



FLUSIN M

“NEW” Multitasking synthetic fluid for die-sinking

Descrizione

New formulation **FLUSIN M** is a **multitasking** medium-viscosity synthetic fluid, developed to answer modern requirements of mold manufacturers and to also satisfy high erosion requirements at the grinding phase as well as giving a high finish performance.

The new **FLUSIN M** is formulated with synthetic paraffin hydrocarbons with a distillation range below 13°C, and a total content of aromatic hydrocarbons $\leq 0.04\%$ in volume. These characteristics place this dielectric fluid amongst the most innovative ones. It is also specially suitable for plastic molds manufacturing.

Its constant high performance derive from a high refinement of the hydrocarbons contained in the formulation and to its shorter than before distillation range.

The new **FLUSIN M** is completely odourless, with a lower solvent action on human skin and lower tendency to evaporate compared to the previous formulation and to conventional dielectric fluids.

Properties and benefits

Bearing in mind all the requirements of a modern die-sinking EDM fluid, the new **FLUSIN M** offers the following benefits compared to conventional medium-to-high viscosity fluids:

- High dielectric rigidity and ability to concentrate discharge energy in the erosion areas. This property, coupled with the ability to operate at low frequency, ensures that the new **FLUSIN M** gives a better performance in:
 - finish grade and dimensional precision;
 - constant performance even after long periods of use;
 - lower fluid consumption than the previous formulation;
 - lower wear of utensile electrodes;
 - no voltaic arcing which may cause production stoppages and lower capacity.
- Medium-to-low viscosity, very stable in time due to its short distillation range to guarantee good circulation in the gap, even when grinding to complex and deep geometric volumes. This in turn facilitates washing action to remove swarfs.
- Very good filterability and very low tendency to foaming and to production of adhesives on the filters, thereby improving their life.
- Very low hygroscopic properties to avoid absorption of ambient humidity.
- Good cooling properties.
- Total transparency and colourlessness when properly filtered.
- Medium-high flammability point suitable for its applications.
- Very low tendency to evaporation thanks to its shorter distillation range than the previous formulation and conventional fluids.
- Extremely low fume emission.
- Excellent resistance to oxidation thanks to the high refinement of the hydrocarbons in the formulation. This ensures in turn a longer life of the fluid.
- Chemical inactivity on metals and on machine seals.
- No unpleasant and noxious odours in the work environment.



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Applications

The new **FLUSIN M** has been developed for the requirements of molds manufacturing for the thermoplastic industry, for pressure casting of light alloys, so as to have a fluid with a very low tendency to evaporation (especially suitable for central plants with a wide area exposed to air) that can increase electroerosion ability at high amperages (>60 Amp.) also allowing to obtain low roughness. All of this at a well balanced purchase price.

Specifications

The new **FLUSIN M** answers all requirements of the main manufacturers of die-sinking EDM machines, such as: AGIE; CDM; CHARMILLES; CORMAC; EROTECH, EXERON; FANUC; FURKAN, INGERSOLL; MAKINO; MITSUBISHI, ONA; SODICK, Sparctron, Zimmer & Kreine.

Storage and safety

The new **FLUSIN M** does not present any special risks under normal conditions of use. Although fume emission is extremely low, it is good practice to install suitable fume extraction systems. Information on health and environmental safety are available on request. It is advisable to store the product indoors. If outdoor storage is inevitable, keep the drums horizontal to prevent water infiltrations, which is incompatible with the electroerosive process as even very small quantities will alter the fluid's dielectric rigidity.

If the drums are stored outdoors, ensure the temperature is at least 5°C above the product's freezing point.

Characteristics

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Characteristics	Test method	Unit of measurement	Values
Appearance			Limpido incolore
Density at 15°C	ASTM D4052	kg/l.	0.767
Kinematic viscosity at 20°C	ASTM D445	cSt	2.95
Flash point (PM)	ASTM D93	°C	> 104
Initial distillation	ASTM D86	°C	244
End distillation	ASTM D86	°C	256
Pour point	ASTM D97	°C	+4
Colour	ASTM D156		+30
Odour			None
Aromatic hydrocarbon content	UV spettr.	%	< 0.04
Doctor test	DIN 51765		Negative

The above data are typical of production and are not specifications