



Industrial  
Lubricants



Automotive  
Lubricants



Biodegradable  
Lubricants



Agricultural  
Lubricants



Cleaning &  
Maintenance



Greases &  
Pastes



Foodsafe  
Lubricants



Heritage Oils



Lubrication  
Equipment



Metalworking  
Fluids



## Pencool CLF Plus

Full Synthetic Water Soluble Grinding Fluid  
Product Code: AHE

### Product Description

Pencool CLF Plus is a new concept in grinding fluid technology, being completely free from amines, boron and formaldehyde release biocides. Designed primarily for the grinding of tungsten carbide, where problems are encountered using conventional fluids because of the cobalt binding agent used, it may also be used on a wide variety of ferrous and non-ferrous alloys. The product contains a highly effective passivator to help prevent staining on copper alloys and aerospace aluminium alloys. Pencool CLF Plus is designed to resist the absorption of cobalt which would normally result in problems such as softening of the workpiece and the need for frequent wheel redressing as well as potential health and safety hazards. It is nitrite and phenol free, provides good corrosion protection, has a low foaming potential, improves surface finish, and improves tool performance through good lubricity and cooling and does not form sticky residues.

### Applications

Pennine Pencool CLF is recommended primarily for the machining / grinding of tungsten carbide and other cobalt containing materials but may also be used with other materials.

### Features & Benefits

- Transparent solution ~ Excellent workpiece visibility
- Highly biostable ~ Extended sump life / fewer fluid changes
- Excellent tramp oil rejection ~ Maintains fluid cleanliness
- Excellent corrosion protection ~ Protects machines & workpieces
- Chlorine free ~ Reduced waste disposal costs

### Typical Test Data

| Characteristic / Test                      | Data                                   |
|--|--|
| Appearance (concentrate)                   | Fluorescent Green                      |
| Appearance (emulsion)                      | Fluorescent Green Transparent Solution |
| Specific Gravity @ 15°C                    | 1.1                                    |
| pH @ 5%                                    | 9.2                                    |
| IP 287 Breakpoint Corrosion                | 2.0 %                                  |
| IP 125 Herbert Corrosion Test              | No Data                                |
| Dilution Range (min ~ max)                 | 4 ~ 8 %                                |
| Refractometer Conversion Factor            | 1.72                                   |
| Water Hardness Range ppm CaCO3 (min ~ max) | 50 ~ 600                               |

Actual dilution rates may vary depending on application. Please consult with Technical Services to determine the most suitable dilution for your application.



Certificate Number: 9480  
ISO 9001



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### Coolant Care

To promote maximum service life, it is strongly advised that coolant systems are thoroughly sterilised with Bioflush System Cleaner prior to coolant changes (see Bioflush Technical Data Sheet for further information and guidelines).

To maintain the efficiency of the coolant, daily checks for concentration with a hand refractometer is recommended. Maintaining a consistent concentration is paramount to prolonging the fluid sump life. Further tests for bacteria, fungus, pH and tramp oil contamination are available through our PROCARE Fluid Management Service and helps users to comply with current HSE legislative requirements. Please contact us for further details.

### Availability & Storage

Pennine Pencool CLF is available in 1000 litre IBC's, 205 litre barrels, 25 litre drums and 5 litre plastic bottles.

Barrels of lubricant should always be stored in such a way that will prevent the ingress of water when stored in the open. Protect from frost.

### Health & Safety

Please refer to the relevant Safety Data Sheet, a copy of which is freely available to all our customers.

Data represented is typical of that obtained with normal production tolerances and does not constitute a specification. The policy of Pennine Lubricants is one of continual improvement; we therefore reserve the right to change specifications without notice.



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