

BONDERITE®**BONDERITE L-MR 46-81**Known as Multan 46-81
November 2012**PRODUCT DESCRIPTION**

BONDERITE L-MR 46-81 provides the following product characteristics:

Technology	Lubricants
Product Type	Synthetic Metal Working Fluid
Application	Mineral oil free Metal Working Fluid for Grinding

BONDERITE L-MR 46-81 is a water soluble synthetic grinding fluid. BONDERITE L-MR 46-81 is a mineral oil-free general purpose full synthetic coolant suitable in a wide range of grinding operations and water hardness (5 to 60° dH). Due to the selection of raw materials, BONDERITE L-MR 46-81 is resistant against bacteria growth. The formulation of BONDERITE L-MR 46-81 provides good foam control, corrosion protection properties and grit settling characteristics. BONDERITE L-MR 46-81 fulfill the rules of the TRGS 611.

Application Areas

BONDERITE L-MR 46-81 is mainly used for surface grinding or similar operations where transparency together with excellent foam control are of prime importance. BONDERITE L-MR 46-81 is preferably used for steel and cast iron and has a very good corrosion protection. Solutions made from BONDERITE L-MR 46-81 are clear and can be used with confidence in high pressure application.

TECHNICAL DATAConcentrate:

Density, 20°C, g/cm ³ DIN 51757	~1.15
Viscosity, (20°C), mm ² /s DIN 53211	~57
Flashpoint, °C DIN ISO 2592	>100

Solution:

Appearance	clear colourless
pH-Value (3%, DI-water) DIN 51369	~9.3

Corrosion protection properties:

according to DIN 51360/2	0/0 at 3 %
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DIRECTION OF 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.

Concentration

Use 3 - 4 % concentrate depending on the corrosion protection properties required by the material to be grinded.

Control of the emulsionRefractometer:

The reading in °Brix multiplied by the product factor 1.4 is equivalent to the concentration in percent.

Titration:

100 mL of the emulsion are titrated with 0.5 N HCl using an electronic pH-meter down to pH 5.5. The consumption of acid in mL multiplied by the product factor 0.16 is equivalent to the concentration in percent.

Storage

Temperature, °C +5 to +40

Classification

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

Hazardous Information
Transport Regulations
Safety Regulations



ADDITIONAL INFORMATION

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.1