

# SpectraSyn™ 6

## Polyalphaolefin (PAO) Fluid

### Product Description

SpectraSyn™ Low Viscosity Polyalphaolefin (PAO) basestocks feature low temperature properties, low volatility, and improved thermal stability. SpectraSyn™ Low Viscosity PAO products have high viscosity indices which translate to improved flow at low temperatures and increased film thickness at high temperatures. SpectraSyn™ Low Viscosity PAO products are the primary basestocks for synthetic lubricants used in passenger car engines, heavy-duty diesel engines, transmissions, gear boxes and a variety of industrial applications.

### General

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

| Basics                                      | Typical Value (English) | Typical Value (SI)       | Test Based On        |
|---------------------------------------------|-------------------------|--------------------------|----------------------|
| Specific Gravity (60.1°F (15.6°C))          | 0.827                   | 0.827                    | ASTM D4052           |
| Appearance (0°F (-18°C))                    | Bright & Clear          | Bright & Clear           | Visual               |
| Color                                       | < 0.5                   | < 0.5                    | ASTM D1500           |
| Kinematic Viscosity                         |                         |                          | ASTM D445            |
| 212°F (100°C)                               | 5.8 cSt                 | 5.8 mm <sup>2</sup> /s   |                      |
| 104°F (40°C)                                | 31.0 cSt                | 31.0 mm <sup>2</sup> /s  |                      |
| -40°F (-40°C) <sup>2</sup>                  | 7800 cSt                | 7800 mm <sup>2</sup> /s  |                      |
| -65°F (-54°C) <sup>2</sup>                  | 68500 cSt               | 68500 mm <sup>2</sup> /s |                      |
| Viscosity Index                             | 138                     | 138                      | ASTM D2270           |
| Pour Point                                  | -71 °F                  | -57 °C                   | ASTM D5950/D97       |
| Flash Point, COC                            | 475 °F                  | 246 °C                   | ASTM D92             |
| Noack Volatility                            | 6.4 wt%                 | 6.4 wt%                  | ASTM D5800/DIN 51581 |
| Water                                       | < 50 ppm                | < 50 ppm                 | ASTM D6304           |
| Refractive Index <sup>2</sup> (77°F (25°C)) | 1.4565                  | 1.4565                   | ASTM D1218           |
| Total Acid Number                           | < 0.05 mg KOH/g         | < 0.05 mg KOH/g          | ASTM D974 (mod)      |

| Flow                                                      | Typical Value (English) | Typical Value (SI) | Test Based On |
|-----------------------------------------------------------|-------------------------|--------------------|---------------|
| Apparent Viscosity by Mini-Rotary Viscometer <sup>2</sup> |                         |                    | ASTM D4684    |
| -40°F (-40°C)                                             | 6500 cP                 | 6500 cP            |               |
| Brookfield Viscosity <sup>2</sup> (-40°F (-40°C))         | 7310 cP                 | 7310 cP            | ASTM D2983    |
| Cold Cranking Simulator <sup>2</sup> (-22°F (-30°C))      | 2260 cP                 | 2260 cP            | ASTM D5293    |

| Thermal                                                | Typical Value (English)         | Typical Value (SI)              | Test Based On   |
|--------------------------------------------------------|---------------------------------|---------------------------------|-----------------|
| Density Correction Factor <sup>2</sup>                 | 6.28E-4 (g/cm <sup>3</sup> )/°C | 6.28E-4 (g/cm <sup>3</sup> )/°C | ASTM D1250      |
| Fire Point, COC <sup>2</sup>                           | 511 °F                          | 266 °C                          | ASTM D92        |
| Evaporation Loss <sup>2</sup> (302°F (150°C), 22.0 hr) | 1.4 wt%                         | 1.4 wt%                         | ASTM D972       |
| Evaporation Loss <sup>2</sup> (401°F (205°C), 6.5 hr)  | 10.3 wt%                        | 10.3 wt%                        | ASTM D972 (mod) |
| Vapor Pressure <sup>2</sup> (302°F (150°C))            | 0.1 mm Hg                       | 0.1 mm Hg                       | ASTM D2879      |

| Performance                                    | Typical Value (English) | Typical Value (SI) | Test Based On |
|------------------------------------------------|-------------------------|--------------------|---------------|
| Dielectric Constant <sup>2</sup> (77°F (25°C)) | 2.11                    | 2.11               | ASTM D924     |
| Dielectric Strength <sup>2</sup>               | 39.4 kV                 | 39.4 kV            | ASTM D877     |
| High-Temp. High-Shear Viscosity <sup>2</sup>   | 2.08 cP                 | 2.08 cP            | ASTM D5481    |

| Solubility                       | Typical Value (English) | Typical Value (SI) | Test Based On |
|----------------------------------|-------------------------|--------------------|---------------|
| Aniline Point <sup>2</sup>       | 259.0 °F                | 126.1 °C           | ASTM D611     |
| Kauri-Butanol Value <sup>2</sup> | 10.9                    | 10.9               | ASTM D1133    |

**SpectraSyn™ 6**  
Polyalphaolefin (PAO) Fluid**Additional Information**

Technical White Mineral Oil, 21 CFR 178.3620(b)

National Sanitation Foundation (NSF) White book, category code H1, Lubricants with incidental food contact

**Legal Statement**

For detailed Product Stewardship information, please contact Customer Service.

**Notes**

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

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

<sup>2</sup> Single sample or two sample average determinations

For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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