

# Esterex™ A51

## Synthetic Fluid

### Product Description

Esterex™ Adipate Esters are API category Group V fluids. These esters have excellent low-temperature properties, high viscosity indices, good lubricating properties and low volatilities. Esterex™ Adipate Esters can be used as sole basestocks or blendstocks with other synthetic fluids in many automotive and industrial lubricant applications. These esters are ideal in high-temperature conditions, such as reciprocating air compressors, where discharge valve cleanliness is required.

### 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	<ul style="list-style-type: none"> <li>▪ 07/01/2019</li> </ul>		

Basics	Typical Value (English)	Typical Value (SI)	Test Based On
Specific Gravity (60.1°F (15.6°C))	0.915	0.915	ASTM D4052
Appearance	Bright & Clear	Bright & Clear	Visual
Color	< 0.5	< 0.5	ASTM D1500
Kinematic Viscosity			ASTM D445
212°F (100°C)	5.4 cSt	5.4 mm <sup>2</sup> /s	
104°F (40°C)	27.0 cSt	27.0 mm <sup>2</sup> /s	
-40°F (-40°C) <sup>2</sup>	16970 cSt	16970 mm <sup>2</sup> /s	
Viscosity Index	136	136	ASTM D2270
Pour Point	-71 °F	-57 °C	ASTM D5950/D97
Flash Point, COC	477 °F	247 °C	ASTM D92
Noack Volatility	7.4 wt%	7.4 wt%	ASTM D5800/DIN 51581
Water	< 350 ppm	< 350 ppm	ASTM E1064
Refractive Index <sup>2</sup> (77°F (25°C))	1.4559	1.4559	ASTM D1218
Total Acid Number	0.0200 mg K/g	0.0200 mg K/g	ASTM D974 (mod)
Hydrolytic Stability, TAN Change <sup>2</sup>	0.16 mg KOH/g	0.16 mg KOH/g	ASTM D2619

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Density Correction Factor <sup>2</sup>	7.02E-4 (g/cm <sup>3</sup> )/°C	7.02E-4 (g/cm <sup>3</sup> )/°C	ASTM D1250
Fire Point, COC <sup>2</sup>	536 °F	280 °C	ASTM D92
Flash Point, PMCC <sup>2</sup>	405 °F	207 °C	ASTM D93
Evaporation Loss <sup>2</sup> (401°F (205°C), 6.5 hr)	10.1 wt%	10.1 wt%	ASTM D972 (mod)

Performance	Typical Value (English)	Typical Value (SI)	Test Based On
RPVOT			ASTM D2272
Neat <sup>2</sup>	265 min	265 min	
With AO <sup>3</sup>	> 1210 min	> 1210 min	
Biodegradation <sup>2</sup>	60.0 %	60.0 %	OECD 301F

Solubility	Typical Value (English)	Typical Value (SI)	Test Based On
Aniline Point <sup>2</sup>	< 68.0 °F	< 20.0 °C	ASTM D611
Kauri-Butanol Value <sup>2</sup>	29.0	29.0	ASTM D1133

Elastomer Compatibility, Fluoroelastomer	Typical Value (English)	Typical Value (SI)	Test Based On
Volume Change <sup>2</sup>	3.4 %	3.4 %	ASTM D471
Hardness Change <sup>2</sup>	-2	-2	ASTM D471
Tensile Strength Change <sup>2</sup>	-3.1 %	-3.1 %	ASTM D471
Elongation Change <sup>2</sup>	-9.1 %	-9.1 %	ASTM D471

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Elastomer Compatibility, Nitrile	Typical Value (English)	Typical Value (SI)	Test Based On
Volume Change <sup>2</sup>	12.0 %	12.0 %	ASTM D471
Hardness Change <sup>2</sup>	-8	-8	ASTM D471
Tensile Strength Change <sup>2</sup>	-32.0 %	-32.0 %	ASTM D471
Elongation Change <sup>2</sup>	-20.9 %	-20.9 %	ASTM D471

Elastomer Compatibility, Polyacrylate	Typical Value (English)	Typical Value (SI)	Test Based On
Volume Change <sup>2</sup>	19.8 %	19.8 %	ASTM D471
Hardness Change <sup>2</sup>	-8	-8	ASTM D471
Tensile Strength Change <sup>2</sup>	-19.9 %	-19.9 %	ASTM D471
Elongation Change <sup>2</sup>	-12.0 %	-12.0 %	ASTM D471

## 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

<sup>3</sup> Single sample or two sample average determinations 1 wt.% diphenylamines and phenyl naphthylamine antioxidant (AO) added

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

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