



Product Name: Quenching Oil

Application: Metallurgical Heat Treatment

Product Overview

Quenching Oil is a high-performance mineral-based quenching oil engineered for fast and uniform cooling of metal components in heat treatment processes. It offers superior thermal stability, oxidation resistance, and controlled quenching characteristics, ensuring minimal distortion and optimal hardness in treated metals. Designed for industrial applications such as hardening of steel tools and components, **Quenching Oil** ensures consistent and repeatable results in demanding operations.

Application

Quenching Oil is recommended for:

- General-purpose quenching of carbon and alloy steels.
- Heat treatment of automotive parts, tools, and industrial components.
- Open and closed quenching systems with controlled agitation.
- Batch and continuous furnaces.

Performance Benefits

- **Controlled Cooling Rate:** Ensures uniform hardness with minimized distortion or cracking.
- **High Oxidation Stability:** Prolongs oil life and reduces sludge or varnish formation.
- **Excellent Thermal Resistance:** Performs under high thermal stress without breakdown.
- **Clean Quenching:** Low carbon residue ensures cleaner parts and less post-cleaning effort.
- **Versatile Use:** Suitable for a wide range of steels and heat treatment operations.
- **Bright Finish Capability:** Maintains surface appearance of components.

Meets & Approvals

- DIN 51524 (Quenching oils performance spec)
- ISO 6743-14 (Lubricants, quenching oils classification)
- ASTM D5864 (Oxidation & thermal stability of quench oils)
- OEM approvals upon request

Typical Properties

Property	Method	Unit	ISO 22	ISO 32	ISO 46
Density @ 15°C	ASTM D4052	g/ml	0.84	0.86	0.87
Kinematic Viscosity @ 40°C	ASTM D445	cSt	22	32	46
Kinematic Viscosity @ 100°C	ASTM D445	cSt	4.5	6.1	7.4
Flash Point (COC)	ASTM D92	°C	190	215	230
Fire Point	ASTM D92	°C	225	250	260
Pour Point	ASTM D97	°C	-18	-15	-12
Quenching Speed (GM/Ni Alloy)	ISO 9950	sec	Fast	Medium-Fast	Medium





Carbon Residue (RCR)	ASTM D189	% wt	0.05	0.06	0.07
Thermal Stability	DIN 51528	°C	Up to 290	Up to 300	Up to 310

Storage & Handling:

- Store in a cool, dry place away from direct sunlight and moisture.
- Avoid contamination with water and other foreign materials.
- Maintain proper ventilation when handling the product.

Health, Safety, and Environmental Guidelines:

- Prolonged and repeated contact with oil may cause skin disorders. Avoid direct skin contact.
- In case of contact, wash affected area with soap and water immediately.
- Do not discharge used oil into drains or the environment. Dispose of it at an authorized collection point.
- Refer to the Safety Data Sheet (SDS) for more details

