



specialty fluids

EDM GREEN

A fully SYNTHETIC EDM FLUID combining the high performance and gentle features of a synthetic with the reasonable price of standard hydrocarbon EDM fluids. EDM GREEN provides the best of both worlds. No need to sacrifice safety and comfort for profitability.

EDM GREEN will give you superior cuts faster by letting your machine operate at its maximum efficiency. Why not get the best your machine manufacturer has to offer? With EDM GREEN you will receive:

- high flash point - reduce the risk of fire
- better flushing - improve cutting speed and improve finishes
- completely odorless
- mild to the skin - improved health and safety
- environmentally safer than other fluids - synthetic
- clear - so you can see the work piece
- highest dielectric strength - the source of an EDM's cutting
- lowest power factor - meaning less of the charge leaks through the fluid
- compatible with most fluids
- good for use with all metals

Property	EDM Green	Brand 'X'*
Specific Gravity	0.80	0.793
Viscosity @ 40°C	2.8	2.8
Pour Point	-32°C	-15°C
Flash Point	>120°C	107°C
Aromatic Content	<0.1%	<0.1%
Dielectric Strength	>60	17
Interfacial Tension	>40	>40
Acid Number	0.003	0.001
Power Factor	0.05%	10.7%

*as reported by manufacturer

**Call us at 1-877-737-9414
for application recommendations.
Your operators will appreciate
working with EDM GREEN, the
class act of dielectric fluids**



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Explanation of EDM Oils

EDM oils act as insulators for electric current. An electric current can only pass through the oil when sufficient voltage is applied. The amount of voltage needed to overcome the insulating power of the oil is called the “DIELECTRIC STRENGTH”. (The higher the dielectric strength of the oil, the more insulation it provides and the more controlled the process.) When the applied voltage is high enough so that the current can pass through the oil, the current will actually heat up the metal enough that it will melt it or “burn” it. At this point, the EDM oil acts to cool the metal, and flush away any burnt off metal. This process occurs thousands of times a second, and can be used to form a variety of designs and shapes. The “POWER FACTOR” of an oil measure the amount of current that leaks through the oil before the “DIELECTRIC STRENGTH” is reached. A higher “POWER FACTOR” means more current is leaking through the oil, which could lead to arcing and/or dimensional inaccuracies in the finished product.

EDM Fluid Test Procedures

Dielectric Strength (ASTM D877)

The amount of voltage that needs to be applied before an electric current can pass through the oil. The fluid is generally acceptable for use if the DIELECTRIC STRENGTH is 30 kV or greater.

Power Factor (ASTM D1298)

The POWER FACTOR is the measure of the electric losses in an electrical insulating fluid. The loss can be attributed to several source contaminants, which degrade the insulating factor of the oil by allowing some current to flow uncontrolled through the oil. As contaminants increase, the current leakage increases, and so do the dielectric losses. These losses are called POWER FACTOR. The results are recorded in terms of the percentage of applied current, which leaks through the oil. A power factor of zero would represent the perfect oil.

Desirable Characteristics of a Dielectric Fluid

1. Dielectric Strength: higher is better.
2. Power Factor: lower is better.
3. Viscosity: lower is better.
4. Flash point: higher is better.
5. Acid number: lower is better.
6. Aromatics: none is best.



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