



# **WATER-MISCIBLE COOLING LUBRICANTS**

**FOR PRODUCTION TECHNOLOGY**

**BOSS** 

LUBRICANTS



# BOSS LUBRICANTS:

FOR INDIVIDUAL SOLUTIONS ABOVE  
ALL STANDARDS

**Successful companies need innovative,  
flexible partners:**

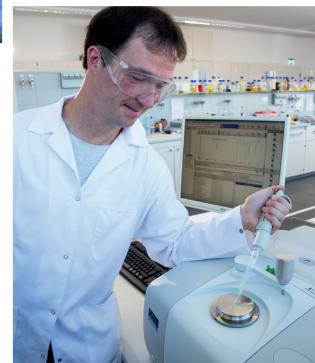
**Boss Lubricants GmbH & Co. KG.**

The company Boss Lubricants GmbH & Co. KG located in Albstadt, Germany, has been founded in 2003. As a medium-sized company we develop and produce custom-tailored special lubricants for various industrial applications.

With our highly specialized research and development team and comprehensive testing and measuring equipment of highest standards, we are able to trigger off trend-setting technologies with the aim to produce even more efficient, economic and environmentally compatible special lubricants.

The sector-specific know how of our experienced technicians and sales specialists, our certificates and the awards we have received, guarantee and prove the process reliability of our lubricants.

**With latest technology we produce special  
lubricants in highest quality: The liquid  
tool for your application – today and in  
future.**





# WATER-MISCIBLE COOLING LUBRICANTS

## THE MODERN GENERATION

### **Fast, flexible and innovative**

Boss Lubricants, an independent lubricants specialist, develops jointly with strong partners from industry and the university sector water-miscible cooling lubricants that are designed specifically for use in practical machining processes. This strong cooperation not only constantly opens up new horizons in development but also makes our lubricants **more valuable**.

We offer you a first-rate, varied range of water-miscible cooling lubricants for the widest range of processing operations and materials. From grinding to broaching and from ferrous metals to aluminium alloys, you can choose products from our range.

### **The requirements of modern water-miscible cooling lubricants are most exacting:**

- **They must be high-performing**
- **Highly profitable and**
- **Free from substances that are harmful or damaging to the environment**

Our products fulfil these requirements without exception.

Without the use of water-miscible cooling lubricants a modern production process is virtually inconceivable in the metalworking industry.

They cool, lubricate and remove chips. These properties lead, if the right cooling lubricants are chosen, to outstanding machining performances and excellent surface quality.

Boss Lubricants offers you not only the product range for this purpose but also the technical expertise and experience in providing advice for customised solutions.

# PRODUCT QUALITY

## YOU CAN RELY ON

### A choice for your precision work

For the choice of the right cooling lubricant the framework conditions are crucially important. The following parameters must be taken into account:

#### ■ The material to be worked on

**Among the materials to be worked on, a distinction is mainly drawn between three groups:**

- Cast iron:

- graphite fin formation (grey cast iron, GG)
- cast iron with spherical graphite formation (spheroidal graphite cast iron, G GG)
- black and white malleable cast iron

These materials have a carbon content of more than 1.7% and are easier to machine than steel.

- Aluminium: alloys contain specific elements such as copper, zinc, manganese, magnesium and silicon. The silicon content in the alloy is a most important factor where material characteristics are concerned. A higher silicon content makes aluminium more brittle and abrasive.

- When working on alloy steels the following factors are of importance:

- the carbon content (the higher it is, the more difficult the material is to machine)
- the hardness of the material (hardened materials require more lubrication)
- the processing method (grinding, turning, ...)

A further decisive factor is whether the steel is nickel-alloyed or high-grade.

#### ■ The machining process (tools, cutting speeds, feed rate)

#### ■ Compatibility with other process media

#### ■ Water quality

#### ■ The surface quality requirement

#### ■ Statutory provisions

#### ■ Waste disposal

#### ■ Plant parameters (filters, filling quantity, etc.)

Competent on-site advice is indispensable in order to clarify all these factors in detail. That is the only way in which the optimal product from our range can be established for your requirements. Our experienced service and field service employees are happy to be of assistance.





# PRODUCT BENEFITS

## OF OUR WATER-MISCIBLE COOLING LUBRICANT



- Outstanding cooling and rinsing effect that reduces your cleaning outlay considerably
- Longer tool life, less wear and tear, by which we do justice to your requirements of the machining process
- Very good corrosion and wear and tear protection
- Pleasant smell, excellent skin compatibility
- Less steam and oil mist formation
- Good filterability – and good maintenance properties as a result
- Excellent lubrication
- Marked resistance to micro-organisms
- Free from slightly nitrosable secondary amines
- Nitrite-free
- Free from chlorine, zinc and heavy metals
- Low top-up concentrations, increased profitability

# PRODUCT OVERVIEW

PRODUCT NAME	BRIEF DESCRIPTION	CONCENTRATE PROPERTIES				EMULSION				
		Amine-free	Boron-free	Formaldehyde-free	Contains mineral oil	Appearance	Concentration to use (in %)	Refractometer factor	Water hardness range (in dH)	
<b>Boss Cut MB 20 ES</b>	very stable boron-based water-miscible cooling lubricant.	no	no	no	yes	transparent	3-12	1,3	5-100	
<b>Boss Cut MB 30 ES</b>	very stable boron-based water-miscible cooling lubricant.	no	no	no	yes	translucent	3-12	1,3	5-100	
<b>Boss Cut MB 38 AS</b>	universal water-miscible cooling lubricant for various machining processes.	no	no	no	yes	transparent	3-8	1,2	5-100	
<b>Boss Cut MB 92 EP</b>	amine- and boron-based water-miscible cooling lubricant for the exacting machining of aluminium, stainless steels, cast iron and yellow metals.	no	no	no	yes	milky	4-8	0,9	5-80	
<b>Boss Cut MB 94 EP</b>	water-miscible high-performance cooling lubricant for the exacting machining of highly alloyed steels and aluminium.	no	no	no	yes	milky	6-20	1,3	5-80	
<b>Boss Cut MB 29 BF</b>	mineral-oil based and boron-free water-miscible cooling lubricant.	no	yes	no	yes	translucent	6-10	1,3	5-80	
<b>Boss Cut MB 38 FF</b>	chlorine-, sulfur- and formaldehyde-free water-miscible cooling lubricant.	no	no	yes	yes	transparent	3-8	1,2	5-100	
<b>Boss Cut MB 40 FF</b>	high-performance cooling lubricant for the machining of high tenacity aluminium alloys.	no	no	yes	yes	translucent	6-18	1,3	5-80	
<b>Boss Cut MB 38 BFF</b>	universal high-performance water-miscible cooling-lubricant, boron- and formaldehyde-free.	no	yes	yes	yes	translucent	5-12	1,3	5-80	
<b>Boss Cut MB 92 ABF EP</b>	amine- and boron-free water-miscible high-performance lubricant for the exacting machining of aluminium, stainless steels, cast iron and yellow metals.	yes	yes	yes	yes	milky	4-8	1,2	5-60	
<b>Boss Cut MB 41 AF</b>	mineral-oil containing high-performance water-miscible EP cooling lubricant.	yes	yes	yes	yes	translucent	6-10	1,5	5-60	
<b>Boss Cut Magnum AX 2500</b>	water-miscible high-performance lubricant, specially developed for machining of magnesium alloys.	no	no	no	yes	transparent	5-10	1,2	10-500	
<b>Boss Cut BU 34</b>	special water-miscible cooling lubricant, optimized for the machining of yellow-metals.	no	no	yes	yes	translucent	5-12	1,0	5-80	
<b>Boss Cut Syn 850</b>	mineral-oil-free water-miscible cooling lubricant for universal machining.	no	yes	yes	no	clear	5-15	1,5	5-60	
<b>Boss Cool S-Tec</b>	water-miscible synthetic high-performance lubricant with high cooling power.	no	yes	no	no	clear	4-8	1,3	5-60	
<b>Boss Cool Carbide S-Tec</b>	water-miscible synthetic grinding-concentrate for yellow metals and carbides.	no	no	yes	no	clear	5-6	1,2	5-60	
<b>Boss Cool 4 AB</b>	universal synthetic water-miscible grinding-concentrate.	no	no	no	no	clear	4-8	1,2	5-60	



	MATERIAL COMPATIBILITY (RISING FROM 1 TO 5)						
	Grey cast iron	Low-alloy steel	High-alloy steel	Aluminium alloys (low Si-content)	Aluminium alloys (high Si-content)	Magnesium alloys	Yellow metals
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# LUBRICANT MANAGEMENT

## REGULAR MONITORING AND MAINTENANCE

Not only technical support and routine monitoring account to our service, but also our special Lubricant Management in which we take your individual circumstances into consideration and completely maintain your cooling-lubricant and all other process fluids in use.

Please contact us, we are happy to outline our service package.

# BOSS LUBRICANTS GMBH & CO. KG

## YOUR EXPERT FOR HIGHLY SPECIALIZED APPLI- CATIONS: THE RIGHT HIGH-PERFORMANCE LUBRI- CANT FOR YOUR PROCESS

From experience we know that every application is different. Our demand is to understand your individual requirements and provide an exactly-fitting solution. This is why an individual and comprehensive consulting is important to us.

We want you to benefit from the performance, efficiency and reliability of our lubricants. Thereby we can pace the way to technology-leadership.

