TECHNICAL DATA SHEET

AD-7500 Fluorinated Engineering Fluid

Description and Applications

AD-7500 Fluorinated Engineered Fluid, 3-ethoxyperfluoro(2-methylhexane), is a clear, colorless, and nonflammable fluid. AD-7500 Fluorinated Engineering Fluid is chemically inert and thermally stable. It is a viable option for replacing perfluorocarbons and perfluoropolyethers in many industrial applications. AD-7500 is intended to replace ozone-depleting and high global warming potential chemicals for the following suggested industrial, electronics and semiconductor applications:

- Cooling fluid for semiconductor and electronic devise manufacture process, testing equipment and facilities
- Heat transfer fluid
- Direct contact cooling fluid for supercomputers, high voltage transformers and power electronics
- Cooling fluid, special solvent, and process aid for chemical manufacture process
- Pharmaceutical manufacture process cooling liquid and freezing dry fluid

Physical Properties

Properties	AD-7500 Value
Average Molecular Weight	414
Pour Point (°C)	-100
Boiling Point @ 1 atm (°C)	128
Liquid Density (kg/m^3)	1620
Surface Tension (dynes/cm)	16.2
Kinematic Viscosity	0.77cSt
Absolute Viscosity	1.2cP
Critical Temperature (°C)	261
Solubility of Fluid in Water	< 3 ppm
Dielectric Strength	>35 kV, 0.1" gap
Volume Resistivity	10^8 ohm-cm
Dielectric Constant	5.8
Flammability	Nonflammable
Ozone Depletion Potential	0
Global Warming Potential	90

Not for specification purposes. All values @ 25°C unless otherwise specified.

Compatibility

AD-7500 is compatible with most metals and hard polymers. Soft and elastomeric materials should be limited to compounds that contain the least amount of extractable plasticizer. As with most fluorinated fluids, AD-7500 fluid will absorb into fluorinated plastics and elastomers over longer exposures. Please contact A. D Dawning Material for additional information.

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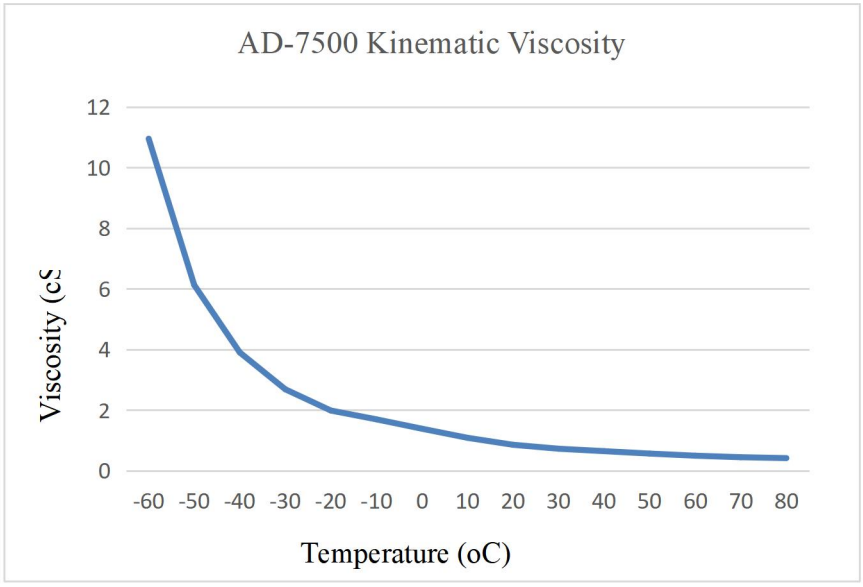
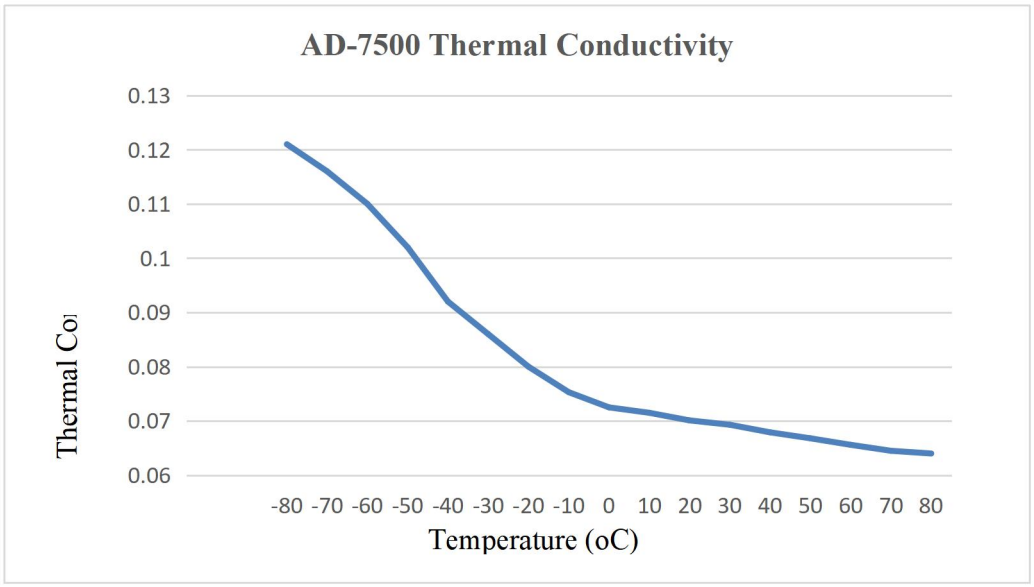


To determine the viscosity at a given temperature T in Kelvin, calculate
$Z = 10^{(10^{(11.843-5.0874*\text{Log}(T[K]))})}$.
Then, Viscosity [cSt] = $(Z-0.7) - \exp(-0.7487 - 3.295(Z-0.7) + 0.6119(Z-0.7)^2 - 0.3193(Z-0.7)^3)$



Packing

5kgs/Can	(Drum capacity: 4L)
20kgs/Pail	(Drum capacity: 15L)
250kgs/Drum	(Drum capacity: 200L)

Storage

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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