

cutting oil-Nr.4+NON FERROUS

coolant lubricants



applications - materials	
N1.1 Aluminium wrought alloys	$\leq 200 \text{ N/mm}^2$
N1.2 Aluminium wrought alloys	$\leq 350 \text{ N/mm}^2$
N1.3 Aluminium wrought alloys	$\leq 550 \text{ N/mm}^2$
N1.4 Aluminium cast alloys	Si $\leq 7\%$
N1.5 Aluminium cast alloys	$7\% < \text{Si} \leq 12\%$
N1.6 Aluminium cast alloys	$12\% < \text{Si} \leq 17\%$
N2.1 Pure copper, low-alloyed copper	$\leq 400 \text{ N/mm}^2$
N2.2 Copper-zinc alloys (brass, long-chipping)	$\leq 550 \text{ N/mm}^2$
N2.3 Copper-zinc alloys (brass, short-chipping)	$\leq 550 \text{ N/mm}^2$
N2.4 Copper-aluminium alloys (alu bronze, long-chipping)	$\leq 800 \text{ N/mm}^2$
N2.5 Copper-tin alloys (tin bronze, long-chipping)	$\leq 700 \text{ N/mm}^2$
N2.6 Copper-tin alloys (tin bronze, short-chipping)	$\leq 400 \text{ N/mm}^2$
N2.7 Special copper alloys	$\leq 600 \text{ N/mm}^2$
N2.8 Special copper alloys	$\leq 1400 \text{ N/mm}^2$
N3.1 Magnesium wrought alloys	$\leq 500 \text{ N/mm}^2$
N3.2 Magnesium cast alloys	$\leq 500 \text{ N/mm}^2$
N4.1 Duroplastics (short-chipping)	
N4.2 Thermoplastics (long-chipping)	
N4.3 Fibre-reinforced synthetics (fibre content $\leq 30\%$)	
N4.4 Fibre-reinforced synthetics (fibre content $> 30\%$)	
N5.1 Graphite	
N5.2 Tungsten-copper alloys	
N5.3 Composite materials	