

PRODUCT DESCRIPTION INFORMATION

Designed to lubricate the internal, high-speed moving parts of the down-the-hole (DTH) hammer and protect them from wear, heat, rust, and corrosion.

Primary Functions

Lubrication and Anti-Wear Protection: Hammer oil significantly reduces friction between the rapidly moving internal components (like the piston and wear sleeve) to prevent scoring, seizing, and premature equipment failure.

Corrosion Prevention: It contains rust and corrosion inhibitors that protect metal parts, which is especially important given the constant exposure to moisture and water during drilling operations.

Sealing: The oil helps maintain an effective air seal within the pneumatic system, ensuring efficient energy transfer from the compressed air to the drill bit for powerful impacts on the rock face.

Heat Dissipation: Hammer drilling generates significant heat due to high pressures and impact frequency; the oil helps manage and dissipate this heat, preventing overheating issues.

Adhesion and Film Strength: The oil is designed with tackifiers to form a tenacious, highly resistant lubricating film that "clings" to metal surfaces and resists being washed off by water or flung off by centrifugal forces.

Application

The hammer oil is typically injected into the compressed air line by a dedicated lubricator system on the drill rig, ensuring a consistent supply to the DTH hammer at the bottom of the borehole. The appropriate viscosity grade of the oil is selected based on ambient temperature and specific drilling conditions to maximize performance and protect the equipment.

Using the correct hammer oil is crucial for extending the service life of drilling equipment, maintaining optimal operational efficiency, and reducing costly downtime in demanding mining and mineral exploration environments.

All ingredients are identified under CAS regulations.

The product meets the international standards and regulations as listed below:

- ASTM (American Society for Testing and Materials)
- CAS (Chemical Abstracts Service)
- TSCA (United States Toxic Substances Control Act)
- EINECS (EU Inventory Existing Chemical Substances)
- DSL (Canadian Domestic Substances List)
- IECSC (China Inventory of Existing Chemical Substances)
- NZIOC (New Zealand Inventory of Chemicals)
- PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- KECI (Known Existing and Evaluated Chemical Substances)
- AICS (Australian Inventory of Chemical Substances)
- IATA / ADR / ICAO / IMDG / CODE / REACH
- OSHA / NIOSH

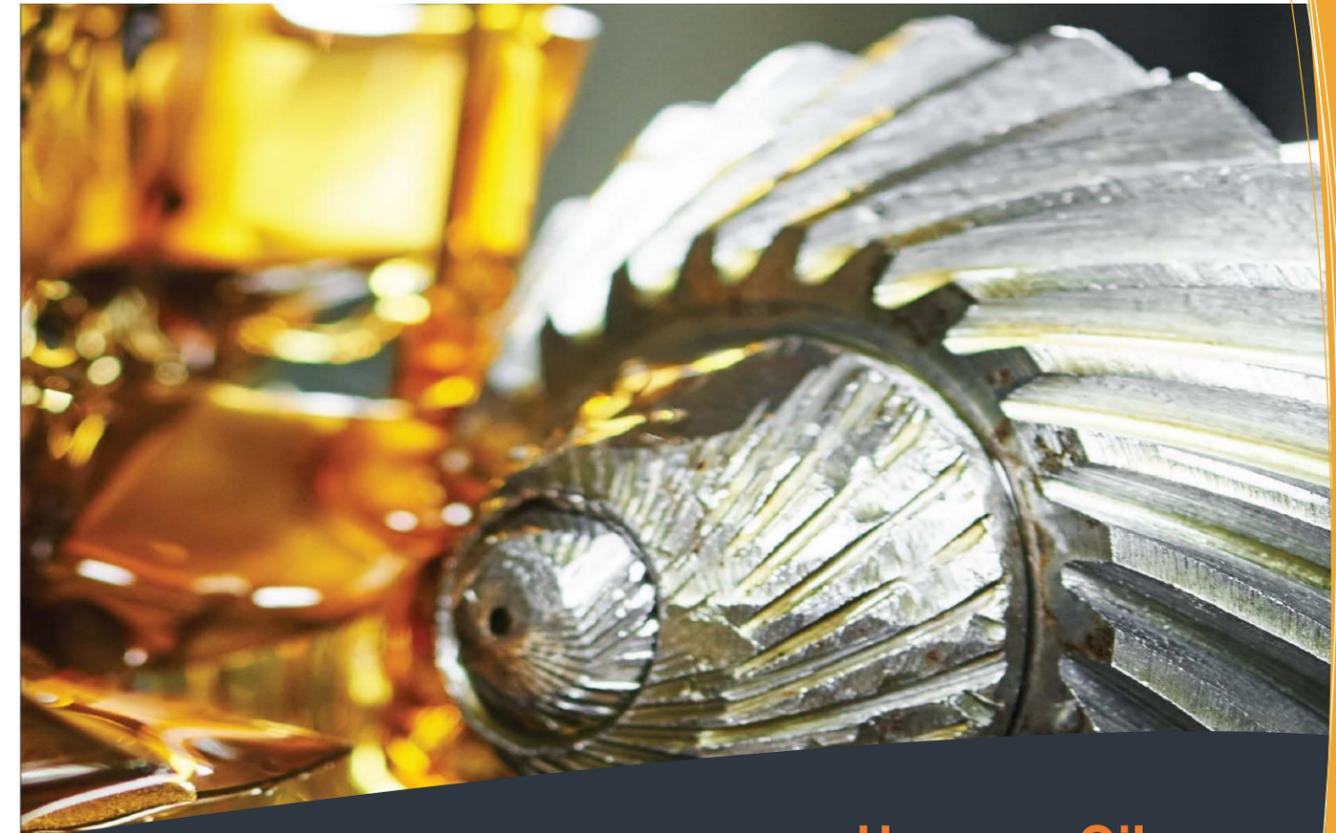
ERA Oilfield Services

lubricants

66/69 Moo 4, Soi 17, Phayun, Ban
Chang, Rayong, Thailand
21130
Phone: +66 8 4345 8730
www.info@eraoilfieldservices.com



ERA OILFIELD
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Hammer Oil
320

ERA - Hammer Oil 320

Product Information

- Cost effective
- Reddish Brown in colour
- Easy Application
- Non Hazardous
- Non flammable under standard conditions
- High Pressure Applications
- Safely handled
- Safely stored
- Chemically stable

Designed to lubricate the internal, high-speed moving parts of the down-the-hole (DTH) hammer and protect them from wear, heat, rust, and corrosion.

Designed with ease of application in mind. ERA Hammer Oil 320 is supplied as standard in square 20L drums.

Ecological Data

- Aquatic - may cause harm due to extended exposure
- Bioaccumulation - low effects
- Soil Mobility - No data
- Environmental release - No data

Transport Data

- Air transport (ICAO/IATA/DGR) - not regulated
- Road Transport (UN-ADR) - not regulated
- Sea Transport (IMDG - CODE) - not regulated
- Non hazardous in transit below flash point

Technical Data

Composition

- Distillates (petroleum), hydrotreated heavy paraffinic >15 %
- Residual oils (petroleum), hydrotreated <80 %
- Additive Package > 5 %

CAS number

- Distillates (petroleum), hydrotreated heavy paraffinic 64742-54-7
- Residual oils (petroleum), hydrotreated 64742-57-0
- Additive Package - not stated

GHS hazard class

- Non Hazardous Substance or mixture

Physical and chemical properties

- Reddish Brown Liquid (ASTM D156)
- Odour characteristic
- Density $g/cm^3 = 0.89$
- Kinematic Viscosity at 40C = 288 - 352 (ASTM D445)
- Pour Point = -21 C (ASTM D2265)
- Solubility = Insoluble in water
- Flash Point = 230 C minimum (ASTM D92)
- Operating Temperature = -20 to +180 C (ASTM D4084)

Chemical Stability

- Chemically stable under normal conditions.
- Non reactive under recommended storage and handling conditions. Avoid excessive heat. Ensure cool, dry and ventilated area.
- Incompatible with strong acids, strong oxidising agents, and strong bases
- Do not store in direct sunlight
- Do not expose to open fire
- Products on decomposition: CO, CO₂, water vapor, oxide of sulfur / nitrogen / phosphorus / boron

Toxicological Information

- Oral Toxicity >4000mg/kg body weight is acute. May cause vomiting.
- Skin Toxicity >2000mg/kg body weight is acute. Cause irritation.
- Eye Irritation may cause severe irritation under Standard Draize Testing
- Respiratory Sensitisation Effects - None
- Skin Sensitisation Effects - May cause itching and irritation.
- Carcogenicity Effects - None
- Reproductive Toxicity - None



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CONTACT US

CONTACT US VIA WEB:

WWW.ERAOILFIELDSERVICES.COM

CONTACT US VIA EMAIL:

INFO@ERAOILFIELDSERVICES.COM
JIM.REID@ERAOILFIELDSERVICES.COM

CONTACT US VIA PHONE:

+66 8 4345 8730