

# ALPHA-1 FLUID

Factory Mutual  
RECOMMENDED

High dielectric strength

Excellent fire safety  
rating

Highly efficient  
cooling properties

Superior oxidation  
and stability  
resistance

Fluid of choice for  
original fill or retrofill



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## Synthetic Fire Resistant Dielectric Fluid for Original or Retrofill of Power Transformers

Alpha-1 Fluid is a fire-resistant dielectric fluid that is unmatched in its ability to cool transformers. Made with synthetic hydrocarbon oils, it has the best heat transfer and low-temperature properties available. Its cooling characteristics make it an excellent choice for original equipment fill and the industry standard for retro-filling mineral oil transformers to upgrade fire safety. Request DSI's Retro-fill guide for further assistance and recommendations.

Due to its lower viscosity, Alpha-1 Fluid flows more easily, thereby cooling your equipment better. Alpha-1 Fluid has outstanding oxidation stability at high temperatures. Alpha-1 Fluid is compatible with conventional transformer oil and other insulating fluids (note: Alpha-1 is not compatible with silicone fluid)

As an FM recommended fluid, please refer to [www.fmglobal.com](http://www.fmglobal.com) to review supporting articles on how to receive potential cost breaks by using Alpha-1 Fluid in your business.



### Applications

- Any dielectric application where the risk of fire must be minimized
- Excels where operating temperatures need to be controlled such as power and distribution transformers, transformer-rectifier sets, load-break and tap-changers
- Chosen for use in extreme high/low temperature applications, viscosity-dampened switchgears and overloaded transformers
- Exceptional heat transfer characteristics ensures equipment maintains low operating temperature

TYPICAL CHARACTERISTICS - Compared with ASTM D5222, Guide for High Fire point Oils

Characteristic & ASTM method	Alpha-1	ASTM Spec
Fire Point, D92, °C.	308	145
Viscosity, D88, cSt. @ 100 °C.	9.3	11.5-14.5
Density @ 20 °C, g/cc	0.83	0.86
Pour Point, D97, °C.	-54	-40
Color, ASTM units	L0.5	L1.5
Appearance	Clear	clear
Dielectric Breakdown, D1816, kV	58	56
Dissipation Factor, 100 °C, D924, %	0.01	0.30
Acid Value, D664, mg KOH/g	0.01	0.02