

Technical Data Sheet

Zubora 77 S Ultra

Product description

- semi-synthetic, water-miscible high performance cooling lubricant
- on the basis of mineral oil
- free of boron
- free of formaldehyde separators
- free of substances with increased allergenic potential
- free of monoethanolamine (MEA) - TRGS 900 Workplace exposure limit
- with high content of polar additives
- with EP additives
- long-term stable
- excellent corrosion protection
- resistance of plastics in accordance with VDI 3035

Due to the use of primary amines there is no risk of formation of nitrosamines according to the current state of knowledge.

Furthermore, Zubora 77 S Ultra is inhibited against the formation of nitrosamines, i.e. that even if there are any secondary amines and nitrites (e. g. through foreign carry-over) no stable N-nitrosamines can be formed. When exceeding the limit value for nitrite according to TRGS 611 a partial or complete change of the emulsion is not necessary.

Characteristics

Density/15°C / DIN EN ISO 12185:	970 kg/m ³
Viscosity/20°C / ASTM D 7042:	211 mm ² /s
pH-value (5 % in H ₂ O) / DIN 51 369:	9.6 (after 4 to 5 days: 9.1 - 9.3)
Cast iron chips test (1:20) / DIN 51 360/T2:	Corrosion degree 0
Mineral oil content:	30 %
Water hazard class, concentrate:	1
Correction factor for determination of the concentration - refractometer:	1.0

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Application

Due to selected highly effective EP additives Zubora 77 S Ultra is suitable for cutting processes of most difficult demand. The product can be used for machining high strength steel, stainless steel, cast iron and aluminium and also for aluminium alloys as AL 2024 and 7075. Furthermore, it is well suited for difficult cutting operations with small diameter (5 mm). Due to a special formulation Zubora 77 S Ultra is particularly long-term stable.

The EP-additives effect a longer tool life and enable the working with high cutting speeds. Thus, a high process security can be guaranteed even for very difficult working operations. Due to the good rinsing capability a high machine cleanliness is achieved. This advantage guarantees high flexibility for different cutting processes mainly in central systems and working centres.

The necessary working concentration depends on the difficulty of the operation and the material.

Recommended hardness of the preparation water:

< 5° dH.

Working concentration

drilling/milling: approx. 5 %

reaming/sawing: approx. 10 %

Storage

Recommended storage temperature: +5 °C up to max. +40 °C.

Miscellaneous

Zubora cooling lubricants and our guide and slide way oils Divinol T 3 EP ISO 32 / Divinol T 6 EP ISO 68 / Divinol T 8 EP ISO 100 / Divinol T 12 EP ISO 220 are optimally compatible with each other. The combined use shows excellent de-emulsification properties, i.e. mixtures of emulsions and slide way oils separate quickly. Black stains can be excluded to a great extent.

If there are increased demands on corrosion protection, e. g. for external transport, we recommend our anti-corrosion agents containing hydrocarbons (Multicor dewatering fluids). They are optimally adapted to our water-miscible cooling lubricants.

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