



EDM fluids

CRYSTAL CLEAR ADVANTAGES IN EFFICIENCY AND SAFETY

FOCUS ON THE HEALTH OF THE HUMAN BEING

esgemo lubricant solutions meet the classic requirements of a metalworking lubricant for reduction of tool wear, effective heat dissipation, cooling down of the entire tool system, the removal of chips and corrosion protection. Additionally esgemo has also made it its mission to find and to provide the most user-friendly lubricant technology and make it available to the customer.

The quality of metalworking lubricants has a decisive influence on an essential factor of the value chain: the operating costs of production. Therefore a metalworking lubricant has to work perfectly in high temperatures, high machining speeds and tough conditions. To meet all these requirements without losing sight of employees and users, is our mission – the esgemo way.

The most obvious solution is not always the best for people, machines and processes. Therefore our experienced specialists will provide the best advice to choose the best fitting solution for your process. esgemo is at your side as a company, with its employees as consultants, in order to jointly achieve your mission!

The esgemo way
– optimal for **users**
and **machines**

esgemo PRODUCT OVERVIEW

EDM FLUIDS

esgeSparc range

- For the complete range of EDM applications
- Die sinking operations, wire cutting, EDM hole drilling
- For combined grinding and processes with just one product
- Odourless and transparent with excellent discharge properties

GRINDING OILS

esgeGrind range

Fully synthetic, PAO based products for grinding of tungsten carbide with superior air release properties and exceptional lowfoaming behavior. GTL and HC based products with a very good price-performance ratio.

WATER BASED COOLING LUBRICANTS

esgeCool range

- NT for long emulsion lifetime and extremely clean products and machines
- Mineral oil free, as well as mineral oil containing products
- Available without amines, boron and bactericides

NEAT CUTTING OILS

esgeCut range

Huge variety of viscosities for many applications. Available for all metals from non-ferrous metal to stainless steel

PUNCHING, DEFORMING, FORGING

esgeStamp / esgePress / esgeHam range

GREASES

esgeGrease range

- Low-temperature greases
- High-temperature greases
- Specialities for plastic industry applications

SPECIALTY PRODUCTS

Skin protection, Fluid management systems, Filter systems

THE OPTIMIZED HYDROCARBON SELECTION – THE OPTIMIZED BOILING CUT

Crude Oil, as the basis of EDM fluids, consists of many different ingredients. Thousands of ingredients have already been detected. The selection of the optimal extracts from the raw material crude oil, the so-called boiling cut, influences the properties of the end products to a very large extent. esgemo products therefore have a special composition of as pure hydrocarbons as possible.

Crude Oil, consists of thousands of different ingredients

This means that the products achieve properties, that lead to advantages in the application. For the selection of the raw material, esgemo is committed to the compatibility and safety of the users and the process. On closer inspection, this results in outstanding economical features, protects employees and machine and increases the trust of all in the the sense of responsibility of the people involved.

Our aim:
The perfect boiling cut“

The product properties of a dielectric are determined by the selection of the boiling cut as well as the the selection of the raw materials used, which can be directly influenced. Resulting from a high quality raw material, special results and properties can be achieved, in terms of viscosity or flash point. This has direct effects on the processing properties and the results obtained with a dielectric. In addition, a high-purity selection allows to optimize the health situation at the the workplace through reduced evaporation and cleaner products, for the benefit of all users in the process. For esgemo, both objectives, protection of the users and quality, are directly linked to each other as one as one presupposes the other. Therefore our aim is always the optimal selection of raw materials, the perfect boiling cut and lowest evaporation at optimum viscosity.

Advantages of reduced evaporation

Cost savings through reduction of the refill quantity

Reduction of evaporation at the workplace

Less airway pollution



< 30°C

~233-245°C

> 350°C

Boiling cut – simply explained

The most precise boiling-cut is the key to the purest dielectric with minimized evaporation.



PRODUCT OVERVIEW

Die-sinking erosion

esgeSparc SE 108 Premium EDM fluid for die-sinking EDM

- Synthetically based with extremely narrow boiling section
- Particularly pure and therefore particularly skin-friendly
- Odourless & water clear
- Suitable for high currents (>60Amp)
- Reduced electrode wear due to purer formulation
- High working safety due to high flash point



esgeSparc SE 105 Multifunctional EDM fluid for die-sinking erosion

- Suitable for finishing and roughing
- Optimum working safety due to high flash point
- Reduced consumption due to narrow boiling cut
- High stock removal with excellent rinsing effect
- Odourless & Aromate-free
- Reduced consumption due to narrow boiling cut



esgeSparc SE 110 EDM fluid for roughing

- Specially developed for roughing with graphite electrodes
- Best possible working safety due to very high flash point
- Very good settling behaviour and filterability
- Maximum stock removal rate

Start hole drilling

esgeSparc SE 60 EDM fluid for start hole drilling on AGEMA machines

- Low viscosity
- Odourless and practically aromatic-free
- High flushing effect and very good filterability

Wire cutting

esgeSparc SE 75 Special EDM fluid with very low viscosity for wire cutting

- For high-precision applications
- High flushing effect and optimum filterability
- Water clear
- High flash point
- Optimized evaporation tendency leads to less consumption



esgeCor RDE Corrosion protection for wire cutting machines with water-based EDM fluid

- Prevents the formation of corrosion on workpieces and machine parts
- Non-combustible and free of mineral oil
- Easy measurability with a refractometer
- Available in 5L containers

Special Solutions

esgeSparc EGR 130 High performance EDM fluid for grinding and disc erosion

- One product for two process technologies on one machine tool
- Electrical discharge machining of PCD & abrasive grinding of carbide metal
- Very good rinsing properties in the erosion zone
- Optimum cooling during the grinding process due to this
- Very low smoke development and no odour nuisance
- Higher workplace safety because of inhibition against cobalt benching
- Excellent filterability for long operating times of the filter units



Advantages of using esgeSparc

Highly pure and therefore:

- Crystal clear
- Minimized skin irritation potential
- Low odour
- High flash point at optimum viscosity
- High flash point and therefore less evaporation
- Less evaporation and less workplace exposure
- Less evaporation and lower refilling quantity
- Higher flash point and higher safety
- Cost saving due to reduced electrode wear
- Very precise removal and highest surface quality

Specifications

PRODUCT	Product appearance	Kinematic viscosity at 20°C	Flash point	Boiling range	Odour	Density at 15°C	Packaging
esgeSparc SE 60	water clear	1,7 cSt	> 56°C	175°C - 188°C	odourless	0,76 g/ml	IBC/Drum
esgeSparc SE 75	water clear	1,8 cSt	> = 74°C	186°C - 228°C	odourless	0,75 g/ml	IBC/Drum
esgeSparc SE 105	water clear	3,7 mm²/S	> 105 °C	240°C - 265°C	odourless	0,81 g/ml	IBC/Drum
esgeSparc SE 108	water clear	3,0 cSt	> 104 °C	233°C - 245°C	odourless	0,76 g/ml	IBC/Drum
esgeSparc SE 110	water clear	5,0 mm²/S	> 130 °C	not specified	odourless	0,79 g/ml	IBC/Drum
esgeSparc EGR 130	water clear	7,9 cSt at 40°C	> 150°C	290C - 350°C	odourless	0,82 g/ml	IBC/Drum



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