



# PROTOCOL<sup>®</sup> HD-100

## HEAVY DUTY, CONTINUOUS USE

### Product Description

PROTOCOL HD contains virgin ethylene glycol and an industrial grade inhibitor formulation designed for heavy-duty, continuous use applications with temperatures ranging from -60°F to 350°F. PROTOCOL HD provides mixed-metal corrosion protection and is formulated to mitigate cavitation corrosion on the wet-sleeve liners of high-speed natural gas compression engines.

PROTOCOL brand heat transfer fluids are blended as concentrate or pre-mixed with deionized water to meet critical performance specifications. All products are available in sizes from 5-gallon pails to bulk tanker quantities and come backed by a comprehensive glycol analysis program to ensure years of trouble-free service.

### Typical Applications

- Natural Gas Compression Engines
- Natural Gas Water Bath Heaters
- Marine Engines
- Power Generation
- Standby Generators
- LNG Vaporizers
- Heavy-Duty Process Heating & Cooling





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## Technical Data

### Typical\* Composition: HD-100, v%

|                          |                 |
|--------------------------|-----------------|
| Propylene Glycol         | ≥ 92            |
| Inhibitors               | ≥ 8             |
| Color                    | Bright Blue     |
| Specific Gravity         | ~ 1.125 - 1.130 |
| pH, 50% solution         | ~ 9.5 - 11.0    |
| Reserve Alkalinity, 100% | ~ 15.0 (min)    |

### Typical\* Properties: HD-50, v%

|                                   |         |
|-----------------------------------|---------|
| BP @ 760 mm Hg (50%)              | ~ 225°F |
| Flash Point                       | None    |
| VP mm Hg (50% @ 68°F)             | ~ 13.31 |
| Thermal Conductivity (50% @ 68°F) | ~ 0.225 |
| Specific Heat (50% @ 68°F)        | ~ 0.81  |
| Viscosity cps (50% @ 68°F)        | ~ 3.37  |

### Typical\* Properties (solutions), v%

| Freeze Point (°F) | Volume % | Boiling Point (°F) |
|-------------------|----------|--------------------|
| 15                | 20       | 215                |
| 9                 | 25       | 217                |
| 3                 | 30       | 218                |
| -4                | 35       | 219                |
| -13               | 40       | 221                |
| -24               | 45       | 223                |
| -47               | 50       | 225                |

\*Typical Properties, not to be construed as specifications.