# TECHNICAL DATA SHEET

## CIIFROL SYNCUT PREMIUM

**High Performance Semi-Synthetic Coolant Cutting Oil**

### DESCRIPTION

Ciifrol Syncut Premium is a high-quality, bio-stable, semi-synthetic cutting fluid. It forms a whitish emulsion when mixed with water. The solution formed is homogeneous and does not break even during prolonged usage or shutdowns. It is a non-EP type product whose emulsions are compatible with cast irons, most ferrous alloys including stainless steel and free-cutting aluminium alloys, oil-resistant plastics and other non-ferrous metals.

### APPLICATIONS

Recommended for grinding, reaming and general machining operations. Also suitable for deep-hole drilling and boring, thread cutting and forming operations under appropriate concentration levels. The source sheet also notes compatibility with cast iron, glass and most ferrous alloys, and states that it provides better oil life than conventional soluble cutting oils, along with improved tool life and finish.

| OPERATION | RECOMMENDED DILUTION |
|---|---|
| General machining | 5–6% |
| Reaming | 8–10% |
| Grinding | 3–5% |
| Thread cutting and forming | 6–8% |
| Deep-hole drilling and boring | 6–8% |

### SPECIFICATIONS

This is a proprietary formulation of SRN Lubricants Pvt. Ltd.

### KEY BENEFITS

- Low foaming in all water conditions to ensure continuous grinding performance.
- Free from sulphur-, chlorine- and phosphorus-based EP additives.
- Inhibits microbial growth to enhance coolant sump life.
- Extended protection of workpiece, machine components and tool material from rust and corrosion.
- Excellent surface finish and superior cooling properties.
- Long emulsion life.

### KEY PROPERTIES

| TEST PARAMETERS | SPECIFICATIONS |
|---|---|
| Appearance | Milky white emulsion |
| Density @ 27°C, gm/ml | 0.89 ± 0.02 |
| pH of 5% emulsion | 9.0 ± 0.5 |
| Refractometer factor | 1.6 |
| Thermal stability @ 50°C ± 2 for 15 hrs. | Passes test |
| Freezing test @ 0°C ± 2 for 15 hrs. | Passes test |
| Copper strip corrosion test | Passes test |
| Cast iron corrosion test (Herbert test) | Passes test |
| Recommended dilution | 1:20 |

### METAL COMPATIBILITY

| MATERIAL | COMPATIBLE |
|---|---|
| Ferrous | Yes |
| Aluminium | Yes |
| Brass / Copper | Yes |

### USAGE DIRECTIONS & PRECAUTIONS

- Always add oil to water and not vice versa, as this can lead to an unstable invert emulsion.
- Although designed to form stable emulsions even with high-hardness water, moderately hard water (approximately 100 ppm) is preferable. High hardness may cause emulsion stability issues, while low hardness may lead to foaming.
- Never add cutting fluid directly to the sump. Prepare an emulsion of the appropriate concentration separately, then add it to the sump.
- Use baffles and other methods to remove all tramp oil from the system.
- Keep the system completely aerated to help avoid anaerobic bacteria growth, especially during shutdowns and temporary breaks.
- Ensure that the system is always maintained at the appropriate pH level.

## GENERAL INFORMATION

The key properties shown are typical values and may vary slightly from batch to batch. Please contact a CIIFROL representative for batch-specific test results. Please visit www.ciifrolglobal.com for company information.

The information provided in this Technical Data Sheet is based on our best knowledge and experience and is intended as a general guide. The technical data represents typical values and may vary depending on product batches, operating conditions and application methods.

Users are advised to refer to the latest Technical Data Sheet and Safety Data Sheet (SDS) for applicable product information.

Users are advised to evaluate the product for suitability for their specific application and to follow recommended handling, storage and safety practices. CIIFROL accepts no responsibility for any loss, damage or injury resulting from improper, unintended or abnormal use of the product or conditions beyond its reasonable control.

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