



Polartech® 8215 Emulsifier and Corrosion Inhibitor Package

Description

Polartech® 8215 is a cost-effective grade, low oil, boron based, semi-synthetic water-based metalworking fluid package that is compatible with a wide range of formaldehyde based biocides. The package was developed using Italmatch proprietary technology that delivers long service life fluids with exceptionally low foaming characteristics for general machining operations. It is designed to be aluminium compatible as it contains an aluminium stain inhibitor.

Typical Applications

- General ferrous machining
- Nodular and Cast Irons
- Free cutting aluminium alloys
- Composite and polymeric materials
- High pressure coolant delivery systems

Key Performance Benefits

- Secondary amine free for use in TRGS 611 compliant products
- Italmatch proprietary low foam emulsification technology giving exceptional stability in soft and hard waters
- Flexibility in biocide choice formaldehyde release biocides such as MBO, MBM, triazine, EDDM
- Low odour for greater operator acceptability.
- Enhanced lubrication performance

Typical Package Characteristics

Appearance:	Yellow amber fluid
Specific Gravity at 15.5 °C:	1.044
Total Alkalinity, % wt KOH:	12.0

Recommended Blend Ratio

Component Name	Products with MBO ² /MBM ³ /Triazine ⁴	Product with EDDM ⁵
Polartech® 8215	46.7	46.9
Fungicide ¹	0.8	0.8
Biocide ^{2/3/4/5}	2.0	2.0
Isofol® 12	0.5	0.3
Good Quality Water	49.97	49.97
Antifoam	0.03	0.03

Legend:

¹IPBC 30%

²Methylene bis oxazolidine (MBO)

³Methylene bis morpholine (MBM)

⁴Hexa Hydro Triazine (HHT)

⁵Ethylenedioxydimethanol (EDDM)





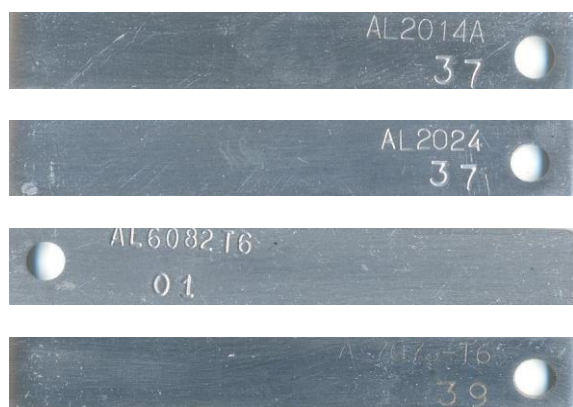
Typical Blended Product Characteristics

Concentrate	
Appearance:	Amber Fluid
Emulsion	
Appearance in deionised:	Translucent
Appearance in 200ppm:	Semi Translucent
Appearance in 500ppm:	Opaque
IP287, Clear paper, %:	4.0
pH @ 5% in deionised:	9.5
Aluminium stain test:	No stain

Aluminium Staining Results

Aluminium Staining Results (after 48 hours, 5% in 200ppm)

Example of the product with Methylene bis oxazolidine (MBO)



Ferrous Corrosion Protection – IP287

IP 287 results in 200ppm			
Product with Methylene oxazolidine (MBO)			
 2%	 2.5%	 3%	 4%
Product with Methylene bis morpholine (MBM)			
 2%	 2.5%	 3%	 4%
Product with Hexa Hydro Triazine (HHT)			
 2%	 2.5%	 3%	 4%
Product with Ethylenedioxydimethanol (EDDM)			
 2%	 2.5%	 3%	 4%

Concentrate Blending Advice

1. Blend between 20-30°C.
2. Charge vessel with Polartech® 8215.
3. Add biocide, fungicide and mix until the blend is clear and homogeneous.
4. Add coupling agent and good quality water slowly with continuous mixing.
5. Finally add antifoam and mix thoroughly for a minimum 30 mins.

