

ORN SYN HYDRAULIC ISO 320 PN HYD320

Mineral-based hydraulic fluid for heavy-duty industrial service

Product Type	ISO Grade	Document Type	Application
Mineral hydraulic oil	ISO 320	TDS	Heavy-duty hydraulics

Product Description

ORN SYN Hydraulic ISO 320 is a mineral-based hydraulic fluid developed for industrial hydraulic equipment and associated lubrication systems. The formulation uses additive technology designed to provide wear protection, oxidation resistance, corrosion control, and foam suppression during operation.

Applications

- Hydraulic systems operating under elevated pressures, changing operating temperatures, and continuous-duty applications.
- Hydraulic equipment associated with Vickers, Gerotor, Gresen, HPM, Denison, Cessna, Hydreco, and Worthington where ISO VG 320 hydraulic oil is specified.
- Industrial hydraulic installations, reduction gears, bearing lubrication systems, workshop machinery, compressed air systems, and rotary screw compressors where compatible with manufacturer requirements.

Key Features

- Helps reduce wear in hydraulic pumps, valves, and associated components.
- Supports resistance to oxidation and lubricant degradation.
- Assists in protecting metal surfaces against corrosion.
- Helps control foam formation for consistent hydraulic performance.
- Maintains viscosity characteristics suitable for heavy-duty industrial service.

Environmental Benefits

- Oxidation-resistant performance helps maintain lubricant condition during normal service intervals and may contribute to longer oil life.
- Anti-wear protection can help reduce component wear, which may support extended equipment service life and reduced maintenance requirements.
- Foam control characteristics assist in maintaining stable hydraulic performance and can help minimise avoidable lubricant losses.
- Corrosion protection helps preserve hydraulic system components operating in industrial environments.
- Stable viscosity characteristics support consistent lubrication performance in heavy-duty hydraulic applications.
- Used oil can be collected through approved recovery or recycling programmes where suitable facilities and local regulations exist.

Environmental Note

Used lubricant should be collected, stored, and disposed of responsibly. Do not allow the product to enter drains, sewers, surface water, or groundwater. Dispose of used oil and contaminated materials in accordance with applicable environmental regulations.

Performance Profile

Specifications

- AFNOR NF E 48-603 HM
- AGMA 9005-E02-RO
- DIN 51524 Part 2
- SAE MS1004
- EATON E-FDGN-TB002-E
- EATON VICKERS M-2950-S
- AFNOR NF E 48-690
- AIST 126, US Steel
- ISO 20763
- SEB 181222
- EATON M-2950-S, 35VQ25 pump test
- GM LS2 AW hydraulic oil
- AFNOR NF E 48-691
- AIST 127, US Steel
- JCMAS HK P041
- DENISON HF-2
- EATON VICKERS I-286-S

Typical Properties

Property	Method	Unit	Typical Value
Density at 15°C	ASTM D4052	g/ml	0.898
Kinematic viscosity at 40°C	ASTM D445	mm ² /s	316
Kinematic viscosity at 100°C	ASTM D445	mm ² /s	23.9
Viscosity index	ASTM D2270	-	96
Pour point	ASTM D6892	°C	-12
Flash point COC	ASTM D92	°C	260

Typical Values

Typical characteristics are average results and should not be treated as fixed sales specifications.

Safety Precautions

Important

Read the latest Safety Data Sheet before handling or using the product. The information below is general handling guidance and does not replace the SDS.

Handling

- Read and understand the latest Safety Data Sheet before use.
- Avoid prolonged or repeated skin contact.
- Avoid contact with eyes.
- Do not ingest the product.
- Wash hands thoroughly after handling.
- Use the product only in applications for which the viscosity grade and performance profile are suitable.

Personal Protective Equipment

- Wear suitable chemical-resistant gloves during handling.
- Use safety glasses or goggles where splashing may occur.
- Wear appropriate protective clothing to minimise skin exposure.
- Ensure adequate ventilation where oil mist may be generated

Storage

- Store in original, tightly sealed containers.
- Keep containers in a cool, dry, and well-ventilated location.
- Protect from moisture, contamination, and direct sunlight.
- Keep away from sources of ignition and excessive heat.
- Prevent ingress of water, dirt, dust, or other contaminants.

Spill Response

- Stop leaks where it is safe to do so.
- Contain spills immediately to prevent environmental release.
- Absorb spilled product using sand, earth, or other suitable inert absorbent materials.
- Dispose of recovered material and contaminated absorbent according to local regulations.
- Clean affected surfaces thoroughly, as oil spills may create slip hazards.

First Aid Measures

- Skin contact: wash thoroughly with soap and water.
- Eye contact: rinse immediately with clean water for several minutes. Seek medical attention if irritation persists.
- Inhalation: move to fresh air if exposed to oil mist or vapour.
- Ingestion: do not induce vomiting. Obtain medical advice immediately.

General Note

Product characteristics may be updated as part of ongoing technical development and product improvement programmes. Users should verify product suitability for the intended application and consult the latest Safety Data Sheet for comprehensive information regarding hazards, exposure controls, storage, transport, first aid measures, and disposal procedures.