



Prista® MZ

Quenching Oils

Description and Application

PRISTA® MZ-100 and PRISTA® MZ-150 are lubricants especially designed for hot quenching and low-temperature annealing/tempering of metals. This process ensures internal stresses relieving induced by quenching and cementation. The recommended working temperature is from 70°C to 200°C.

PRISTA® MZ-460 is especially developed for low- and medium-temperature annealing/ tempering in the temperature range of 150°C to 250°C. It is particularly suitable for use with spring and constructional steels to increase their elasticity and to relieve internal stresses.

These oils are formulated from highly refined paraffinic-naphthenic narrow cuts of low coking tendency blended with an appropriate high performance additive package to ensure excellent thermal & oxidation stability and cooling capacity to the oils and cleanliness of the treated parts.

Benefits

- Excellent oxidation resistance
- High thermal stability
- Consistent performance
- Excellent cleanliness
- Good quenching speed

Specifications

ISO 3448	VG 100, 150, 460
ISO 6743/14	ISO-L-UHC; ISO-L-UHE

Typical Characteristics

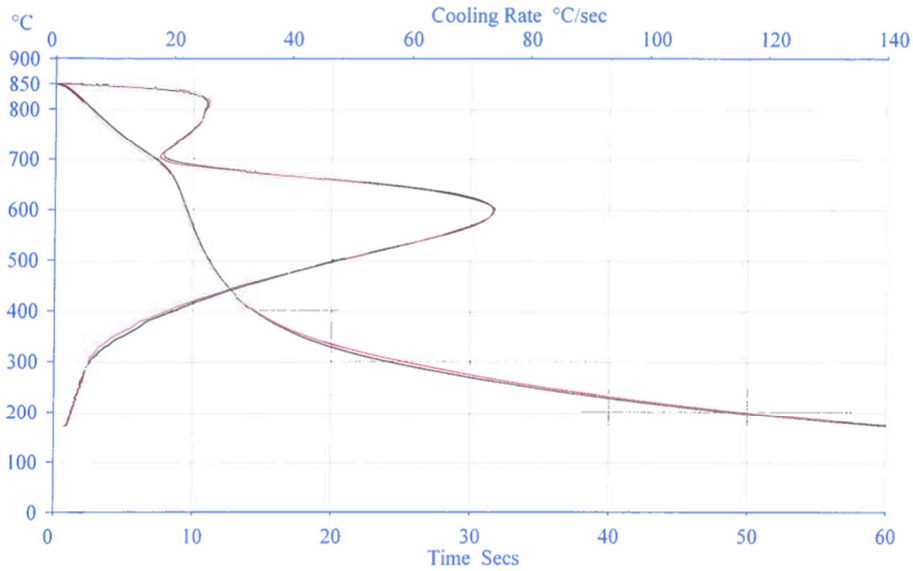
Parameter	Test Method	Typical Value		
		MZ 100	MZ 150	MZ 460
Density at 20°C, g/ml	EN ISO 3675	0.881	0.886	0.890
Kinematic Viscosity at 100°C, mm ² /s	EN ISO 3104	11.27	14.2	28.4
Kinematic Viscosity at 40°C, mm ² /s	EN ISO 3104	102.7	151.1	430.4
Viscosity Index	ISO 2909	95	90	92
Flash point COC, °C	EN ISO 2592	252	268	300
Pour point, °C	ISO 3016	-12	-9	-6
Cooling characteristics	ASTM D 6200			
Maximum rate, °C/sec		73.83	74.98	-
Temp @ max rate,		598.08	617.46	-
Rate @ 300°C, °C/sec		5.93	6.12	-
Time (s) to 600°C		9.438	9.000	
400°C		14.375	14.938	-
200°C		48.938	51.063	
Viscosity, cSt @ 40°C		87.5	146	-

Important note: typical data values do not constitute a specification but are an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved.

Table 2. Cooling curves for the individual quench runs are provided separately.



Quenchalyzer Compare Standard Report



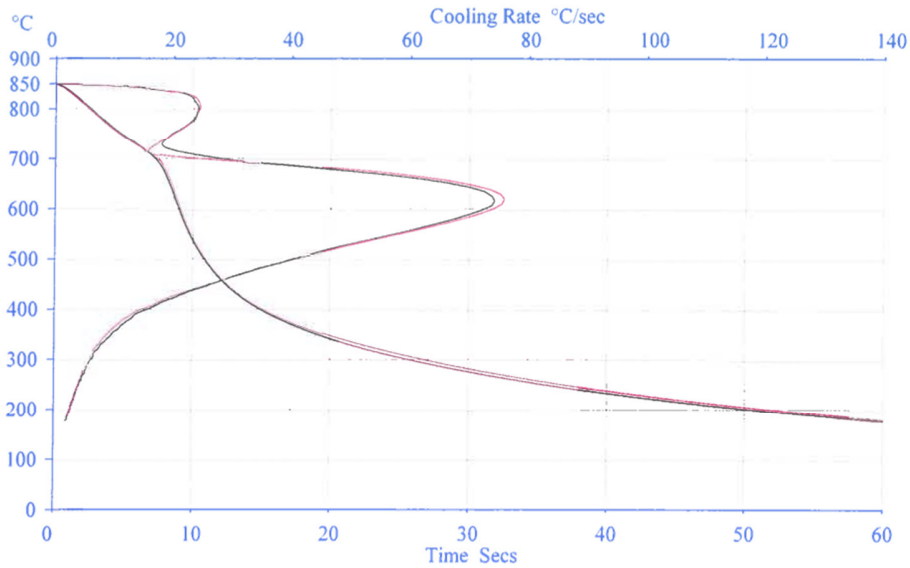
	■	■
Test Reference	T153077	T153077
File Name	MZ-100-01	MZ-100-02
Operator	JOHT	JOHT
Time of Test	13:47:06	14:09:24
Date of Test	Fri 16-Oct-2015	Fri 16-Oct-2015
Type of Test	Media	Media
Test Condition	Static	Static
Agitation Flowrate		
Probe Number	2089-6	2089-6
Test Start Temp	850 °C	850 °C
Media Temp	40 °C	40 °C
Product Name	Unknown	Unknown
Manufacturer	N/A	N/A
Formulation	N/A	N/A
Batch Number	N/A	N/A
Type of Media	Oil	Oil
Maximum Cooling Rate	73.94 °C/sec	73.71 °C/sec
Temp at Maximum Cooling Rate	601.43 °C	594.72 °C
Temp at Start of Boiling Phase		
Time at Start of Boiling Phase		
Temp at End of Boiling Phase		
Time at End of Boiling Phase		
Temp Diff between Start & End		
Cooling Rate at 300 °C	5.98 °C/sec	5.88 °C/sec
Cooling Rate at		
Cooling Rate at		
Time to reach 600 °C	9.500 secs	9.375 secs
Time to reach 400 °C	14.375 secs	14.375 secs
Time to reach 200 °C	48.500 secs	49.375 secs
Time from to		

CSR-1

Quenchalyzer



Quenchalyzer Compare Standard Report



	■	■
Test Reference	T153077	T153077
File Name	MZ-150-01	MZ-150-02
Operator	JOHT	JOHT
Time of Test	14:29:24	14:47:58
Date of Test	Fri 16-Oct-2015	Fri 16-Oct-2015
Type of Test	Media	Media
Test Condition	Static	Static
Agitation Flowrate		
Probe Number	2089-6	2089-6
Test Start Temp	850 °C	850 °C
Media Temp	40 °C	40 °C
Product Name	Unknown	Unknown
Manufacturer	N/A	N/A
Formulation	N/A	N/A
Batch Number	N/A	N/A
Type of Media	Oil	Oil
Maximum Cooling Rate	74.13 °C/sec	75.82 °C/sec
Temp at Maximum Cooling Rate	615.76 °C	619.16 °C
Temp at Start of Boiling Phase		
Time at Start of Boiling Phase		
Temp at End of Boiling Phase		
Time at End of Boiling Phase		
Temp Diff between Start & End		
Cooling Rate at 300 °C	6.17 °C/sec	6.06 °C/sec
Cooling Rate at		
Cooling Rate at		
Time to reach 600 °C	8.875 secs	9.125 secs
Time to reach 400 °C	14.750 secs	15.125 secs
Time to reach 200 °C	50.375 secs	51.750 secs
Time from to		

CSR-1

Quenchalyzer

Prista Oil Holding EAD
www.prista-oil.com



Health, Safety and Handling

Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application.

For more information about product MSDS, terms and conditions for storage and shelf life please visit: www.prista-oil.com

Packages

210L, Bulk