

RECOMMENDED HANDLING PROCEDURES FOR PREMIXED AND FROZEN MATERIALS

To avoid the weighing, mixing and filling of two-component epoxies, many customer obtain these products already mixed, filled in cartridges and frozen. Here are some tips for the correct handling with these cartridges:

1. The products are delivered with dry ice prevent premature hardening reaction. Upon delivery, the cartridges should be stored as soon as possible in a appropriate freezer, at min. -40°C .

2. When handling such cartridges, please ensure that the cartridge is only touched at the tip or the upper end (flange). Wearing insulation gloves is recommended. If the cartridge is touched with bare hands, the filled material will withdraw from the cartridge body due to the hand temperature. From the cartridge body due to the temperature of the hand and cavities are created, which can lead to unwanted air bubbles.

3. When thawing, the cartridge should be in a vertical position, preferably in a holder or rack, needle tip pointing downwards. Never thaw the cartridge in a horizontal position! Recommended thawing times, depending among other things on the filling quantity/cartridge:

Packing size	Thaw times
1-3cc	5min
5cc	10min
10cc	10-15min

4. After the adhesive has thawed, it can be dispensed. The cartridge can now be handled without gloves. If the product still seems a little too pasty, it may be completely thawed.

5. The processing time (pot life) of the adhesive is slightly shorter than the time specified on the data sheet for the same material as a two component adhesive. Some processing time is lost during mixing and freezing as well as thawing.
Always build in a reserve.

6. Once thawed, do not freeze the cartridges again! Among other things, you risk air inclusions and moisture absorption, wich can lead to subsequent dispensing and curing problems. The reproducibility of the process is no longer guaranteed. It is recommended to select the desired quantity/cartridge in such a way that refreezing or too much waste is avoided.

A staged thawing procedure may be advantageous in some cases. The cartridge stored at -40°C is first placed in a refrigerator at approx. 0°C for 30 - 60 min. before the thawing process is completed at room temperature. This intermediate step can avoid potential void formation, as the temperature difference from -40°C to $+23^{\circ}\text{C}$ is cushioned. Differential expansion or contraction of the material and plastic cartridge is thus mitigated. Frozen cartridges are very brittle. Careful handling is necessary to avoid cracks.



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