

**Motorenöle**

*Motor oils*

**Getriebeöle**

*Gear oils*

**Zweitaktöle und Traktorenöle**

*Two-stroke oils and tractor oils*

**Hydrauliköle**

*Hydraulic oils*

**Industrie- und Spezialschmierstoffe**

*Industrial and specialty lubricants*

## PENNASOL HEAVY CUT 22, 32, 46 (metalworking oil non water miscible)

**PENNASOL HEAVY CUT 22, 32, 46** are cutting oils for the application on steel and stainless steel. Because of their high lubricity PENNASOL HEAVY CUT 22, 32, 46 are well suited for tooth flank grinding and heavy cutting processes up to easy broaching operations. The base oil with low volatility and high viscosity index secures very good product stability and long-term process reliability

### Application:

alloyed steel	unalloyed steel	aluminium	yellow metals
XX	XXX	X	X

XXX: excellent suitable

XX: very well suitable

X: suitable

-: not recommended

### Active Components:

Ester	S (active)	S (not active)	P
X	X	XX	X

XX: high level

X: normal level

-: not contained

### Technical Data:

value	unit	method	HEAVY CUT 22	HEAVY CUT 32	HEAVY CUT 46
viscosity 40°C	mm <sup>2</sup> /s	DIN 51562-1	23,4	32,2	42,9
density 15°C	kg/m <sup>3</sup>	DIN EN ISO 12185	866	870	871
flash point	°C	DIN ISO 2592	214	228	208
copper corr.	Grad	ASTM D 130	4b	4b	4b

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