DOWTHERM™ and DOWFROST™ Heat Transfer Fluids

Quick Reference Guide

Why Choose Dow?

- DOWTHERM™ and DOWFROST™ Heat Transfer Fluids are made from glycol with the highest industry purity
- DOWTHERM™ and DOWFROST™ Fluids can provide protection for upwards of 20 years
- Competitive products may only last 5 years or less
- Only DOWFROST™ is made from Dow PURAGUARD™ Propylene Glycol USP
- Competitor products can be made from recycled, industrial grade or bio-renewable glycol having reduced quality and performance characteristics, such as strong odors, high foaming propensity & compromised lifetime

DOWFROST™
Operating Temperature: 0°F to 250°F
Freeze / Burst Protect Down To: -60°F

DOWFROST™ HD
Operating Temperature: 0°F to 325°F
Freeze / Burst Protect Down To: -60°F

DOWTHERM™ SR-1
Operating Temperature: -20°F to 250°F
Freeze / Burst Protect Down To: -60F

DOWTHERM™ 4000
Operating Temperature: -20°F to 350°F
Freeze / Burst Protect Down To: -60F

Where Are DOWTHERM™ and DOWFROST™ Fluids Used?

- Water based heating and cooling systems that require freeze protection
- Heating, Ventilation & Air Conditioning (HVAC)
  - Chill water & hydronic heating loops
  - Geothermal (ground source heat pumps)
  - Snow melt & Turf heating systems
  - Solar hot water heating
- Food processing
  - Chilling of dairy products & beverages
  - Beer & wine (fermentation cooling)
  - Freezing of concentrated juices, meats, poultry & fish
- Refrigeration
  - Ice skating rinks
  - Cold storage, refrigerated warehouses & super-markets (secondary loop)
  - Thermal Energy Storage (TES)

Should You Use DOWTHERM™ or DOWFROST™?

- Ethylene Glycol (EG) fluid characteristics
  - Moderately toxic but lower cost option
- Propylene Glycol (PG) fluid characteristics
  - Essentially non-toxic
  - PG USP/FCC grade is approved by FDA as a direct food additive
  - PGI is not intended as direct food additive
- Use DOWFROST™ for low toxicity needs:
  - Food processing (DOWFROST™ only)
  - Schools or hospitals (DOWFROST™ HD)
- Use DOWTHERM™ SR1 for other applications
  - Take advantage of EG's lower viscosity for better system performance

Why Are Glycol Based Products Used?

- Effective and affordable freeze protection when mixed with purified H_2O
- Extends the operating range of pure water
  - Water freezes at 32°F
  - Glycol mixtures can provide freeze protection down to -60°F and burst protection down to -100°F
- Alternative products have serious disadvantages:
  - Methanol & Ethanol → Flammable
  - Chlorides & Other Salts → Highly Corrosive
  - Non-Aqueous Fluids → Poor Heat Transfer

Dow Analytical Service

- FREE service for systems containing 250 gallons or more DOWFROST™ or DOWTHERM™ Heat Transfer Fluid
- Sample analysis kits are available from Dow in "2 PAKs" and "6 PAKs"
- Send samples to Dow laboratory and receive analysis within 2 weeks, with recommendations

For more information, visit:
www.dow.com/heattrans

Product Stewardship
Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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