

Synthetic Grinding Fluid

Hartland Synthetic Grinding Fluid is a light duty, synthetic coolant formulated for general roll grinding operations on ferrous alloys only. Hartland Synthetic Grinding Fluid provides an optimum balance of cooling, detergency, corrosion protection, and work-piece visibility for turbulent roll grinding operations.

Hartland Synthetic Grinding Fluid offers low foaming properties in most grinding operations. A special corrosion inhibitor blend offers excellent protection against corrosion and staining of grey iron, cast iron, and ferrous alloys and for freshly ground ferrous surfaces. Hartland Synthetic Grinding Fluid comes packaged as a highly concentrated form.

Hartland Synthetic Grinding Fluid does not leave a sticky or tacky residue on machined surfaces. The residue is very fluid-like and will not gum up ways or stick switches. Hartland Synthetic Grinding Fluid readily rejects most tramp oils, which may be easily removed with standard skimmers and other removal systems. Hartland Synthetic Grinding Fluid contains no triazine biocides. Hartland Synthetic Grinding Fluid can also be utilized as a leak detection or non-destructive test fluid for ferrous metals or ferrous alloy assemblies.

FEATURED BENEFITS

- True solution chemistry and low foaming properties assure clean, clear workpiece visibility
- Imperceptible thin film corrosion preventative provides excellent tack free in-process rust protection
- Exceptional hard water stability keeps windows clean and grinding wheels free from buildup
- Additive Independent: No need for tank side pH buffers, emulsifiers or costly and hazardous biocide
- Oil rejecting properties keep the sump clean and free of odor causing bacteria and fungus
- Freeze-thaw stable
- Low to non-foaming use dilutions
- Contains no Triazine or Formaldehyde releasers

TECHNICAL DATA

| | |
|------------------------------------|----------------------|
| Fluid Type | Synthetic |
| Appearance | Clear to slight haze |
| Odor | Mild chemical |
| Specific Gravity, 60°F (15.6°C) | 1.05 – 1.08 |
| Weight, 60°F (15.6°C) | 8.96 lbs/gal. |
| Freezing Point | 32°F (0°C) |
| pH (concentrate) | 9.2 – 10.2 |
| pH (5% dilution) | 8.6 – 9.6 |
| Alkalinity, concentrate (meq/gram) | 2.3 – 2.6 |
| VOC, ASTM E 1868 | 39.8 grams/liter |

PRODUCT APPLICATION/USAGE

Hartland Synthetic Grinding Fluid is recommended for general purpose machining of aluminum alloys, non-ferrous and aluminum alloys, and tougher exotic alloys (both non-ferrous and ferrous).

| Operation | Carbon Steels | Malleable Iron, Cast Iron |
|--|---------------|---------------------------|
| Grinding: I.D., O.D., Blanchard, Double Disk | 4 – 6% | 4 – 6% |

MIXING DATA

Hartland Synthetic Grinding Fluid metalworking fluid is to be mixed with water for use. Add product to water with moderate agitation for mixing. The ideal concentration ratio should fall between 4% and 6% and can easily be monitored by refractometer or alkaline titration using the Chemtool titration kit.

| Concentration | 10% | 6% | 5% | 4% | 3% |
|--|-----|-----|-----|-----|-----|
| Refractometer Reading | 3.6 | 2.3 | 1.9 | 1.5 | 1.2 |
| Alkalinity (factor = 0.30) Titration Test Kit | 31 | 20 | 15 | 13 | 12 |