



**Mobil Rarus™ PE R 220**  
Mobil Industrial , Luxembourg  
Ethylene compressor oil

**Product Description**

Mobil Rarus™ PE R 220 is a premium ethylene compressor oil of ISO viscosity grade 220. It is a polymer thickened, food-grade white oil based lubricant used for lubrication of ethylene hyper compressors.

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 have acceptable purity and be known not to modify the properties of the polyethylene.

Mobil Rarus PE R 220 provides good lubrication of the compressor cylinders and is compatible with the polyethylene process. It can be used to produce polyethylene where food contact can occur such as in food packaging. Mobil Rarus PE R 220 offers good thermal and chemical stability.

**Features and Benefits**

Mobil Rarus PE R 220 is specifically engineered to help provide long and trouble-free compressor performance. Mobil Rarus PE R 220 is NSF H1 registered and meets the requirements of FDA regulation 21CFR 178.3570 for lubricants with potential for incidental food contact. Mobil Rarus PE R 220 also meets the requirements of FDA regulation 21 CFR 177.1520 for processing aids used in the production of olefin polymers intended for use in contact with food.

Mobil Rarus PE R 220 compressor oil offers the following benefits:

- Suitable for applications where it can come in contact with food
- High purity levels so that it 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

| 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                                    |
| Low polarity                                  | Suitable in the manufacture of polymers for electrical insulation and thin bags (plastic bags) |
| Premium quality product                       | Reduced maintenance shutdowns                                                                  |

**Applications**

Mobil Rarus PE R 220 has the following applications

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

**Specifications and Approvals**

|                                                           |
|-----------------------------------------------------------|
| <b>This product is registered to the requirements of:</b> |
| NSF H1                                                    |

|                                                    |
|----------------------------------------------------|
| This product meets or exceeds the requirements of: |
| FDA 21 CFR 177.1520                                |
| FDA 21 CFR 178.3570                                |
| Burckhardt VSB 1001180                             |

Properties and Specifications

| Property                                      |          |
|-----------------------------------------------|----------|
| Grade                                         | ISO 220  |
| Acid Number, mgKOH/g, ASTM D974               | 0.05     |
| Density @ 15 C, kg/l, ASTM D4052              | 871      |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 210      |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445  | 227      |
| Pour Point, °C, ASTM D97                      | - 12 max |
| Saybolt Color, ASTM D156                      | + 27 min |
| Water Content, mg/kg, ASTM D6304              | 50       |

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.as>  
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