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Technical Data Sheet

ORN SYN HYDRAULIC HV ISO 15
PN HYD015

High-viscosity-index hydraulic oil for variable temperature operation

Product Type	ISO Grade	Document Type	Application
Paraffinic hydraulic oil	HV ISO 15	TDS	Hydraulic circuits

Product Description

ORN SYN Hydraulic HV ISO 15 is a high-viscosity-index, paraffinic hydraulic oil formulated for hydraulic circuits. It is designed to support clean system operation by helping limit deposit formation, while also providing good filterability, water separation, and rapid air release performance.

Applications

- Hydraulic systems operating under variable temperatures and high-pressure service.
- Gearboxes that require a high-viscosity-index oil with mechanical and chemical stability.
- Regulation systems and hydraulic steering applications where this viscosity grade and performance profile are suitable.

Key Features

- Anti-wear and oxidation protection for reliable equipment operation.
- Foam control to support stable hydraulic response.
- Strong viscosity stability across varying temperature conditions.
- Helps reduce deposit formation and supports system cleanliness.
- Good filterability, water separation, and rapid air release characteristics.

Environmental Benefits

- High viscosity index performance supports consistent operation across changing temperatures, helping reduce unnecessary system stress.
- Good oxidation stability can help extend lubricant service life under normal operating conditions.
- Anti-wear protection may help extend hydraulic component life, reducing maintenance waste and replacement part usage.
- Cleanliness-supporting performance helps limit deposit formation, which may reduce system contamination and maintenance requirements.
- Good water separation and air release characteristics support efficient hydraulic system operation.
- Suitable for collection through approved used-oil recovery or recycling routes where local regulations and facilities allow.

Environmental Note

Used oil must be handled responsibly. Do not discharge into drains, soil, surface water, or groundwater. Store used oil in suitable containers and dispose of it through authorised waste oil collection or recycling services in accordance with local regulations.

Performance Profile

Specifications

- AFNOR NF E 48-603 HV
- AFNOR NF E 48-690
- AFNOR NF E 48-691
- AGMA 9005-E02-RO
- AIST 126, US Steel
- AIST 127, US Steel
- ASTM D6158 HV
- DIN 51524 Part 3
- ISO 20763
- JCMAS HK P041
- SAE MS1004
- SEB 181222
- VICKERS I-286-S3
- DENISON HF-2
- EATON E-FDGN-TB002-E
- EATON M-2950-S, 35VQ25 pump test
- EATON VICKERS I-286-S
- EATON VICKERS M-2950-S
- GM LS2 AW hydraulic oil

Typical Properties

Property	Method	Unit	Typical Value
Density at 15°C	ASTM D4052	g/ml	0.841
Kinematic viscosity at 40°C	ASTM D445	mm^2/s	15.8
Kinematic viscosity at 100°C	ASTM D445	mm^2/s	4.1
Viscosity index	ASTM D2270	-	172
Acid number, colorimetric	ASTM D974	mg KOH/g	0.28
Pour point	ASTM D6892	°C	-39
Flash point COC	ASTM D92	°C	162

Typical Values
Typical characteristics are average values 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

- Avoid prolonged or repeated skin contact.
- Avoid contact with eyes.
- Do not ingest.
- Wash hands thoroughly after handling, especially before eating, drinking, or smoking.
- Use only in applications where the product viscosity grade and performance profile are suitable.

Personal Protective Equipment

- Wear suitable protective gloves when handling the product.
- Use safety glasses or goggles where splashing may occur.
- Wear protective work clothing to reduce skin exposure.
- Ensure adequate ventilation if oil mist may be generated during system operation.

Storage

- Store in the original, tightly closed container.
- Keep containers in a cool, dry, and well-ventilated area.
- Protect from direct sunlight, excessive heat, moisture, and contamination.
- Keep away from open flames, sparks, and other ignition sources.
- Prevent water, dust, dirt, or other foreign matter from entering the container.

Spill Response

- Stop the leak if it is safe to do so.
- Contain spills immediately to prevent environmental contamination.
- Use sand, earth, or another suitable inert absorbent material to collect spilled product.
- Dispose of contaminated absorbent and recovered oil in accordance with local regulations.
- Clean affected surfaces thoroughly, as spilled oil may create a slip hazard.

First Aid Measures

- Skin contact: wash affected skin with soap and water.
- Eye contact: rinse carefully with clean water for several minutes. Seek medical advice if irritation continues.
- Inhalation: move to fresh air if exposed to oil mist or vapour.
- Ingestion: do not induce vomiting. Seek medical advice promptly.

General Note

Product characteristics may be updated as part of ongoing technical development. Users should confirm product suitability for the intended application and refer to the latest Safety Data Sheet for detailed information on hazards, handling, storage, transport, exposure controls, first aid, and disposal.