# **Technical Data Sheet**

### **Multicut FSE HSC 20**

#### **Product description**

- · fully synthetic high-performance cutting oil
- on basis of synthetic esters
- · high sustainability by the use of ester oils from renewable resources
- free of chlorine and zinc
- no labelling according to EG regulation 1272/2008 (CLP)
- · corresponds to the requirements of the negative lists known to us

#### Characteristics

Colour / DIN ISO 2049:	lighter 2.5
Density/15°C / DIN EN ISO 12185:	880 kg/m³
Viscosity/40°C / ASTM D 7042 :	20.8 mm²/s
Flash point (Cleveland) / DIN ISO 2592:	> 200 °C
Corrosion effect on copper 1h/50°C / DIN EN ISO 2160:	2c
Corrosion effect on copper 1h/100°C / DIN EN ISO 2160:	3b

### Application

**Multicut FSE HSC 20** is a high-performance cutting oil on basis of synthetic esters and is well-suitable for high speed cutting operations (HSC). It contains a new combination of EP-additives and can be used for many cutting operations of free cutting mild steels, case-hardened and heat-treated steels as well as for acid and rust resistant steels. Additionally, **Multicut FSE HSC 20** is recommended for machining non-ferrous metals and in particular for the processing of aluminum we have made very good experiences before. When processing sensitive non-ferrous metal alloys, a preliminary checking of the material compatibility is recommended. Very good results can be especially achieved in chip removing operations of titanium alloys.

Working processes such as turning, milling, drilling but also thread cutting and deep-hole drilling can be handled without any difficulty. In many cases chlorine containing products can be substituted by **Multicut FSE HSC 20**. Low viscosity guarantees a good rinsing and cooling effect.

When using cooling lubricants we recommend to take care of VDI 3035 regarding design of machine tools, manufacturing plants and additional equipments to ensure greatest possible process safety.

#### 31460

04/2017-31460-1

The statements made in this publication are according to our present knowledge. They do not absolve the user from own examinations. A legally binding assurance of certain properties or suitability for a specific use can not be derived from our statements. Possibly existing laws and regulations concerning the handling and use of our products have to be observed by the receiver of our products himself.

1/2



ZG Division: Industrial Lubricants Zeller+Gmelin GmbH & Co. KG Schlossstr. 20 D73054 Eislingen/Fils - Germany Tel. +49 7161 802-0 - Fax +49 7161 802-290 www.zeller-gmelin.de - info@zeller-gmelin.de



# **Technical Data Sheet**

## **Multicut FSE HSC 20**

#### Storage

In case of storage temperatures below -5 °C the product may become turbid but this is a reversible procedure.

31460

04/2017-31460-1

The statements made in this publication are according to our present knowledge. They do not absolve the user from own examinations. A legally binding assurance of certain properties or suitability for a specific use can not be derived from our statements. Possibly existing laws and regulations concerning the handling and use of our products have to be observed by the receiver of our products himself.

2/2



ZG Division: Industrial Lubricants Zeller+Gmelin GmbH & Co. KG Schlossstr. 20 D73054 Eislingen/Fils - Germany Tel. +49 7161 802-0 - Fax +49 7161 802-290 www.zeller-gmelin.de - info@zeller-gmelin.de

