Quenching Oil A 46

Metal Treatment Oil

Product Data Sheet

Customer benefits

- **Effective hardening**
  The viscosity of Quenching Oil A 46 enables fast oil circulation during heat transfer, providing rapid quenching.
- **Low consumption**
  The viscosity of Quenching Oil A 46 means reduced drag-out and fast draining, minimizing oil losses during operation.
- **Long oil life**
  Base oils of inherently high thermal and oxidation resistance provide maximum oil life.
- **Maximizes production throughput**
  High thermal stability minimizes oil cracking and the formation of deposits on metal surfaces, limiting the need for post-quenching cleaning and stain removal operations.

Applications

- Heat treating applications involving quenching or rapid cooling of carbon and alloy steels.
- Heat treatment processes where a uniform hardening of steel with minimum distortion and coloration is desired.
- Slow quenching operations at bath temperatures between 30 and 65°C where maximum hardness is not required.

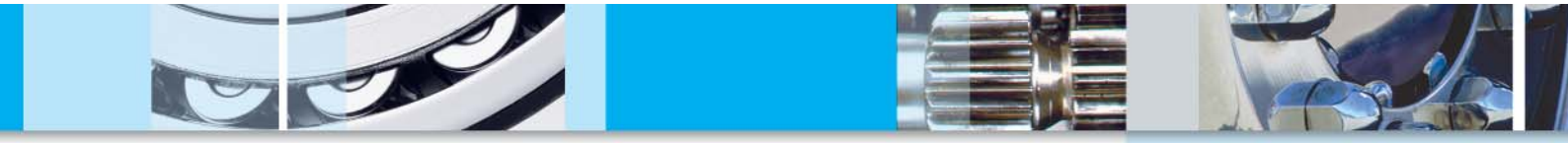
Service Considerations

Heat-treating operations consist of heating and cooling metals and alloys in order to produce the optimum physical properties for a specific end use. Quenching (rapid cooling) from red heat is the most important phase of heat treatment. Hardness, strength, ductility and toughness can be controlled using the appropriate viscosity and quenching techniques.

In order to produce even hardening of the work piece, system agitation should be employed to remove the blanket of oil vapour which may form on the service of the metal which slows the rate of cooling.

Product features:

Highly refined paraffinic based quenching oil for the uniform hardening of carbon and alloy steels.



In operation, general practice is to use approximately twenty litres of Quenching Oil A per kilogram of steel quenched per hour in systems where the oil is circulated through coolers. Without coolers, the ratio of oil to steel quenched should be greater.

Scale and solid contaminants, which product deterioration of hot oil and may interfere with cooling rates, should be regularly removed by filtration. The service life of any quenching oil is dependent on variables such as operating temperature of the bath, contamination and catalytic effect of metal fines or chips in the oil.

Serious external contamination of the oil should be avoided. However, should contamination such as particulate matter, water or other fluids occur, immediate remedial action should be taken. Solid particles may be removed by filtration, while water and other liquid contaminants may be removed by centrifuging, coalescence, vacuum dehydration or other suitable means.

Typical test data

QUENCHING OIL A 46 KEY PROPERTIES	RESULTS
ISO Grade	46
Product Code	534605
Appearance	Pale
Kinematic viscosity at 40°C	46
Kinematic Viscosity at 100°C	6.5
Viscosity Index	95
Flash Point, COC, °C	>204
Pour Point, °C	-6

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Chevron Lubricants; Africa, Middle East and Pakistan.

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.

For more information, go to **www.chevronlubricants.com**

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