

Goldenstone® MZ

Technical Data Sheet (TDS) Quenching Oils

Description and Application

GOLDENSTONE® MZ oils are designated for cold quenching of various types and contents steels. These products are especially fit for bulk and surface quenching of high and low carbon steels. They are suitable for constructional and industrial alloyed steels. The well balanced additive package ensures high cooling rates in the pearlite and low cooling rates in the martensite intervals respectively. The treated parts are heated up to 800- 1100°C and then they are dipped in the oil. Thus they exhibit superior quenching depth and level of hardness of the material as well as very high cleanliness. The working temperature of the oil is between 300C to 1000C. The higher the working temperature, the shorter the service life of the oil.

GOLDENSTONE® MZ quenching 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

- Low volatility
- Low odor
- Suitable for quenching of small size parts

Specifications

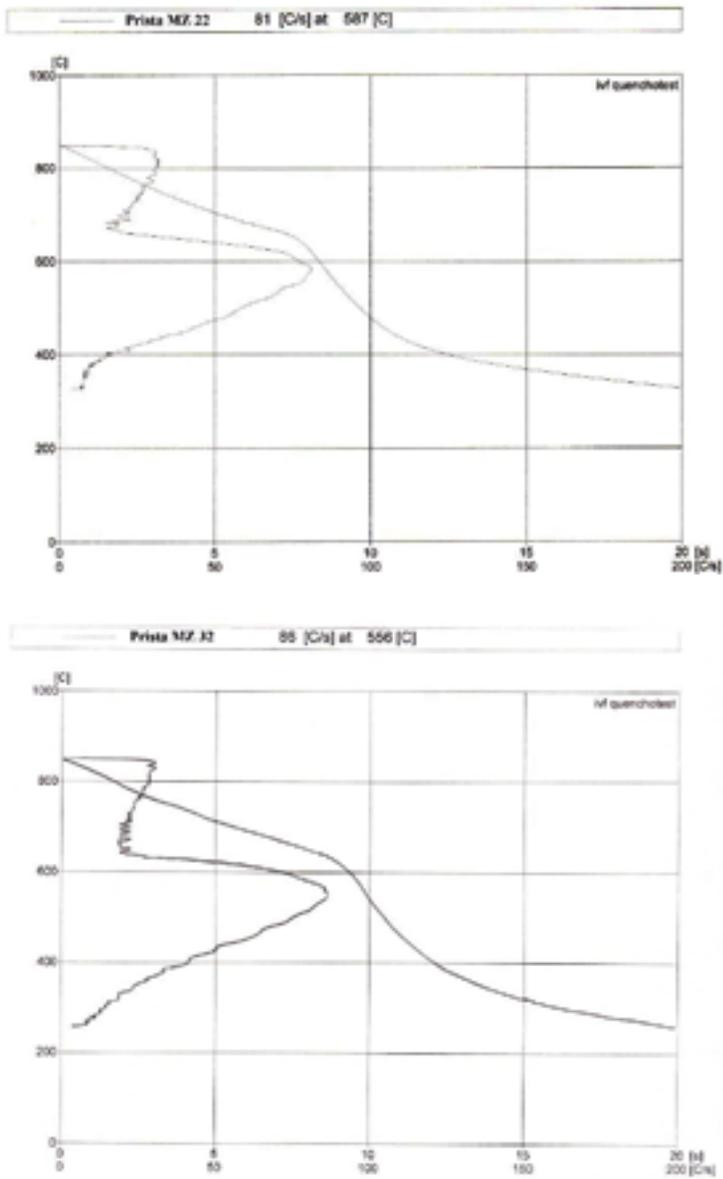
ISO 3448	VG 22, 32, 46
ISO 6743/14	ISO- L-UHA, ISO- L-UHB

Typical Characteristics

Parameter	Test Method	Typical Value		
		MZ 22	MZ 32	MZ 46
Density at 20°C, g/ml	EN ISO 3675	0.850	0.869	0.885
Kinematic Viscosity at 100°C, mm ² /s	EN ISO 3104	21.9	32.6	46.3
Kinematic Viscosity at 40°C, mm ² /s	EN ISO 3104	4.5	5.5	6.9
Viscosity Index	ISO 2909	120	109	107
Flash point COC, °C	EN ISO 2592	204	234	236
Pour point, °C	ISO 3016	-15	-12	-12
Colour	ISO 2049	L1.5	L2.0	L2.5
Quenching Experimental Data at Temperature of 50°C				
Cooling characteristics	Quench Test			
Maximum cooling rate, °C/sec		81	86	-
Temperature @ max rate, °C		587	556	-
Rate @ 400°C, °C/sec		19.5	40	-
Rate @ 300°C, °C/sec		-	17.5	-
Time (s) to reach 600°C		8.2	9.0	-
Time (s) to reach 400°C		12.5	12.0	-

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 **GOLDENSTONE® MZ 22** and **GOLDENSTONE® MZ 32**.



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.goldenstoneoils.com

Packages

210L, Bulk

Version: March 15, 2018