely lead to issues with curing or finished physical properties.

The following recommendations for resolving crystallization apply only to products manufactured by Epoxies, Etc...

- Loosen cover of affected container.
- Heat contents to 45 – 65 deg C (113 – 150 deg F) for 1-2 hours in a well ventilated area.
- Larger containers such as 5 gallon pails may require several hours
- Mix or stir the contents of the container and visually inspect to make sure there is no evidence of crystallization. Pay particular attention to the bottom of the container for any residue. Keep in the oven for longer periods if needed.
- Clean all spouts, spigots and closures of any resin build-up.
- Replace cover tightly and store at or above 25 deg C (77 deg F).

\*\*\*Contact Epoxies, Etc... for instructions on how to handle crystallized resin in Triggerbond™ or syringe packages or for hardeners or catalysts that appear crystallized.\*\*\*

\*\*\*Single component heat cure epoxies should not be heated! If you suspect crystallization, contact Epoxies, Etc... for instructions\*\*\*

### **IMPORTANT:**

**EPOXIES, ETC. MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE WITH RESPECT TO ITS PRODUCTS.** The information in this brochure is based on data obtained by our own research and is considered reliable. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. The properties given are typical values and are not intended for use in preparing specifications. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular purpose. January 2013

epoxies.com  
21 Starline Way  
Cranston, RI 02921 USA

t 401.946.5564  
f 401.946.5526