



Gulf Solucut *Soluble cutting oil*

Product Description

Gulf Solucut is a general purpose mineral oil based cutting oil designed for moderate to heavy duty machining operations like turning, milling, drilling etc. and also tapping, threading, boring at higher concentration. It offers good emulsion stability even with hard water and contains suitable biocides to avoid unpleasant odor and maintain emulsion stability. The oil is environment friendly in nature, as it is free from nitrite, phenol, nonyl phenol and heavy metals.

Features & Associated Benefits

Features	Associated Benefits
Excellent emulsion stability	Longer sump life, less disposals, less top-ups
Resistance to microbial growth	Longer sump life, acceptability to operators
Environment friendly	Acceptability to operators, easier disposal

Applications & Recommended Concentrations

Applications	Concentrations
General Machining (Turning, Milling , Drilling ,)	4-7 %
Heavy duty machining (Reaming, Tapping)	8-12%

Specifications & Typical Properties

Specification		
Typical Properties		
Test Parameters	ASTM Method	Typical Values
Kinematic Viscosity at 40°C, cSt	D 445	52
Density @ 15°C, g / cc	D 4052	0.90
pH (10% emulsion in DM Water)	In House	9.40
Refractometer Factor	In House	1.0
Emulsion stability @ 5% concentration in 400 ppm hard water	IS: 1448 pg98	Pass
Emulsion stability @ 5% concentration in 800 ppm hard water		Pass
Frothing Test, 200ppm Hard Water	IS 1448 pg 99	
5:1 in Hard Water, min		3 mins
20:1 in Hard Water, min		20 secs
Cast Iron Corrosion 5% emulsion in 400 ppm hard water	IS 1115	Pass
Aluminium staining test AI 6061 10% emulsion @ 50 deg C	In house	No Stains



Additional Information

To get the optimum results

- Always add oil to the water in specified concentration. Never add water to the oil.
- Use clean container for preparation of emulsion preferably of non-galvanized materials
- Optimum pH of the emulsion should be within the range of 8.8 and 9.3
- Bacterial Count of emulsion should be controlled below 10^5 colony forming unit/ml.

Metal Compatibility

Ferrous Metals	Yes	Titanium	Yes
Yellow Metals	Yes	Magnesium	No
Aluminum	Yes		

Water quality for optimum life of cutting fluid

Water Hardness	Should range between 80 to 125 ppm of CaCO_3
Sulphate Ions	50 ppm maximum
Chloride Ions	50 ppm maximum
Phosphate Ions	30 ppm maximum

Handling & Storage guidelines

- Refer Safety Data Sheets for Health and Safety related information.
- Used product to be disposed by referring to applicable statutory guidelines.
- Store preferably in in-door condition.
- Under normal storage conditions, the product should be consumed within 6 months for optimum performance.