

Tech Tip 128

Handling Frozen M Clean Materials

BACKGROUND

M Clean washout chemistries are water-based materials, as such, these materials are all subject to the possibility of freezing: either during transit or material storage. While freezing of these materials typically requires extended exposure to such conditions, it is possible that it will occur.

The following Technical Tip will describe what to do in the event that M Clean chemistry has been observed to be frozen.

PROCEDURE FOR HANDLING FROZEN MATERIALS

The sequence for handling frozen M Clean products is as follows:

- 1) Verify the material is actually frozen; the most common materials that could freeze are the M Clean Developer and M Clean Detergent components. The M Clean Developer is completely clear, so the observation of any haze is a key indicator of some freezing activity. The M Clean Detergent, being amber in color, will simply appear lighter in color in addition to being hazy. Simply rocking or tilting the container is another way of verifying that solid ice is present in the container.
- 2) Identify a reasonable heat source to store the container for a period of time to allow it to thaw. This can be the post exposure oven, or simply a room kept at warmer (above 25C) temperatures
- 3) Monitor the material during the thawing progress. This can be indicated by the reduction and/or elimination of the haziness. Agitating, or swirling, the containers can aid in this process in addition to verify the thawing is complete.
- 4) Once the material has been thawed, agitation or swirling will be necessary to ensure any separated components will be mixed appropriately before use. This is a very simple and precautionary step, as the components are very compatible with each other and typically mix well without the use of additional mixing.
- 5) Now that the material is well-mixed, it is available to use without any degradation in material performance.

