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## Dielectric

### Fluids for Electro-discharge Machines (EDM)

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#### Description; Description

The BP Dielectric range is formulated to suit spark-erosion machines of all power ratings, while providing long fluid life and meeting the demands of operator requirements regarding health and safety.

All fluids are hydrocarbon oils of low viscosity and good cooling characteristics; they flush erosion particles from the work area and provide quick and easy separation in filter systems.

#### Applications; Applications

- BP Dielectric 180 is designed for the finest and most delicate machining operations, particularly in small EDM units working on finishing operations where very close tolerances are important. This grade is additive-treated to avoid the generation of unpleasant odours in service and to provide long service life.

- BP Dielectric 200 is an oil of slightly higher viscosity and a grade that can be used in machines of all sizes. It is formulated for optimum metal-removal rates and low electrode wear. Its characteristics make it equally suitable for roughing and finishing operations. It is additive-treated to achieve long service life.

- BP Dielectric 250 is an oil of high viscosity and lower volatility, designed for larger electrodischarge machines and particularly suited for roughing operations where high rates of metal-removal are required. It has a high flash point, very low odour and a low level of aromatic hydrocarbons.

The BP Dielectric fluids are approved or recommended by:

- AEG-Elotherm (Elbomat)
- AGIE
- Charmilles (BP Dielectric 250)
- Ingersoll (BP Dielectric 250)

#### Main Benefits; Main Benefits

- High metal-removal rates and low electrode wear  
 - Excellent filterability with good flushing and cooling capabilities  
 - Resistant to oxidation, hence long service life

- Low odour and fume generation, hence pleasant in operation  
 - Highly refined oils with low aromatics content for safe working environment

#### Storage; Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration  
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of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.; of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

**Health, Safety and Environment; Health, Safety and Environment**

Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.; Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.

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**Typical Characteristics; Typical Characteristics**

	Test Methods; Test Methods	Units; Units	Grade :: Grade :		
Density @ 15°C	ISO 3675, ASTM D1298	kg/m <sup>3</sup>	180 752	200 816	250 823
Flash Point (COC)	ISO 2592, ASTM D92	°C	78	106	125
Viscosity KV @ 20°C 40°C	ISO 3104, ASTM D445	mm <sup>2</sup> /s	1.9 1.4	3.6 2.4	6.0 3.7
Colour	ISO 2049, ASTM D1500	-	L0.5	L0.5	L0.5
Neutralization value	ASTM D974, DIN 51 558	mgKOH/g	0.01	0.01	0.01
Boiling point: 5%	DIN 51 435	°C	180	195	230
95%		°C	240	290	340
Aromatic content	DIN 51 378	%	<0.1	<0.1	<0.1

*The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.*

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