



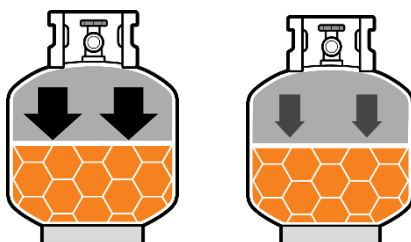
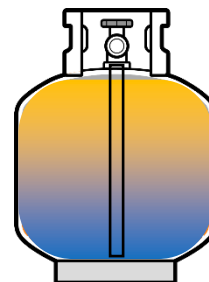
# Cold Weather Effects on Cylinder Adhesives

Technical Bulletin

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How does cold weather effect cylinders?

1. The viscosity of bulk adhesive in the cylinder will increase as temperature decreases, and cold fluid will sink below warmer fluid causing a temperature gradient in the adhesive. Because the dip tube reaches the bottom of the cylinder, the coldest and highest viscosity fluid will be drawn into the dip tube.
2. The propellants used will decrease pressure and, as a result, effectiveness as temperature decreases.
  - a. Liquefied hydrocarbon propellants will condense and reduce the effective amount of available pressure on the cylinder. This will adversely affect the spray pattern and, consequently, the overall performance of the adhesive.
  - b. Compressed gas propellants will shrink in cold weather causing the system to have much less available force to push out a thicker bulk adhesive. The effect will be improper, uncontrolled spray properties with longer dry times required.



How can you prevent cold weather problems?

1. Store solvent-based cylinders in a controlled environment with temperatures between 60°-80° F (16°-27° C).
2. Keep cylinders off of cold concrete floors and away from outside walls.
3. Use heat belts or blankets, approved for use with flammable adhesives, to control the temperature of the cylinders.
4. Allow additional time for solvents and propellants to flash off when temperatures are below 60° F (16° C).

## What should you do if cylinders get too cold?

If cylinders arrive cold or have been exposed to temperatures that are causing poor spray properties, move to an area that is heated above 70° F (21° C) but not exceeding the safe storage conditions. The larger the cylinder, the longer it will take for the temperature to equilibrate.

Mini (~11 lb) and large (~30 lb) cylinders can be shaken or submerged in hot water not exceeding safe storage conditions to accelerate the warming process. Once the cylinders equilibrate back to at least 60° F (16° C), the products will perform as normal.

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