

BONDERITE L-MR 21718

February 2021

PRODUCT DESCRIPTION

BONDERITE L-MR 21718 provides the following product characteristics:

Technology	Lubricants
Product Type	Water miscible metal working fluids
Application	Metal machining (e.g. turning, drilling, milling, grinding)

BONDERITE L-MR 21718 is a water-miscible, boron free metal working fluid which is free of Cl-, P- and S-containing EP-additives and Formaldehyde Releasing Agents.

The high lubricity of BONDERITE L-MR 21718 extends the tool lifetime and reduces the process costs.

The excellent cleaning performance of BONDERITE L-MR 21718 keeps the machine clean and reduces the maintenance cost.

BONDERITE L-MR 21718 fulfills the rules of the TRGS 611 and is conform to VKIS substance list and contains an inhibitor to prevent the N-Nitrosamine formation.

Application Areas:

BONDERITE L-MR 21718 is a water-miscible cutting fluid for general machining of grey cast iron and different types of steel. The machining of aluminum and non-ferrous metals is possible in a material mix.

BONDERITE L-MR 21718 emulsions are stable and build a very low foaming in a water hardness between 2°GH and 80°GH.

TECHNICAL DATA**(as supplied):**Concentrate:

Density, 20°C, g/cm ³ DIN 51757	0.988
Viscosity, (20°C), mm ² /s DIN 53211	17
Refractive index (20°C)	1,399
Mineral oil content, %	10
Ester oil content, %	0

Emulsion:

Appearance	semi transparent
pH-value, (5%, DI water) DIN 51369	~9.5
Corrosion protection properties, at 5%, DIN 51360-2	0/0

Lubricating effect:

Tapping Torque (5%, 20°GH), Ncm (8 mm, 900 rpm, M4F, AlMgSi1)	25
Reichert (5%, 20°GH), mm² (Ducom Friction test, steel)	22

DIRECTIONS FOR USE**Preliminary Statement:**

Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Dermatological Assessment:

BONDERITE L-MR 21718 can be rated as well tolerated by the skin (Henkel Internal Patch-Test & Skin Irritation Test – OECD 439). Detailed dermatological assessment on request.

Concentration:

Make up concentration: 7 % to 15 % (depending on the machining operation and material)

Topping up concentration: 1 % to 2 %

Control of the emulsion:Refractometer:

The reading in °Brix multiplied by the product factor 2.2 is equivalent to the concentration in percent.

Titration:

100 mL of the emulsion are titrated down to pH 5.5 using 0.5 N HCl and an electronic pH-meter. The consumption of acid in mL multiplied by the product factor 0.45 is equivalent to the concentration in percent.

Splitting with acid (DIN 51368):

100 mL of the emulsion are heated up with concentrated hydrochloric acid. The reading in mL multiplied by the product factor 3.5 is equivalent to the concentration in percent.

Classification:

Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Recommended Storage Temperature, °C

5 to 40

The shelf life is indicated on the container.

ADDITIONAL INFORMATION**Disclaimer**

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Reference 1.1