

Polartech MA 440 E

Fatty Acid Diethanolamide

- Use** : Corrosion inhibitor
Emulsifier
Lubricity enhancer
- Applications** : Synthetic watermix cutting fluids
Semi synthetic watermix cutting fluids
Conventional cutting fluids
Watermix hydraulic fluids
Watermix cleaning fluids
- Advantages** : Superb emulsification of paraffinic and naphthenic oils
Compatible with hard water
Excellent corrosion inhibition
Synergistic anti wear performance
Improved concentrate stability
Very low foaming potential
- Concept** : To develop a truly multifunctional additive with enhanced cutting performance yet capable of emulsifying a variety of base oils and have a low foaming propensity.

Typical Product Data

Appearance	:	Amber, semi fluid
Specific Gravity @ 20°C	:	0.96
pH @ 1% Concentration	:	10.0
Acid Value mg KOH/g	:	5.0

This does not represent a complete specification, full sales specification data will be supplied on request by Polartech Quality Assurance Department.

Health and Safety

Polartech MA 440 E is free from nitrites, phenols, chlorine and PTBBA in accordance with international health and safety trends. For a full Material Safety Data Sheet please contact Polartech Limited.

Polartech MA 440 E forms part of a comprehensive range of additives, if you require more information on this or any other product please contact Polartech Technical Department. This information is for guidance only. It is recommended that complete testing be carried out on all additives to determine their suitability for use in proprietary formulations.



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Formulatory Guidance

The following formulation would typically form a general purpose, long service life, chlorine free metalworking fluid.

<u>Additive</u>	<u>% weight</u>
Polartech BA 70 M	12.5
Polartech MA 440 E	12.0
Polartech Morecide BOO	2.0
Naphthenic Base Oil	55
Butyl Diglycol Ether	1.5
Polartech AK 200	2.0
Distilled Tall Oil	2.0
Naphthenic Acid	3.0
Water	11.0
Propylene Glycol Ethers	2.0

This formulation is hypothetical only. The actual proportions will depend on a variety of factors including the type of base oil, coupling agents and fatty acids. All manufactured materials have a specification range and again this will vary the proportions required to produce a stable product. If further guidance is required please contact the Polartech Technical Department.

The following Reichart test results indicate the advantage of using Polartech MA 440 E in the formulation of metalworking fluids.

<u>Fluid (all 20% emulsions)</u>	<u>Noise Level</u>	<u>Weight Loss %</u>
1 Conventional Emulsion	100	97
2 Semi Synthetic	100	90
3 Semi Synthetic using MA 440 E	80	78
4 Semi Synthetic using Chlorine	71	65



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