

# Technical Information

# INDUOIL® HL 4

## TECHNICAL DATA

› Colour	colourless
› Odour	almost odourless
› Viscosity at 40 °C	2.5 mm <sup>2</sup> /s
› Density at 20 °C	0.79 g/cm <sup>3</sup>
› Pour point	none specified
› Flash point	105 °C

## WATER HAZARD CLASS

- › WGK 1

## THIS HIGH PERFORMANCE OIL IS

- › PVB/PCT-free
- › phenol-free
- › chlorine-free
- › silicone-free
- › heavy metal-free (such as barium, zinc, molybdenum, etc.)
- › toxicologically harmless

## PRODUCT DESCRIPTION

**INDUOIL® HL 4** is a low-residue stamping, cutting and shaping cooling lubricant with excellent lubricating properties.

## USE

For light-duty non-machining shaping operations such as stamping, shaping, bending, drawing, profile rolling, tapering, deep drawing, but also for chip-cutting machining such as turning, milling, drilling, sawing and thread cutting, as well as during internal cooling for minimum quantity cooling lubrication.

## MATERIAL

Non-ferrous metals (Al)  
 Non-alloy and alloy steels (ST, V2A)  
 Electrical contact materials  
 Wooden materials

## APPLICATION

Undiluted by spraying, rolling, daubing or in the drop procedure.  
 Not suitable for cyclic or mechanical lubrication!

## RECOMMENDATION

For optimal, non-contact and wear-free application, we recommend the mist-free **INDUTEC® MS** minimum quantity cooling lubrication systems with dual air jacket as well as the **INDUTEC® MS** systems for internal cooling.

## ADVANTAGES

**INDUOIL® HL 4** has the following advantages for minimum quantity lubrication:

- › minimal residues
- › dry work pieces, machines and chips
- › no disposal of the cooling lubricant
- › improvement of tool life
- › practically odourless

## DEGREASING OPTIONS

Evaporates almost residue-free when used as intended.

This information is based on our current knowledge, but does not constitute a guarantee of product properties and does not establish a contractual legal relationship. In case of doubt, practical tests are required on site depending on the requirement profile.