



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.
- 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).

IMPORTANT:

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