

Electrical discharge machining fluid for metalworking.

#### DESCRIPTION & APPLICATIONS

Roughing and finishing operations performed by electrical discharge machining.

**OIL FORM FE 109** is a very high performance fluid characterised by a mid-range viscosity gradient and a narrow distillation range of the MultiUse type, thus suitable for both roughing and superfinishing operations. This fluid is formulated using paraffinic hydrocarbons selected to preserve high levels of purity, stability and resistance to oxidation, to eliminate almost entirely the content of aromatic hydrocarbons and to adjust the distillation range and rate of evaporation to optimised levels.

**OIL FORM FE 109** is, from a qualitative point of view, an innovative solution which satisfies the requirement – increasingly common amongst matrix producers – for a MultiUse fluid suited to roughing operations (which allows faster spark erosion speeds combined with low levels of electrode wear) but which can also offer excellent finishing quality and dimensional accuracy.

**OIL FORM FE 109** is especially recommended for all the machining operations performed using CNC machines to meet the requirements for the construction of matrices characterised by a high-quality surface finish. The roughing phase, performed at medium to high amperages (more than 40 A), must be followed by a rapid and precise finishing phase, performed even on geometrically complex parts. OIL FORM FE 109 is the most innovative solution for machining thermoplastics (cars, household items, domestic electrical appliances, etc.) from a point of view of performance, ecotoxicological safety and operating cost.

The OIL FORM FE 109 formulation meets the requirements of the main manufacturers of plunge (or sinker) EDM machines, such as: AEG, AGIE, CDM, CHARMILLES, CORMAC, EROTECH, INGERSOLL, MITSUBISHI, ONA, SODICK.

#### ADVANTAGES

- Chlorine-free
- No aromatic hydrocarbons
- Odourless and colourless
- Very low volatility
- Dielectric strength perfectly suited to all types of material removal (roughing and finishing)
- Inert with regard to yellow metals
- Compatible with very high cutting speeds, Inert with regard to machine components
- High flash point for greater safety during use and when in storage.

Characteristics	Standards	Units	Values
Appearance / Colour	-	-	Clear fluid
Density at 20°C	NFT 60-101	kg/m <sup>3</sup>	815
Kinematic viscosity at 40°C	NFT 60-100	mm <sup>2</sup> /s	2.4
VO flash point	NFT 60-118	°C	105

*Characteristics are given for information only and correspond with our manufacturing standards. IGOL reserves the right to modify them to provide its customers with the benefits of technical progress. Before using this product read the instructions for use and the environmental impacts mentioned in the technical and safety data sheets. The information given above is based on the current level of knowledge relative to the product concerned. The product user should take all useful precautions relative to its use. IGOL can in no circumstances be held responsible for damage resulting from incorrect use.*

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