



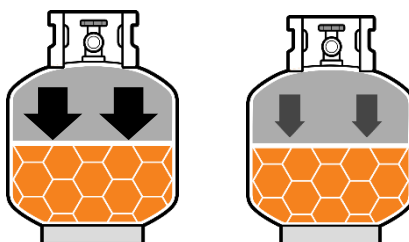
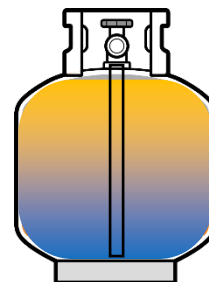
Cold Weather Effects on Cylinder Adhesives

Technical Bulletin

March 2017

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.

Technical Information	The technical information, recommendations, and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.
Product Use	Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.
Warranty, Limited Remedy, and Disclaimer	Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.
Limitation of Liability	Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted.

ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550 • 877-369-2923 (Fax)
www.3M.com/sprayadhesives

3M is a trademark of 3M Company.
©3M 2017

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

3M:

7000144617