PRODUCT INFORMATION

EMULCUT 160

WATER DILUTABLE METALWORKING FLUID

DESCRIPTION

EMULCUT 160 is a high-performance metalworking fluid for difficult to machine materials.

The product can be used on: steel, grey cast iron, stainless steel, aluminium, copper, brass as well as other non-ferrous metals, nickel-based alloys and mineral glass.

It is suitable for the following machining operations: turning, drilling, milling, reaming, honing, thread forming, thread tapping, deep hole drilling, sawing, grinding and broaching.

EMULCUT 160 is a semi-synthetic combination of mineral oil and novel EP high-performance esters. The emulsions achieve excellent surface finishes of the workpieces and excessively long tool life. Furthermore, EMULCUT 160 contains inhibitors that can prevent nitrosamine formation.
We recommend mixing EMULCUT 160 emulsions with a suitable mixing device. When processing non-ferrous metals, a non-ferrous metal deactivator must be added for a new preparation.

BENEFITS

- boron and formaldehyde free
- long term stability
- excellent lubrication performance
- very good filterability
- pH-stable emulsion
- outstanding corrosion prevention
- low foaming tendency
- non-cytotoxic

TECHNICAL DATA

Oil acceptance characteristic	emulsifying
Oil droplet dispersion	fine
Boron/FRB free	✓
TRGS-611-compliant	✓
Corrosion prevention, 5 % in water with 20 °dH [356 ppm] (DIN 51360/2)	Note 0
Preparation water quality	5 - 20 °dH [90 – 370 ppm $CaCO_3$]
Foam behaviour	low
Storage temperature	5 - 35 °C avoiding frost
Shelf life	observe the use by date on the container

PHYSICAL DATA

Appearance/20 °C (visual)	clear - slightly turbid, yellow liquid
Density/20 °C (ASTM D 7042)	approx. 0.997 g/cm³
Viscosity/20 °C (ASTM D 7042)	approx. 305 mm²/s
pH value/5 % in water with 20 °dH [356 ppm]/20 °C (DIN 51369)	approx. 9.4

FACTORS FOR CONCENTRATION DETERMINATION

Acidimetric titration up to pH 4: 0.69*
Acidimetric titration up to pH 7: 0.99*
Refractometer: 1.3
Acid split factor: 2.3
*) Method used: Titration of a 10 ml sample with 0.1 n hydrochloric acid

CONCENTRATIONS RECOMMENDED FOR USE

Grinding: 5 -7 %
Thread forming, sawing: 8 – 12 %
Turning, drilling, milling: 6 – 8 %
Reaming: 8 - 20 %
Deep hole drilling: 8 – 14 %