



Associated Chemists, Inc.

CUSTOM PRODUCTS

38 % PROPYLENE GLYCOL BY VOLUME

(MSDS Number PT1114.76)

Product Description

PROPYLENE GLYCOL is the desired antifreeze for fire protection systems. Use in sprinkler systems where freezing may damage or interfere with the functioning of systems or equipment and/or where toxicity to humans or animals is a concern.

Applications & Installation

PROPYLENE GLYCOL is compatible with all approved types of sprinkler systems with the exception of CPVC.

- The system should be flushed and all water should be evacuated.
- After filling the system, a sample of the fluid should be taken from a portion of the system that is as far from the filling location as possible and tested.
- Compare the results with the concentration table. If the concentration should be increased, the system should be drained. The drained fluid should be mixed with **PROPYLENE GLYCOL**. Concentrate until the desired freeze temperature is reached.

Technical Data

The freeze point (where the first ice crystal forms in the fluid) protects at the following concentrations:

Concentration %	Freeze Point	Specific Gravity @ 78°F
38% by volume	- 4.1°F	1.0139

Product Assurance Statement:

Propylene Glycol is completely soluble with water. Associated Chemists blends Propylene Glycol with deionized water in a blending vessel for a minimum 30 minutes under a vigorous propeller/blade agitation. Agitation speed of 100-150 rpm.

Associated Chemists, Inc. has been blending and manufacturing chemicals since 1929. ACI has been at its current 90,000 square foot facility since 1962. ACI has been providing a wide variety of specialty products for many industries such as Pulp and Paper, Wood Products, Machining and Fabrication, Auto Industries, Automated Sprinkler Industries and many more.

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System Requirements, Limitations & Cautions

All fire protection sprinkler systems that use **PROPYLENE GLYCOL** should conform to local, state and NFPA requirements. The use of antifreeze within these systems should also conform to NFPA requirements. Use of antifreeze solutions should also be in conformance with any state or local health codes. Please contact your local health authorities if you have any questions concerning the codes in your area.

PROPYLENE GLYCOL can break down over time. NFPA 25 requires that the freezing point of the system should be tested at least once a year. Periodic testing of systems is critical to maintaining the proper concentration and freeze point of the fluid. Leaks, pressure surges, and temperature changes to the system can cause antifreeze to flow out of the system or water to flow into the system changing the freeze temperature.

NFPA Ruling

Antifreeze compounds are allowed in new sprinkler systems with the following conditions:

- o Only glycerin and propylene glycol can be used
 1. Glycerin can be up to 48 percent by volume
 2. Propylene glycol can be up to 38 percent by volume.
- o Only factory premixed solutions can be used

These concentrations provide freeze protection levels down to approximately -16°F for glycerin and -3°F for propylene glycol.

These changes apply to all installations and not just those in dwelling units.

- o Additionally, a TIA on NFPA 25 (TIA 11-1) was released that places similar restrictions on the use of antifreeze in existing systems. If the system meets the following two conditions, when tested at multiple locations, it can remain in use.
 1. The antifreeze compound can be positively identified and is either glycerin or propylene glycol.
 2. The concentration does not exceed 50 percent by volume for glycerin and 40 percent by volume for propylene glycol and does not require modification.

If for any reason the solution must be replaced or modified, then one must drain the system and use factory premixed solutions at the 48 percent and 38 percent maximum concentrations, respectively.

Available Packaging

PROPYLENE GLYCOL is available in the following units:

40 pound pails 450 pound drums 2,250 pound totes

Before using this product, please read Material Safety Data Sheet Number **PT1114.76** for **38% PROPYLENE GLYCOL BY VOLUME** and follow the recommended safety instructions.

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