



# Commonwealth Oil

## EDM 101™ Di-Electric Fluid



### WHAT IT DOES:

Commonwealth Oil's **EDM 101™** is an all purpose fluid, developed by Commonwealth Oil for Electrical Discharge Machines. **EDM 101™** works very well when machining graphite electrodes.

### WHERE TO USE IT:

**EDM 101™** is designed for following applications

- Di-electric fluid in electrical discharge machining operations.
- Electrical discharge machining in the tool and die industry.
- Electrical discharge machining in the mold industry.
- Medical, computer and aerospace industries.
- Manufacturing of air craft components, valves, regulators, hardware, tools, etc...

### PERFORMANCE BENEFITS:

**EDM 101™** is especially formulated to deliver the following performance benefits:

- Reduces DC Arcing
- Produces excellent surface finishes
- Oxidation stable: Longer storage and fluid life
- More rapid flushing at point of cut because of a lower viscosity
- Inherently biodegradable
- Clean and clear – when you open the bungs on the drums, you can easily see to the bottom of the barrel
- Allows rapid settling of particles in filter
- Extremely low odour levels from **EDM 101™** at the time of initial fill and after many hundreds of working hours
- Environmentally safer due to the workers' health as the aromatic and sulphur content are almost undetectable under laboratory conditions versus your typical EDM fluids now in use.
- Reduced polishing time of molds because of higher dielectric strength



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## TECHNICALLY SPEAKING:

Test	ASTM Test Method	EDM 101™
Viscosity: cSt @ 40°C	D-445	2.80
Viscosity: SUS @ 100°F	D-445	34.1
Acid Number, mg KOH/g	D-974	≤ 0.02
Aniline Point, °C (°F)	D-611	82/180
Flash Point, COC °C	D-92	101
Flash Point, COC °F	D-92	214
Odour		Slight odour
Colour, Saybolt	D-156	30+
Density, lbs./US Gallon	D-1298	6.676
Specific Gravity	D-1298	0.800
Dielectric Strength		High

These are typical figures and do not constitute a specification.

### Handling & Safety Information

For information on the safe handling and use of this product, refer to the Material Safety Data Sheet.



**Available in Pails, Drums and One-Way Bulk Containers**

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## SERVICE INFORMATION

**Seal & Hose Compatibility:** The proper choice of hose and gasket material for your EDM machine can eliminate the problems of a potential spill due to premature failure. The following materials have been shown to provide the longest life span when used with most EDM fluids.

- 1) Teflon - Tetra Fluoro Polyethylene
- 2) Neoprene - Polychloroprene
- 3) Buna-N NBR - Acrylonitrile and Butadiene
- 4) Viton - Vinylidene Fluoride Hexafluoro - Propylene
- 5) MCP - Modified Cross-Lined Polyethylene

Your local mill supply house, when given the above information, will be able to provide you with the proper materials.

**Filtration:** Effective filtering is very important for consistent machine performance and longer fluid life. Dimensional accuracy and surface finish can be maintained in workpieces with effective filtration. Poor filtration can lead to serious contamination, which may cause arcing, especially in fine finishing and the drilling of small holes, where very small gaps exist.

In respect to EDM systems, three types of filter media are used:

- a) Edge type filters
- b) Powder beds
- c) Disposable paper-element cartridges

To a lesser extent, electrostatic separation may be used. Most of the major EDM manufacturers supply filter systems with their machines. It would be advisable to consult either the machine manufacturer or a reputable filter consultant when determining the filter type and size to be used for a particular machine.

Commonwealth Oil Corporation is a pioneer in the formulation of high performance lubricants, metalworking fluids and specialty products that do not contain 1-1-1 Trichloroethane or other carcinogenic materials. Commonwealth metalworking fluids meet WHMIS, OSHA and other standards. We are dedicated to the continuing development of products that do NOT contain hazardous materials.

Commonwealth adheres to the highest standards of quality control. We have a long record of innovative research and development, both in our own laboratories and at independent research institutions including The University of Pittsburgh Applied Research Center, the University of Houston, Texas, and the Milwaukee School of Engineering, Milwaukee, Wisconsin and McMaster University in Hamilton, Ontario, Canada.

Commonwealth Oil continuously encourages customers to allow us to train and update their personnel with our latest techniques and current industrial trends. This service is performed with the idea that the best consumer is an informed consumer.

We invite you to talk with our distributors or ourselves about your needs and how we can assist you. You'll like our prices, and the quality of our engineered lubricants and specialty products.

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