

## CareCut™ ES 1

High Performance Cutting Oil

### Description

Castrol CareCut™ ES 1 (previously called Carecut ES 1 NA) is a chlorine and heavy metal free neat cutting oil, based on advanced biodegradable ester technology. It is formulated with a unique combination of anti-wear additives and boundary lubricants to optimise machining performance, enhance surface finish and lower the overall operating costs.

It can be used in single sump machines and large central systems.

### Application

CareCut ES 1 is designed for several machining applications including general machining, broaching and gear manufacture of ferrous and non ferrous metals.

CareCut ES 1 does not contain active sulphur and is hence compatible with yellow metals.

	Cast Iron	Honing / Super finishing	High alloyed steel / Stainless steel	Titanium alloys	Aluminium alloys	Yellow Metals
Honing / Super finishing						
Grinding						
Drilling						
Broaching / Gear Manufacture	√√√	√√	√		√√√	√√√
General Machining	√√√	√√√	√√	√	√√√	√√√

√√√ core application    √√ recommended application    √ suggested application, please consult Castrol representative

### Advantages

- Low oil mist and foam characteristics, even at high pressures and flow rates, leads to a reduction in oil consumption and increased production rates.
- Excellent flushing and lubrication properties extend tool life and enable high surface finish and dimensional accuracy.
- Good filtering characteristics and high oxidation stability help increase product lifetime.
- Our chlorine, mineral oil and heavy metal free formulation, based on advanced biodegradable ester technology improves the environmental profile and can help reduce disposal costs.
- High flashpoint, low odour, light colour and low mist qualities improve the work environment.
- Multi-metal machining using our superior additive technology provides opportunity for product consolidation.

## Typical Characteristics

Name	Method	Units	CareCut ES 1
Appearance	Visual	-	Clear Yellow Liquid
Viscosity at 40°C	DIN EN ISO 3104	mm <sup>2</sup> /s	25 - 30
Density at 15°C	CN-TM-084	g/cm <sup>3</sup>	0.925 - 0.930
Flash Point, PMCC	CN-TM-037	°C	> 250
Copper Corrosion, 3 hr at 100°C	CN-TM-020	-	1b

## Additional Information

	Ester	Active sulphur	Inactive sulphur	Phosphorous	Calcium	Chlorine	Zinc
Additives	√	-	√	√	-	-	-

CareCut™ ES 1

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BP Lubricants USA Inc., 1500 Valley Road, Wayne, NJ 07470  
 Telephone: +1-888-CASTROL Product Information: +1-877-641-1600  
[www.castrol.com/en\\_us/b2b/home.html](http://www.castrol.com/en_us/b2b/home.html)