

Esterex™ P81

Synthetic Fluid

Product Description

Esterex™ Phthalate Esters are API category Group V fluids. These esters have excellent low-temperature properties, good lubricating properties and low volatilities. Esterex™ Phthalate Esters can be used as sole basestocks or blendstocks with other synthetic fluids in many automotive and industrial lubricant applications. These esters are ideal for use in air compressor applications, where low viscosity indices are acceptable and low-cost, clean operation is desirable.

General

| | | | |
|---------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Availability ¹ | <ul style="list-style-type: none"> Africa & Middle East Asia Pacific | <ul style="list-style-type: none"> Europe Latin America | <ul style="list-style-type: none"> North America |
| Revision Date | <ul style="list-style-type: none"> 07/01/2019 | | |

| Basics | Typical Value (English) | Typical Value (SI) | Test Based On |
|-----------------------------------------------|-------------------------|--------------------------|----------------------|
| Specific Gravity (68.0°F (20.0°C)) | 0.955 | 0.955 | ASTM D4052 |
| Appearance | Bright & Clear | Bright & Clear | Visual |
| Color | < 0.5 | < 0.5 | ASTM D1500 |
| Kinematic Viscosity | | | ASTM D445 |
| 212°F (100°C) | 8.3 cSt | 8.3 mm ² /s | |
| 104°F (40°C) ² | 84 cSt | 84 mm ² /s | |
| -13°F (-25°C) ² | 74050 cSt | 74050 mm ² /s | |
| Viscosity Index | 52 | 52 | ASTM D2270 |
| Pour Point | -27 °F | -33 °C | ASTM D5950/D97 |
| Flash Point, COC | 509 °F | 265 °C | ASTM D92 |
| Noack Volatility ² | 4.9 wt% | 4.9 wt% | ASTM D5800/DIN 51581 |
| Water | < 1000 ppm | < 1000 ppm | ASTM D6304 |
| Refractive Index ² (77°F (25°C)) | 1.4830 | 1.4830 | ASTM D1218 |
| Total Acid Number | < 0.14 mg KOH/g | < 0.14 mg KOH/g | ASTM D974 (mod) |
| Hydrolytic Stability, TAN Change ² | 0.27 mg KOH/g | 0.27 mg KOH/g | ASTM D2619 |

| Thermal | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------------------------------------|---------------------------------|---------------------------------|-----------------|
| Density Correction Factor ² | 6.84E-4 (g/cm ³)/°C | 6.84E-4 (g/cm ³)/°C | ASTM D1250 |
| Fire Point, COC ² | 559 °F | 293 °C | ASTM D92 |
| Flash Point, PMCC ² | 462 °F | 239 °C | ASTM D93 |
| Evaporation Loss ² (401°F (205°C), 6.5 hr) | 8.0 wt% | 8.0 wt% | ASTM D972 (mod) |

| Performance | Typical Value (English) | Typical Value (SI) | Test Based On |
|-----------------------------|-------------------------|--------------------|---------------|
| RPVOT (With AO) | > 2500 min | > 2500 min | ASTM D2272 |
| Biodegradation ² | 54.5 % | 54.5 % | OECD 301F |

| Solubility | Typical Value (English) | Typical Value (SI) | Test Based On |
|----------------------------------|-------------------------|--------------------|---------------|
| Aniline Point ² | < 68.0 °F | < 20.0 °C | ASTM D611 |
| Kauri-Butanol Value ² | 60.0 | 60.0 | ASTM D1133 |

| Elastomer Compatibility, Fluoroelastomer | Typical Value (English) | Typical Value (SI) | Test Based On |
|------------------------------------------|-------------------------|--------------------|---------------|
| Volume Change ² | 3.5 % | 3.5 % | ASTM D471 |
| Hardness Change ² | -3 | -3 | ASTM D471 |
| Tensile Strength Change ² | -0.5 % | -0.5 % | ASTM D471 |
| Elongation Change ² | -5.6 % | -5.6 % | ASTM D471 |

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| Elastomer Compatibility, Nitrile | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------------------------|-------------------------|--------------------|---------------|
| Volume Change ² | 31.4 % | 31.4 % | ASTM D471 |
| Hardness Change ² | -14 | -14 | ASTM D471 |
| Tensile Strength Change ² | -43.5 % | -43.5 % | ASTM D471 |
| Elongation Change ² | -29.9 % | -29.9 % | ASTM D471 |

| Elastomer Compatibility, Polyacrylate | Typical Value (English) | Typical Value (SI) | Test Based On |
|---------------------------------------|-------------------------|--------------------|---------------|
| Volume Change ² | 48.2 % | 48.2 % | ASTM D471 |
| Hardness Change ² | -16 | -16 | ASTM D471 |
| Tensile Strength Change ² | -37.2 % | -37.2 % | ASTM D471 |
| Elongation Change ² | -13.2 % | -13.2 % | ASTM D471 |

Legal Statement

For detailed Product Stewardship information, please contact Customer Service.

Notes

Typical properties: these are not to be construed as specifications.

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

² Single sample or two sample average determinations

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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