Product Data Sheet

NATIONAL | Premium Rust and Oxidation Oils

Product Description

NATIONAL Premium Rust and Oxidation (R&O) Oils are formulated to provide superior oxidation stability, rust/corrosion protection, minimum foam, fast air release, rapid water separation, and excellent thermal stability.

NATIONAL Premium R&O oils are a specific type of industrial lubricant designed with rust and oxidation inhibitors. These oils are used in systems where the primary concern is protecting metal surfaces from rust and oxidation rather than handling extreme pressure or heavy loads. The thermal and oxidation stability of these lubricants, due to their high level of refinement, has been further enhanced by their unique ashless, zinc-free formulation.

Industry and OEM specifications [1]

- DIN 51524-1, DIN 51515-1
- Siemens TLV 901304
- British Standard 489-1999
- GEK 28143b, GEK 46506D
- Parker Denison HF-0 Bench Test
- FIVES (formally MAG) P-38, P-54, and P-55
- Alstom HTGD 90117

Applications [2]

NATIONAL PREMIUM R&O Oils be used as a general purpose machine oil for shop use when R&O type oil is needed or is recommended. Oils ISO 32 through ISO 150 are recommended for use in most electric motor bearings, air compressors, gears, hydroelectric turbines, steam turbines, marine turbines, and non-heavy duty hydraulic systems where OEM recommends R&O type oils.

Features

- ✓ Outstanding rust protection of metal surfaces due to the use of an effective rust and corrosion inhibitor
- ✓ Fast air release minimizes pump cavitation in systems with high circulation rates
- ✓ Excellent water separation (demulsibility) that facilitates water removal
- ✓ Environmentally friendly due to its ashless (zinc-free) formulation

Technical Data

ISO Grade		22	32	46	68	100
Product Number		07-505022	07-005022	07-001528	07-001232	07-001233
SDS Number		S180	S181			
Viscosity @ 40°C, cSt	D445	23.65	29.59	45.70	64.31	107.2
Viscosity @ 100°C, cSt	D445	4.368	5.425	6.908	8.286	11.75
Viscosity Index	D2770	86	120	107	97	97
Specific Gravity @ 60°F	D4052	0.8476	0.8483	0.8637	0.8720	0.8742
Color ASTM	D1500	L0.5	L1.0	0.5	1.0	L0.5
Pour Point, °C	D6749	-42	-33	-33	-36	-30
Flash Point, °C	D92	202	221	231	249	262
Demulsibility	D1401	40-40-0 (20')	40-40-0 (10')	40-40-0 (30')	40-40-0 (30')	40-40-0 (20')
Rust, (A & B, 24 hr.)	D665	Pass	Pass			
RPVOT, min	D2272	700	700	650	500	660

1. *Always follow your operator's manual to confirm that the selected product is consistent with the original equipment manufacturer's recommendation and maintenance practices*
2. *Do not use these R&O oils in large and high temperature gas turbines or in high pressure systems in the vicinity of flames, sparks and hot surfaces. R&O Oils are NOT suitable for applications requiring Extreme Pressure (EP) additives, such as heavy-duty gear systems or high-load bearings.*

The recommended shelf life for these oils is typically 48 months from manufacturing date when stored properly in the original sealed containers.

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Pinnacle Oil believes the information presented in this specification is accurate at the time written and is based upon internally generated information and information as presented by its vendors. No representation, warranty, or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.

Technical Data (cont.)

ISO Grade		150	220	320	460
Product Number		07-001234	07-001235	07-001236	07-005460
SDS Number		S181			
Viscosity @ 40°C, cSt	D445	154.5	238.5	349.9	505.6
Viscosity @ 100°C, cSt	D445	14.95	20.00	25.73	32.85
Viscosity Index	D2770	96	97	97	97
Specific Gravity @ 60°F	D4052	0.8817	0.8832	0.8880	0.8910
Color ASTM	D1500	L2.0	L2.0	L3.5	4.5
Pour Point, °C	D6749	-15	-9	-9	-6
Flash Point, °C	D92	266	271		
Demulsibility	D1401	40-40-0 (30')	39-39-2 (50')	40-37-3 (45')	40-37-3 (45')
Copper Corrosion 3h at 100°C, max	D130	1A			
Rust, (A & B, 24 hr.)	D665	Pass			
RPVOT, min	D2272	500	310	300	300

1. *Always follow your operator's manual to confirm that the selected product is consistent with the original equipment manufacturer's recommendation and maintenance practices*
2. *Do not use these R&O oils in large and high temperature gas turbines or in high pressure systems in the vicinity of flames, sparks and hot surfaces. R&O Oils are NOT suitable for applications requiring Extreme Pressure (EP) additives, such as heavy-duty gear systems or high-load bearings.*

The recommended shelf life for these oils is typically 48 months from manufacturing date when stored properly in the original sealed containers.

The product described above is designed for a specific use and may not be valid for other uses not specified in our specification sheet or in applications not requiring this specific product. Pinnacle Oil believes the information presented in this specification is accurate at the time written and is based upon internally generated information and information as presented by its vendors. No representation, warranty, or guarantee is made as to its accuracy or completeness. We do not accept any liability for any loss or damage that may occur from the use of this information.