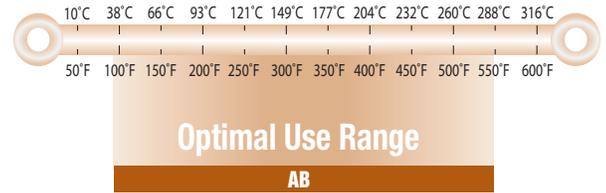


Paratherm™ AB

Heat Transfer Fluid



Thermally Stable • Low-Temperature Start-Up

ENGINEERING BULLETIN AB 815

Paratherm AB Heat Transfer Fluid

Paratherm AB Heat Transfer Fluid is an alkylated aromatic based heat transfer fluid formulated for closed loop liquid phase heating systems to 550°F.

Applications include:

- Gas processing
- Liquid terminal tank heating
- Asphalt plants
- Plastic production

Thermally Stable

Paratherm AB Heat Transfer Fluid exhibited almost 40% less degradation when exposed to 600°F (316°C) for 500 hours than a widely used competitive fluid. Although very few heaters expose the fluid to the maximum film temperature for extended periods, this level of stability helps insure that your system operates trouble free during operating upsets.

Low Temperature Capability

Minimum startup temperature is a realistic measure of a fluid's low temperature capability since 300 cps is the maximum viscosity that a centrifugal pump can handle. Paratherm AB Heat Transfer Fluid has a lower minimum start-up temperature than any mineral-oil based fluids that cover a similar temperature range.

Fluid Storage

Drums should be stored inside to prevent water from getting into the heat transfer fluid. If sealed drums must be left outdoors, they should be stored on their sides. While unopened totes are weatherproof, they should not be stacked if left outdoors. If the fluid is to be stored outside below its minimum pumpable temperature, the containers should be moved indoors to warm up before charging the fluid into the system.

Typical Properties*

Chemical Name	Alkylated Aromatic
Appearance	Clear Yellow
Odor	Mild Solvent
Maximum Recommended Film Temperature	600°F/316°C
Maximum Recommended Operating Temperature	550°F/288°C
Minimum Operating Temperature 20 cPs (20mPa-s)	100°F/38°C
Minimum Start-Up Temperature 300 cPs (300mPa-s)	14°F/-10°C
Viscosity cSt:	
40°C (104°F)	23
100°C (212°F)	4.3
288°C (550°F)	0.64
Density at 60°F/15.5°C lb/gal (kg/m ³)	7.1 (844)
Flash Point Pensky-Martens Closed Cup (D93)	>340°F/171°C
Boiling Point (14.7 psia/101 kPa)	>700°F/371°C
Vapor Pressure @ maximum operating temperature psia (kPa)	1.6 (11.4)
% Volume expansion over recommended operating temperature per 100°F (°C)	6.0 (10.8)
Average Molecular Weight	400

* These are typical laboratory values, and are not guaranteed for all samples

Replacing Existing Fluid

In many cases, changing fluid involves a straightforward drain and fill. There are very few fluids that are so incompatible that 10-15% residue will affect the new Paratherm. If you have any questions, contact us.

Charging New Systems

Unless required for product quality reasons, new systems do not need to be cleaned before Paratherm is charged. The amount of chemical coatings, oils, and other manufacturing residues are usually not enough to affect the fluid life. All that is necessary is to install a Y-strainer with a minimum 60 mesh screen up stream of the pump to catch any metal or welding residue. The screen can be removed once the system has been cycled twice through its operating temperature.

Fluid Analysis

The fluid in new systems should be tested within 9 to 12 months of start-up. New fluid in existing systems should be tested within the first month of operation to establish a base line for future testing.



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