

# TECHNICAL DATA SHEET

## TADALSOL 133

High lubricity semisynthetic metalworking fluid for machining and grinding

### GENERAL DESCRIPTION

Featuring **extremely high lubricity and detergency** TADADALSOL 133 is a semisynthetic soluble oil designed for machining and grinding of ferric and nonferric metals. It contains additives that protect against tarnish the copper alloys. TADALSOL 133 features a high detergency, which improves the performance when abrasive tools are used, such as in **superfinish or grinding** operations. Excellent surface finish is achieved because the product is based in synthetic oil with superior lubricity.

It easily emulsifies with water giving high stability emulsions, even with hard waters up to 400 ppm as CaCO<sub>3</sub>. If deionised water is used to top up the systems the service life of the emulsion is extremely long, exceeding 2 years if a good filtering system and tramp oil skimmer are used. In a few cases combination of agitation, air trapping and temperature can produce an excess of foam, which uses to disappear after some working time. If foam gives trouble it is allowed to add an antifoam additive to the emulsion. Our Technical Service will help you in choosing the suitable antifoam additive.

The product contains a low toxicity non-phenolic biocide that produces good bacteriostatic behaviour provided that emulsions are free from sludge and tramp oil. During shutdown periods it is important to recirculate or blow air into the emulsion to avoid the growth of anaerobic bacteria. TADALSOL 133 does not contain any phenol, chromate, nitrite, heavy metals, chlorinated additives and PTBB acid derivatives.

### TYPICAL CHARACTERISTICS

#### Concentrate

|                  |   |                  |
|------------------|---|------------------|
| Appearance       | : | Dark viscous oil |
| Specific gravity | : | 0.91             |
| Flash point      | : | 180 °C           |
| Pour point       | : | -10 °C           |

#### Emulsion

|                                   |   |                                 |
|-----------------------------------|---|---------------------------------|
| Appearance                        | : | White                           |
| pH at 5 %                         | : | 8 approx.                       |
| Herbert test                      | : | 0/0-0                           |
| Rust test DIN 51360 p.2           | : | 0                               |
| Copper tarnish,<br>48 h. at 50 °C | : | Class 1 according to ASTM D 130 |
| Corrosion on Aluminium            | : | None.                           |

## APPLICATION GUIDELINES

Typical concentrations for machining and grinding steel, copper alloys and aluminium alloys are from 3 to 6 % .To machine steel typical values ranges from 4 to 7 %. Nevertheless higher concentrations up to 12 % may be used in specific cases, where a higher lubricity is needed.

## CHECKING THE CONCENTRATION OF THE EMULSION

- A. Adding sulphuric acid will split the emulsion up. The direct reading of the oily phase gives the concentration. Due to the high stability of the emulsion it may take a long time to split up. Keeping the mixture emulsion+sulphuric acid in oven at 60 –70 °C speeds up the oily phase separation.
- B. Direct reading in a hand refractometer. The factor is 1.

## MIXING INSTRUCTIONS

The concentrate must be added upon the water (**never the reverse**), at room temperature, while stirring until full emulsification.

## STORAGE

Store at temperatures above 0 °C. We recommend using the product before 6 months after the manufacturing date. After this period some haziness might appear, if so check whether the concentrate emulsifies easily and the emulsion is stable before using the concentrate.

## EFFECT ON PAINTS

This product does not contain any substance that adversely affects the paints of tool-machines, such as glycols or its derivatives. The information presented herein is based on the best data available and is believed to be correct. However, nothing stated in this bulletin is to be taken as a warranty, expressed or implied, regarding the accuracy of the information, or the use of our products; nor shall anything contained herein be construed to constitute a permission or recommendation to practice any invention covered by a patent owned by SIDASA, any of its divisions, or by others, without a license from the owner of the patent.

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