



Advanced Lubricants Technology

PRODUCT INFORMATION

PERENNIAL EDM SEF (Synthetic Spark Erosion Fluids / Electrical Discharge Machining Fluids)

DESCRIPTION

PERENNIAL EDM SEF is an excellent dielectric fluid which is an **ultra pure fully synthetic based liquid hydrocarbon** with high normal paraffin content and narrow boiling point. The process is based on latest Fischer-Tropsch technology which provide the proper balance of viscosity, low volatility, exceptional oxidation stability and odorless. It has proper controlled dielectric strength to serve as a

- Spark conductor
- As well as an insulator, under high frequency electric spark.
- The fluid with an excellent heat transfer property is good coolant.
- A flushing medium for disposal of small metal chips.

PERENNIAL EDM SEF is a highly purified normal paraffin oil characterized by the absence of nitrogen, sulphur, aromatics and other impurities. The aromatics content is typically less than 100 ppm while sulphur content is as low as 3 ppb. Its **odourless** and **water white** properties make it a superior working fluid in electrical discharge machine (EDM), also called spark erosion machine.

PROPERTIES

- Contolled dielectric strenght to act as a good insulator as well as spark conductor between electrode and workplace under proper voltage variation
- Low viscosity to ensure fluid cover complete metal products
- High oxidation stability to provide long service life
- Free of aromatics and naphthenics and therefore no corrosion with rubber or plastic parts
- Excellent thermal properties for efficient cooling and heat transfer
- Low evaporation rate
- Low fluidity to allow for minimum metal chips to flush away through narrow spark gap

ADVANTAGES

- Non toxicity / No irritation showed at primary contact
- Minimal electrode wear, avoiding frequent replacement, cost saving
- Good dimensional accuracy
- Excellent workpiece surface finish after machining
- Minimal mist and odour during process

TYPICAL PROPERTIES

Density @ 15 ° C	0.769 g/ml	ASTM D1298-85
Colour, ASTM	+30	ASTM D156
Sulphur content	< 100 ppb	ASTM D1266-92
Flash Point	87 ° C	ASTM D93-90
Cloud Point	< 1	ASTM D2500-91
Pour Point	3 ° C	ASTM D97-87
Viscosity @ 40 ° C	2.30 cps	ASTM D445-88
Water Content	0.00 % v/v	ASTM D95-83
Sediment	0.00 % m	ASTM D473-81
Aromatics	< 100 ppm	ASTM D2728
TLV / OEL (ppm)	30	
Distillation, Initial Boiling Point, °C	252	
Distillation, Dry Point, °C	272	

The above details is typical and does not constitute a contract in terms of properties