



Polartech® 8612 Boron Free, Aqueous Phase Corrosion Inhibitor Package

Description

Polartech® 8612 is a boron, secondary amine & formaldehyde-release biocide free synthetic corrosion inhibitor package to deliver long service life fluids with exceptionally low foaming characteristics for general grinding and machining operations.

Polartech® 8612 meets the highest HSE standards and addresses the problems associated with difficult water qualities and the pressures demanded in modern machine tools to deliver exceptional performance and productivity for the end user.

Typical finished fluid applications include:

- Synthetic watermix cutting & grinding fluids

Key Performance Benefits

- A premium secondary amine free and boron free package
- Low foam in soft water and clean in hard water, reducing maintenance time
- Multiple blending options, allowing simplification of formulation and component inventory
- Lower tendency to form sticky residues, making machine tool maintenance easier
- TRGS 611 compliant products
- Excellent pH buffering to maintain fluid life and reduce maintenance time
- Efficient flushing action and fines separation to keep the grinding / cutting zone clear and protect workpiece surface

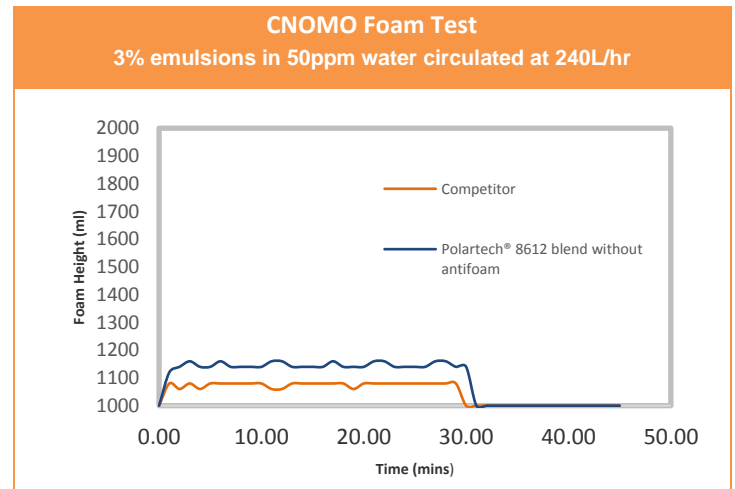
Typical Package Characteristics

Appearance:	Amber fluid
Specific Gravity at 15.5°C	1.23
Kinematic viscosity at 40°C, cSt	37
Total Alkalinity, % KOH	28

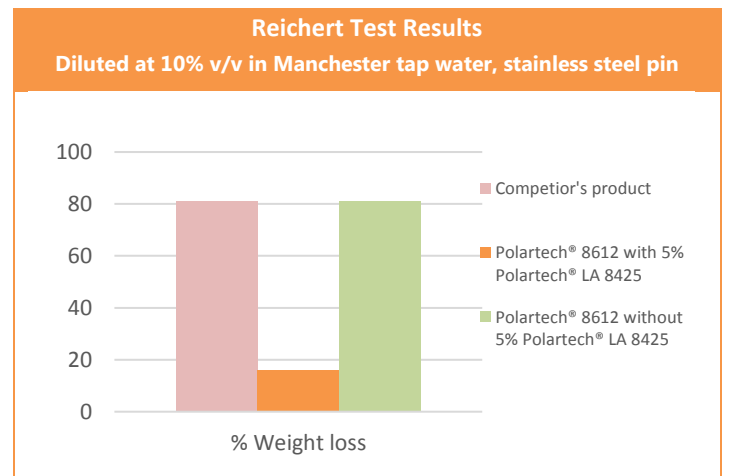
Blending Cutting Fluids

Blends of Polartech® 8612 can be converted from grinding fluids to cutting fluids by including Polartech®8425, a highly effective PAG based lubricity additive.

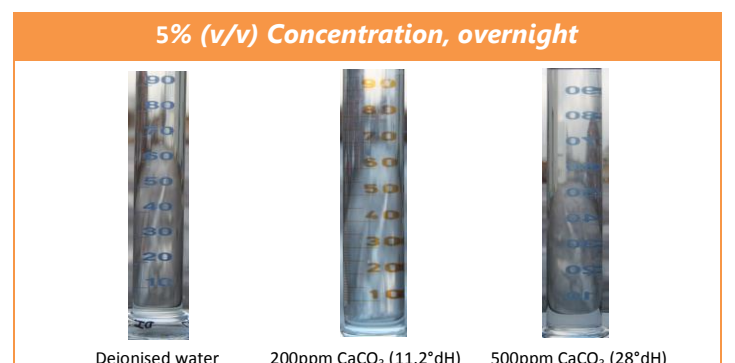
Low Foam Performance



Machining Performance



Emulsion Quality and Stability





Recommended Concentrate Blend Ratio

Polartech® 8612, % wt	25.0 – 40.0
Good quality water, % wt	Difference
Fungicide ¹ , % wt	0.6
Chelating agent ² , % wt	0.2
Polymer (optional) ³ , % wt	5.0 – 10.0
Antifoam ⁴ , % wt	0.05

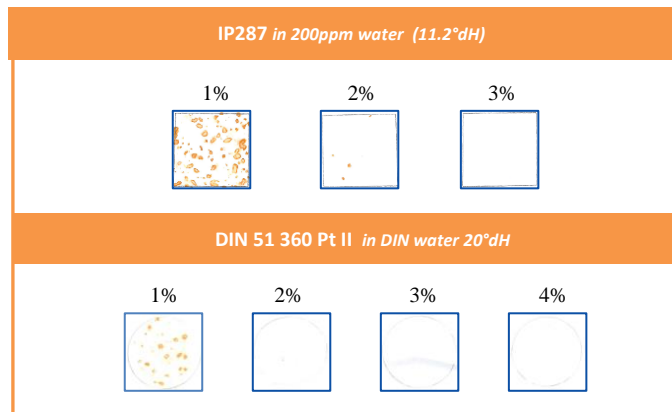
¹ Sodium Omadine

² Dissolvine GL 38

³ Polartech® LA8425

⁴ Polartech® AF 2000

Ferrous Corrosion Protection



Typical Blended Concentrate Characteristics

Concentrate

Appearance: Amber fluid

Solution

Appearance: Clear solution

Stability in 200ppm: Clear solution

Stability in 500ppm: Clear solution

IP287, at 3%: Clear paper

IP125, at 1%: 0/0-0

DIN 51360 Pt II, % rating 0: 3.0

pH @ 3% in deionised: 9.8

Refractometer Factor: 3.2

Concentrate Blending Advice

1. Ideal blending temperature is between 20°C and 30°C
2. Add good quality water to the blending vessel
3. Add Polartech® 8612 with good mixing
4. Add selected fungicide and mix until the blend is clear and homogeneous
5. Add other additives if required, continuing the gentle agitation

Storage

Store inside warehouse, ideally between 10°C and 30°C

Shelf life of 12 months from date of manufacture

Store out of direct sunlight

Avoid water collecting on barrel top