

APEX ROCK DRILL OIL 460 SERIES

High Performance Pneumatic Rock Drill & Tool oils



Product Data Sheet

Product Description

APEX ROCK DRILL OIL 460 series of lubricants are supreme performance Pneumatic Rock Drill & Tool oils, formulated with high quality base stocks fortified with sulfur-phosphorus additive system. They are designed to work efficiently in pneumatically operated rock drills in underground and surface mining operations. They offer optimum adhesiveness and emulsification with water to avoid adverse effects of rust and corrosion. Their excellent wear protection property helps in reducing component wear and maintains adequate lubrication film to carry high loads.

Features & Benefits

- High thermal & oxidation stability protects against deposit formation and oil thickening, especially in critical areas of air driven tools where elevated temperatures are found.
- Excellent wear protection and outstanding lubrication performance, especially in percussion tools including rock drills operating under severe conditions.
- Excellent corrosion protection even during severe water ingress, for longer component life.
- Compatible with hoses, seals and gaskets, leads to minimum leakage and reduced contamination.
- Excellent demulsifying properties, low foaming and good air release characteristics.

Application

APEX ROCK DRILL OIL 460 series are suitable for use in Highway construction, Building construction and underground & surface mining operations.

- Oil mist lubrication systems and air tools.
- Gear and bearing lubrication applications where water ingress cannot be avoided.
- Percussion type Pneumatic tools, including those used for rock drills.

Typical Characteristics

Apex Rock Drill Oil	Test Method	Units	68	100	150	220	320	460
ISO Viscosity Grade	ISO 3448	-	68	100	150	220	320	460
Density @ 15 °C	ASTM D 4052	gm/cc	0.880	0.887	0.894	0.898	0.900	0.905
Viscosity @ 40 °C	ASTM D 445	cSt	68.9	100.8	150.2	220.5	320.9	460.9
Viscosity @ 100 °C	ASTM D 445	cSt	8.76	11.17	14.62	18.85	24.10	30.54
Viscosity Index	ASTM D 2270	-	98	95	95	95	95	95
Pour Point	ASTM D 97	°C	-27	-24	-24	-21	-18	-12
Flash Point (COC)	ASTM D 92	°C	218	226	238	248	256	268
Copper Strip Corrosion	ASTM D 130	-	1B	1B	1B	1B	1B	1B
Rust Test-Proc B	ASTM D 665	-	Pass	Pass	Pass	Pass	Pass	Pass
Foam Seq I,II,III	ASTM D 892	ml/ml	0/0	0/0	0/0	0/0	0/0	0/0

The above figures are typical of blends with normal production tolerance and do not constitute a specification.

Refining/stability			
Appearance	Visual	Transparent Clear & odourless liquid free from suspended impurities	Transparent Clear & odourless liquid free from suspended impurities
Neutralisation Value / Acidity, mg KOH/g, Max	IEC 62021-1 / IEC 62021-2	0.01	< 0.001
Interfacial tension, mN/m, Min	EN 14210 / ASTM D 971	40	48
Total Sulphur Content, % , Max	ISO 14596	0.05	< 0.01
Corrosive Sulphur, silver strip, 100°C, 18 hrs	DIN 51353	Non Corrosive	Non Corrosive
Cu Strip & Paper 150 °C, 72 hrs	IEC 62535	Non corrosive	Non corrosive
Dibenzylsulphide (DBDS)	IEC 61297-1	Not Detectable	Not Detected
Antioxidant Additives, % Max	IEC 60666	0.3 – 0.40	0.3
2-Furfural content, mg/kg, Max	IEC 61198	0.05	Nil
Performance			
Oxidation Stability, 500 hrs			
- Total acidity, mg KOH/g, Max	IEC 61125 : 1992 Method C	0.30	0.02
- Sludge, %, Max		0.05	< 0.01
- DDF at 90°C, Max		0.05	0.005
Health, safety and environment (HSE)			
Flash Point, PMCC, °C , Min	ISO 2719	135	150
Polycyclic Aromatics (PCA) content, % Max	BS 2000 (P: 346)	3.00	< 1 %
Polychlorinated biphenyls (PCB) content	IEC 61619	Not Detectable	Not Detected
Bio Degradability			
OECD 301 B, CO ₂ Evolution Test	OECD 301B	-	“Readily Biodegradable” (> 60 %)
Conforms to Standards			
IEC 60296:2012 Table 2 : I – High Grade requirements		✓	✓
ASTM D3487 Type II		✓	✓

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Packaging Options:

APEX Elect Oil IH Inhibited Transformer oils are offered in 200-210 litres of steel drums and also in bulk in Flexi bags or ISO tanks.

Storage Precautions:

Extreme care is taken while packing these products, including filling of drums in inert atmosphere, as Electrical Insulating oils / Transformer oils are very sensitive to very minute concentrations of contaminants, such as moisture, particulate matter, fibers, etc. Hence, care should be taken to store APEX Elect Oil IH Inhibited Transformer oil in a clean and dry condition. It is strongly recommended that all storage tanks / drums be maintained such that oil is not in contact with atmospheric air. Also these oils should always be stored indoors in climate controlled environments.