

Mobil Rarus PE R- A/B/C/D 220

Ethylene compressor oil

Product Description

Mobil Rarus PE R-A, R-B, R-C and R-D 220 are viscous, colourless oils of ISO viscosity grade 220, specifically designed for the lubrication of very high pressure ethylene compressors. They are based on high purity, saturated hydrocarbon oils (white oils), supplemented with friction reducing and free-radical trap additives at adapted treatment levels.

In the production of polyethylene, high-speed reciprocating compressors are used to compress ethylene gas to high pressures up to 3000bar. In these applications, the compressor lubricant can come in contact with the polyethylene in the polymerization process. Under these circumstances, the lubricating oil required must be of acceptable purity and be known not to modify the properties of the polyethylene.

Mobil Rarus PE R-A, R-B, R-C and R-D 220 provides good lubrication of the compressor cylinders and are compatible with the polyethylene process. They can be used to produce polyethylene where food contact can occur such as in food packaging. Mobil Rarus PE R-A, R-B, R-C and R-D 220 have good thermal and chemical stability. They may be used up to 3000 bars, according to injection system and temperature. Reactive gas components and impurities may react into the compressor itself, with formation of sludge, which may lead to lubrication failure. This is prevented by the additives, which also reduce bushing wear.

Mobil Rarus PE R-A 220 is recommended with highly reactive gas components

Mobil Rarus PE R-B 220 is recommended for low reactivity impurities. Its additives display low volatility and migration. It is well suited for fatty food contacts applications.

Mobil Rarus PE R-C 220 is recommended with intermediate reactivity gases.

Mobil Rarus PE R-D 220 is recommended for specific highly severe, high pressure applications.

Features and Benefits

Mobil Rarus PE R-A, R-B, R-C and R-D 220 are specifically engineered to help provide long and trouble-free compressor performance. They meet USDA requirements where they can be used to lubricate equipment where food contact is possible.

Mobil Rarus PE R-A, R-B, R-C and R-D 220 compressor oils offer the following benefits:

Features	Advantages and Potential Benefits
High neutrality and low reactivity components	Do not interfere with catalytic polymerization reactions
High purity components	Do not induce any discolouration or odor in the final polymer
Components approved for food contact	Suitable for the manufacture of polymers for food packaging



Features	Advantages and Potential Benefits
Low polarity	Suitable in the manufacture of polymers for electrical insulation and thin bags (plastic bags)
Premium quality products	Reduced maintenance shutdowns

- Suitable for applications where they can come in contact with food
- High purity levels so that they will not modify properties of polyethylene
- Excellent cylinder lubricant helping to prolong compressor life
- Good thermal and chemical stability resulting in lower deposits and longer oil life

Applications

Mobil Rarus PE R6A, R-B, R-C, R-D 220 have the following applications:

- High pressure ethylene compressors
- Compressors used in the production of polyethylene used in food contact applications

Specifications and Approvals

MOBIL RARUS PE R-A, R-B and R-D 220 meets or exceeds the following industry specifications*

FDA 21 CFR 178.3570	X
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Typical Properties

Test Method	Test	Units	Mobil Rarus PE R-A 22	R-B 220	R-C 220	R-D 220
ISO Viscosity grade			220	220	220	220
Density at 15°C	ASTM D4052	Kg/m ³	880	875	878	
Kinematic viscosity at 40°C	ASTM D445	mm ² /s	220	226	226	220
Colour, Saybolt	ASTM D156		+21	+24	+24	
Flash Point	ASTM D92	°C	210	210	210	200
Pour Point	ASTM D97	°C	- 18	- 18	- 18	- 9
Acid number	ASTM D974	mg KOH/g	6.1	6.1	6.1	
Water content	ASTM D6304	ppm	50	50	50	

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet or will be provided by seller to customers if and as legally required. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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