# HY-THERM™ 707

## Synthetic Heat Transfer oil

ROYAL PURPLE®

*Beyond Synthetic™*

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Hy-Therm™ 707 is a synthetic, heat transfer fluid that is more efficient than mineral oil based fluids. Its thermal conductivity (0.121 BTU/hr ft °F at 400°F) is 50 to 100 percent higher than many widely used heat transfer fluids. This means that heat goes in and comes out of Hy-Therm™ 707 much more quickly. A pound of Hy-Therm™ 707 can hold 30 + percent more heat with its specific heat of 0.665BTU/lb. °F at 400°F. Hy-Therm™ 707 can safely be used in open systems up to 400°F and in closed systems under inert gas at 700°F. Fluid life and system cleanliness can greatly be enhanced when Hy-Therm™ 707 is used with inert gas (nitrogen, etc.) blanketing. Its low temperature fluidity eliminates the need to drain fluid during cold weather shutdowns, a common problem with many heat transfer fluids.

System using Hy-Therm™ 707 are both safer and cleaner. Hy-Therm™ 707 higher flash as up to 25% more heat is removed than comparable petroleum heat transfer oils. Systems remain cleaner as Hy-Therm™ 707 minimizes carbon deposits assuring superior heat transfer efficiency.

Hy-Therm™ 707 is environmentally responsible. All components comply with TSCA, EPA and OSHA requirements.

Typical Properties*

| | | |
|---|---|---|
| Viscosity | | |
| cSt @ 40˚C | | 32 |
| cSt @ 100˚C | | 5.9 |
| SUS @ 100˚F | | 166 |
| SUS @ 210˚F | | 47 |
| Viscosity Index | | 150 |
| Flash ˚F | | 460 |
| Fire ˚F | | 520 |
| Pour Point ˚F | | -60 |
| Specific Gravity | | .835 |
| Lbs. per Gallon | | 6.9 |
| Distillation,˚F(Gas Chromatograph) | | |
| IBP | | 786 |
| 20% | | 810 |
| 50% | | 915 |
| 80% | | 980 |
| 90% | | 1001 |
| E.P. | | 1106 |
| Specific Heat, Btu/lb ˚F | | |
| 100˚F | | 0.522 |
| 300˚F | | 0.620 |
| 500˚F | | 0.718 |
| ASTM D2273 Sedimentation, vol % | | 0.001 |
| ASTM D892, Foam Test | | 0/0 |
| ASTM D942 Evaporation Loss, Wt % | | |
| 22 hrs. @ 300˚F, 760 Hg | | 0.3 |
| Densty, g/cc (Dialatometer) | | |
| Temp., ˚C | (0˚F) | |
| 0.0 | 32 | .8482 |
| 15.5 | 60 | .8350 |
| 25 | 77 | .8268 |
| 50 | 122 | .8053 |
| 75 | 167 | .7834 |
| 100 | 212 | .7614 |
| 125 | 257 | .7391 |
| 150 | 302 | .7168 |
| 175 | 347 | .6944 |
| 190 | 374 | .6810 |

*All properties are typical and may vary.

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