



APPLICATIONS

Eni Fresia ESB 35 is a biodegradable, multifunctional and EP cutting oil, specifically formulated with synthetic ester for a more effective reduction of friction between the tool and the workpiece.

The formulation is free of chlorine and sulfur and is enriched with specific additives that give the product high detergent, anti-corrosive, anti-fog and antioxidant properties.

Eni Fresia ESB 35 is recommended for medium and high severity chip removal operations, such as milling, turning, boring, tapping, gear hobbing, shaving, slotting, broaching, sawing, shearing and medium-light stamping operations on stainless steel and steel alloys, aluminum and its alloys, titanium and its alloys and yellow metals.

The product is suggested for minimal lubrication (MQL).

Eni Fresia ESB 35 is 'readily biodegradable' (>60%) according to method OECD 301 B.

CUSTOMER ADVANTAGES

- Very low tendency to smoke and mist formation.
- Excellent workpieces surface quality.
- Extension of the tool life.
- It replaces mineral based products with EP additives containing chlorine and sulfur.
- High corrosion protection of the workpieces and the machine tool.

SPECIFICATIONS - APPROVALS

- ISO 6743/7 MHE
- WGK Class 1





CHARACTERISTICS

Properties	Method	Unit	Typical
Appearance	-	-	clear
Density at 15°C	ASTM D 4052	kg/m ³	920
Viscosity at 40°C	ASTM D 445	mm ² /s	35
Flash point COC	ASTM D 92	°C	230
Pour point	ASTM D 97	°C	-6
Copper corrosion	ASTM D 130	-	1a
Wieland pin corrosion	-	-	
on product	-	-	pass
+ 0,2% H2O	-	-	pass
+ 0,2% H2O + 10% OSO 46	-	-	pass
4 Balls weld load	DIN 51350	daN	>650
4 Balls wear	ASTM D 4172	mm	0.15

WARNINGS

- Do not mix the product with mineral oils to prevent the decay of the product properties.
- Perform compatibility tests in case of topping up of different product.
- Further information on the product is available on the material safety data sheet.

