



ISO 9001-2015 Certified

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TECHNICAL TIPS

Handling Procedures for Premixed & Frozen Materials

Commonly, customers will purchase two component epoxies premixed and frozen in syringes for automated dispensing. This removes the weighing step and ensures that material has already been properly mixed for two component systems.

Here are some quick tips on how to properly handle these materials:

1. Materials are shipped in dry ice to keep them frozen below -40°C. Once the package is received, the syringes should be moved into a freezer at -40°C or below as soon as possible.
2. When handling frozen syringes, take special care to handle the product by either the needle tip or flange of the syringe only. Insulating gloves may also be worn to facilitate handling. Touching the barrel of a frozen syringe without gloves may result in the product pulling away from the barrel and could cause voids. It can also introduce air and moisture into the epoxy that may result in dispensing and curing issues.
3. After removing from the freezer, place the syringe on a clean surface or a desiccant box at room temperature to thaw properly. On very low viscosity products, we recommend to stand the syringe up if possible with the tip facing upwards to allow the meniscus pocket to move towards the tip. Allow the product to thaw until ready to use. Thaw times may vary but the following is a guide:

1-3 cc 5-10 min
10 cc 10-15 min
30 cc 15-20 min

ALWAYS remove syringe end cap before removing the luer lock tip cap.

4. Once the syringe has been thawed, wipe syringe of excess moisture or condensation before removing end cap. If the product seems too thick, wait longer for the epoxy to thaw more before continuing with dispensing.
5. The pot life of the syringe packaged material will be similar to the pot life listed on the datasheet for the product. Keep in mind the time needed to thaw the product as well as for packaging. The user should be conservative with the syringe pot life so as not to affect the performance of the adhesive by dispensing too close to the end of the recommended pot life. It is strongly suggested that the epoxy be packaged in a way that will reduce the need to refreeze product. While some products may be able to be thawed and re-frozen for future use, is not true for all products. Please inquire with Epoxyset before re-freezing any products.

Note: In some cases, a “stepped thaw” may be preferred in thawing syringes. This is done by placing a previously frozen syringe (-40°C) into a standard freezer (0°C) for 30-60 minutes, *before* thawing at room temperature to complete the thaw. Using this interim step can aid in reducing potential problems that may occur in some products due to a CTE mismatch between the barrel and the adhesive. Frozen syringe barrels can be brittle and will fracture easily. Careful handling is always recommended.

DISCLAIMER: All information given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.