**DOWTHERM™ and DOWFROST™ Heat Transfer Fluids**

Quick Reference Guide

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**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

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**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: -60°F

**DOWTHERM™ 4000**  
Operating Temperature: -20°F to 350°F  
Freeze / Burst Protect Down To: -60°F
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 & supermarkets (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 H₂O
- 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

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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