



## 工業用油 切削油及研磨油 Cutting and Grinding Oils



# Innovative solutions for highest efficiency

**BECHEM is the specialist in the field of cutting and non cutting metal working operations.**

**BECHEM develops, produces and monitors the application of metal working agents for most demanding machining operations such as broaching, deep drilling, cold heading or wire drawing, as well as multipurpose cutting oils and bio stable water miscible coolants for extreme requirements.**

Regular exchange of experience and close cooperation between the group members greatly enhance each sector's individual R + D, which is above all designed to improve performance, help protect our environment and to increase efficiency.

Production underlies BECHEM's principle of quality first, which applies upon receipt of the raw materials: they are carefully checked, selected and, once they have been released for

production, they will be monitored at any single phase of production.

It is BECHEM's philosophy not just to recommend a suitable product but to offer individual solutions including professional assistance and advice, laboratory service, maintenance, environmental protection and information on how to correctly dispose waste emulsions. Efficient service and prompt supplies are self-evident.

## Neat metalworking oils

**Neat metalworking oils are optimized mixtures of mineral oils and additives which have especially been developed for high-performance metalworking processes. All BECHEM metalworking oils are free from organic chlorine.**

**When developing new coolants BECHEM puts main emphasis on:**

- Highest performance
- Environmental protection
- Health and safety requirements

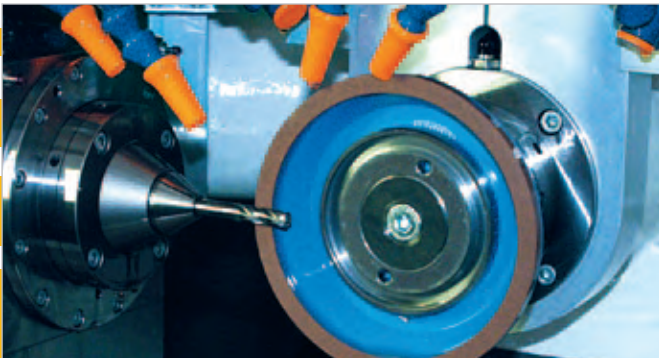
**BECHEM neat metalworking oils are based on:**

- Selected mineral oil fractions with very narrow boiling ranges
- Highly purified, almost PCA-free, base fluids and additives
- Low-odour and almost mist free base oils

Long experience in the field and intensive R + D helped us to translate the specific requirements of the market into practice and find the key to alternative solutions:

**BECHEM additive-design means:**

- Development of modern high-performance substances
- Intelligent combination of highly efficient ingredients
- Solutions specifically tailored to customers' requirements



<b>Finishing 整修</b>		<b>BERUGRIND – SFO- und HNO-series</b>	
<b>Grinding 研磨</b>	SFO 107 HC	$V_{40} = 7 \text{ mm}^2/\text{s}^{1)}$	Hard metal grinding
	SFO 110	$V_{40} = 10 \text{ mm}^2/\text{s}$	Tool grinding
	SFO 122	$V_{40} = 22 \text{ mm}^2/\text{s}$	Tool grinding
<b>Honing 搪磨</b>	HNO 205	$V_{40} = 22 \text{ mm}^2/\text{s}$	Cylinder honing
<b>General cutting 一般切削</b>		<b>BERUCUT-series</b>	
High-performance cutting oils for universal machining of steel and non-ferrous metals. Also suitable as hydraulic oils (fulfil DIN 51524-T2 and DIN 51517-T3).			
<b>Turning 微調, drilling 鑽孔</b>	SCO 122	$V_{40} = 22 \text{ mm}^2/\text{s}$	Steel, non-ferrous metals
<b>Turning, drilling, grinding</b>	SCO 310	$V_{40} = 10 \text{ mm}^2/\text{s}$	Steel, precious steel
	SCO 322 HC	$V_{40} = 22 \text{ mm}^2/\text{s}$	Steel, precious steel
	SCO 332 HC	$V_{40} = 32 \text{ mm}^2/\text{s}$	Steel, precious steel, non-ferrous metals
<b>Turning, drilling, milling</b>	SCO 446 UWS <sup>2)</sup>	$V_{40} = 46 \text{ mm}^2/\text{s}$	Steel, precious steel
<b>Deep drilling 深度鑽孔</b>		<b>BERUCUT – TBO-series</b>	
Deep drilling oils for most demanding cutting operations, not suitable for non-ferrous metals.			
<b>Diameter 直徑 &lt; 2 mm</b>	TBO 406	$V_{40} = 6 \text{ mm}^2/\text{s}$	Steel, precious steel
<b>ELB-, BTA-process</b>	TBO 515 (496)	$V_{40} = 15 \text{ mm}^2/\text{s}$	Steel, precious steel
<b>ELB-, BTA-process</b>	TBO 422	$V_{40} = 22 \text{ mm}^2/\text{s}$	Steel, precious steel
<b>Broaching 鑽孔</b>		<b>BERUCUT – RMO-series</b>	
A well balanced broaching oil system, based on broaching oil, hydraulic oil and additive package to always guarantee highest process reliability.			
<b>Vertical broaching 垂直鑽孔</b>	RMO 822	$V_{40} = 22 \text{ mm}^2/\text{s}$	Internal-external profiles
	RMO 822 Package	$V_{40} = 16 \text{ mm}^2/\text{s}$	Internal-external profiles
	RMO TC 22	$V_{40} = 22 \text{ mm}^2/\text{s}$	Ball tracks
	RMO TC 18 Package	$V_{40} = 18 \text{ mm}^2/\text{s}$	Ball tracks
<b>Helical broaching 螺旋鑽孔</b>	RMO 35	$V_{40} = 35 \text{ mm}^2/\text{s}$	Gear cutting
<b>Multipurpose oils 多功能潤滑油</b>		<b>BERUFORM – HY-series</b>	
High-performance multipurpose oils for most demanding cutting and forming operations. Suitable for hydraulic systems.			
	5022 HY	$V_{40} = 22 \text{ mm}^2/\text{s}$	
	5032 HY	$V_{40} = 32 \text{ mm}^2/\text{s}$	
	5046 HY	$V_{40} = 46 \text{ mm}^2/\text{s}$	
<b>Spraylubes 微量冷卻潤滑劑</b>		<b>Lubricants for minimum quantity lubrication: MMS</b>	
	Spraylub A 21 EV	$V_{40} = 5 \text{ mm}^2/\text{s}$	Cutting operations without any residues
	Spraylub A 16	$V_{40} = 10 \text{ mm}^2/\text{s}$	Al-processing (alcohol)
	Spraylub A 20	$V_{40} = 22 \text{ mm}^2/\text{s}$	Al-processing (alcohol)
	Spraylub E 30	$V_{40} = 30 \text{ mm}^2/\text{s}$	Steel-processing (ester)
	ALUCUT 20 ZF	$V_{40} = 40 \text{ mm}^2/\text{s}$	High performance aluminium processing

<sup>1)</sup> $V_{40}$  = Viscosity at 40°C, <sup>2)</sup>UWS = ester-based lubricant (脂類基礎油)