

Tru Grit Sol Cut 7000

Description

Sol Cut 7000 is a general-purpose EP semi-synthetic soluble cutting oil that is free of Chlorine, Nitrite, Cobalt and Boron. It is suitable for a wide range of machining operations with most metals when *added to water* at the correct ratio. Sol Cut 7000 forms a stable milky white emulsion and will provide excellent cooling, lubrication and corrosion protection.

Features & Benefits

Sol Cut 7000 is formulated using a non-silicone, non-ionic, mineral hydrocarbon based foam control additive. The absence of silicone eliminates the possibility of 'fish eyeing' in subsequent processes such as painting, anodizing and powder coating. Sol Cut 7000 contains an EP additive that is non-chlorinated. An intrinsic characteristic of Sol cut 7000 is its inbuilt protection against bacteria. This is more effective and longer lasting than the proteos offered by added bactericides resulting in long-term stability, both in the concentrate product and the emulsified fluid, resisting bacteria and offensive odours.

DO NOT mix Sol Cut 7000 with other oils.

Sol Cut 7000 has superior anti-corrosive properties so it can be used as a temporary rust protection for mild steels at a 40:1 solution for up to 4 weeks in inside storage.

General Recommendations for Mixing

- Always **add oil to water** while stirring to ensure a stable emulsion is created. Not water to oil.
- Only use clean equipment when mixing oil.
- Add the oil slowly to the water with constant stirring.
- Stir for an additional few minutes after all of the oil is added to water.

Recommended Mix Ratios (Parts Water : Parts Oil)

Machining: 20:1

Mild Steels & Brass 15:1

Medium Steels 10:1

Hard Steels 25:1

Aluminium 40–50:1

Grinding 10:1

Rolling For general machining, a concentration of 5% (1 part Sol Cut 7000 to 20 parts water) will give good results in free machining. A concentration stronger than 10% is seldom necessary as performance is not significantly improved and can have detrimental effects such as

foaming.

Sol Cut 7000 was developed to produce extremely stable emulsions under widely varying conditions. To produce this level of stability, high levels of emulsifying agents are used in the formula, which can on rare occasions lead to minor difficulties in the preparation of the emulsion. This is usually highlighted by the observation of creaming on standing. Use of the product under these conditions is not detrimental. The cause of creaming can be traced back to one of the following;

- Insufficient mixing
- Not stirring when oil is added to water
- Adding the oil to water in one hit – not as a steady stream
- Adding water to oil – not oil to water.
- Very cold oil and/or water – extreme winter conditions, Use warm water 40C.
- Contamination from the use of contaminated or dirty mixing equipment

Fluid Maintenance

Maintenance of the coolant bath is paramount to workshop cleanliness and health of workers. Maintenance is well described at this website.

http://www.coolantmaintenance.com/coolant_science/coolant_measurement_control.htm

Always add oil (Sol Cut 7000) to water as a separation may occur which will not redisperse back into the water phase.

The effective bath life for a made up solution with slight top ups is 4 months. Constant additions to the bath will extend bath life but will depend on how well the concentration of the bath is maintained. A higher coolant level will provide reserve biocide and reserve alkalinity and most likely negate the need to add additional biocide and an alkalinity booster. Low pH, low concentration and inadequate tramp removal will result in higher than normal bug growth. The efficacy of the biocide drops with dropping pH so it is important to maintain an adequate concentration and hence higher pH.

Regular testing for pH should ideally be in a range of 7 to 9. Ph test strips in the 6 to 10 pH range is best and sourced from www.bacto.com.au/. The concentration is ideally maintained within a range of 5 to 10% but no lower than 3% and measured with a hand held refractometer also from www.bacto.com.au/ Cat # REF 101 or 111. Price \$130 + GST
Microbiocidal activity is checked using agar test strips that measure Fungus and Bacteria.
Cat # 100037 SAB / PCA

Available from Amyl Media 39 Healy Rd Dandenong 03 97065666.

Chart for testing <http://pdf.troycorp.com/images/BF-Insert%20with%20diptests.pdf>

If it is deemed that a biocide is required, Ricatol BIT 20, can be sourced in minimum packs sizes of 1 Kilogram from <http://www.rcainternational.com.au/Home.html> of Ringwood, Victoria. Ricatol BIT 20 is a broad spectrum biocide for treatment of fungus and bacteria. Please discuss your results with us prior to any extraordinary dosing. Use Bleach and thorough rinsing also to kill any bugs prior to a new tank make up of Sol Cut 7000.

Health / Safety & Environment

Health, safety and environmental information is provided on the Material Safety Data Sheet for this product. Users should consult the MSDS, follow the precautions outlined and comply with all laws and regulations concerning its use and disposal.

Product Bulletin Sol Cut 7000 Issued: September 2014