



WATER MISCIBLE COOLANTS

ADDINOL PENTA-COOL WM 650

PRODUCT DESCRIPTION

ADDINOL Penta-Cool WM 650 is universal coolant concentrate containing mineral oil for general cutting operations. The product is free of amines, boric acid and formaldehyde-releasing components.

APPLICATION

- Suited for processing:
 - cast alloys
 - iron and steel
 - high-alloy steels
 - aluminium (check proneness to staining before use)
 - non-ferrous metals and non-ferrous metal alloys
- NOT suited for processing magnesium alloys

PLEASE NOTE

When mixing, add concentrate under constant agitation to the water, never vice versa!

TYPE

- Semi-synthetic
- Mineral oil content ~ 45%

DELIVERY

Delivery preferable in drums and 20L cans.

OPERATION CONCENTRATION

Depending on application:

- > 5%
- > 10% for difficult operations

SHELF LIFE AND TRANSPORT OF CONCENTRATE

Storable at room temperature in closed original package up to 12 months after date of production. Frost-protected transport!

CHARACTERISTICS

- Outstanding corrosion protection
- Free of boric acid
- Free of formaldehyde and formaldehyde-releasing components

ADVANTAGES AND BENEFITS

- Temporary storage of workpieces possible
- Does not form sticky or crystalline residues
- No health hazard





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SPECIFICATIONS AND TYPICAL PARAMETERS

Concentrate

Feature	Test condition / unit		Penta-Cool WM 650	Method acc. to
Appearance, colour			clear, light brown liquid	visual
Storage temperature		°C	from +5 up to +40	
Density	at 15°C	kg / m ³	974	DIN EN ISO 12185
Viscosity	at 20°C	mm ² /s	300	DIN EN ISO 3104
Mineral oil content		%	~ 45	
Refractive index		% per °Brix	1.0	

Emulsion with (fresh) water

Operating concentration	universal application	> 5%	
pH-value in DIN 20 water	5% emulsion	9.0	DIN 51369
Corrosion protection	3% emulsion	R0/S0	DIN 51360-1
	4% emulsion	0/0	DIN 51360-2
Stability in hard water	mixing water	between 10°dH and 25° dH	
	in operation	stable up to 60°dH	

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We at ADDINOL develop and produce more than 600 high-performance lubricants of the new generation. Among these are automotive lubricants for highest demands and pioneering developments for industrial applications. Our customers all over the world benefit from the high and stable quality of our ADDINOL high-performance lubricants, our know-how and the individual customer advisory service of our competent experts. Our company has world wide activities. ADDINOL high-performance lubricants are distributed by more than 70 international partners.

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