

DISCRIPTION

CUTTING OIL LIFE (METAL) is a high-performance, biostable water-soluble cutting fluid designed for a wide range of machining and grinding operations. It provides excellent cooling, lubrication, and corrosion protection for ferrous and non-ferrous metals.

CUTTING OIL LIFE (METAL) is a premium-quality soluble cutting oil formulated with advanced additive technology to deliver superior machining performance and extended service life. It forms a stable milky emulsion when mixed with water and maintains excellent stability even under varying water quality conditions. The product offers outstanding cooling and lubricating properties, effectively reducing friction and heat generation during metalworking operations. This results in improved surface finish, enhanced tool life, and increased productivity. Its advanced biostable formulation helps resist bacterial growth, minimizing odor formation and reducing maintenance requirements. The product also provides reliable corrosion protection for machine tools and workpieces.

APPLICATION

- General machining operations
- Grinding operations
- Turning, milling, drilling, and cutting processes
- Suitable for use on:
 - 1).Ferrous metals (iron and steel)
 - 2).Non-ferrous metals (aluminum, copper, and alloys)
- Recommended for CNC machines, conventional machines, and central systems

BENEFITS

- Excellent cooling and lubrication performance
- Improves tool life and reduces tool wear
- Enhances surface finish of machined components
- Stable emulsion with resistance to water hardness
- Effective corrosion protection for tools and workpieces
- Biostable formulation reduces bacterial growth and odor
- Free from nitrites, phenols, and chlorine
- Reduces machine downtime and maintenance costs
- Economical in use with long sump life

MATERIALS

- Low to medium tensile steels.

Recommended Concentrations

Type of Application	%	Ratio
Grinding	2 - 3	50 : 1 – 30:1
General machining ferrous metals.	5	20:1
General machining Non- ferrous metals.	3 - 5	30:1 – 20:1

Concentrations may need to be increased when machining difficult materials and where the water hardness of the diluent has an effect on corrosion inhibition.

MIXING

Cutting oil life should be added gradually into the full volume of water- never the reverse, and gentle agitation maintained until all the oil has been added and a uniform emulsion obtained. Use lower concentration for top-up to achieve recommended mix- ratios.

PERFORMANCE FEATURES

- **Nitrite free**- operator's health & safety.Reduced risk of the formation of nitrosamines.
- **Phenol& chlorinefree** – Environmentally safe. Low disposal costs.
- **Excellent lubricity** – high oil content provides excellent machine tool lubrication.
- **Emulsion stability** – tolerant to difficult diluent waters.
- **Corrosion inhibition** – high level of corrosion inhibition on tool, slide ways and components

PRODUCT CHARACTERISTICS

Test Parameter	Units	Test Limits	Test Method
Appearance	-	C&B	Visual
Density @ 15°C	Kg/m3	0.88 – 0.95	ASTM D-4052
Viscosity @ 40°C, min	cSt	35 - 45	ASTM D-445
Dilution			
.Dilution Appearance	-	Milky	Visually
pH Value (5%dilution)	-	9 – 9.5	-
Herbert Corrosion test	-	0/0-0	IP 125
Filter Paper Corrosion test	%	Nil	IP 287
CODE		1003/1	

