



PETRO™ OIL

Esterex™ TM111
Synthetic Fluid

Product Description

Esterex™ Trimellitate Esters are API category Group V fluids. These esters have excellent low-temperature properties, good lubricating properties and low volatilities. Esterex™ Trimellitate Esters can be used as sole basestocks or blendstocks with other synthetic fluids in many engine and industrial lubricant applications.

General

Availability - Latin America, North America, Asia Pacific

Revision Date – 07/01/2019

Basics	Typical Value	(English)	Typical Value	(SI)	Test Based On
Specific Gravity (68°F (20°C))	0.978		0.978		BRCP 4843
Appearance	Bright & Clear		Bright & Clear		Visual
Color	< 0.5		< 0.5		ASTM D1500
Kinematic Viscosity					ASTM D445
212°F (100°C)	11.9	cSt	11.9	mm ² /s	
104°F (40°C)	124	cSt	124	mm ² /s	
Viscosity Index	81		81		ASTM D2270
Pour Point	-27	°F	-33	°C	ASTM D5950/D97
Flash Point, COC ²	525	°F	274	°C	ASTM D92
Noack Volatility ²	1.4	wt%	1.4	wt%	ASTM D5800/DIN 51581
Water	< 1000	ppm	< 1000	ppm	ASTM D6304
Refractive Index ² (77°F (25°C))	1.4845		1.4845		ASTM D1218
Total Acid Number	< 0.16	mg KOH/g	< 0.16	mg KOH/g	ASTM D974 (mod)
Hydrolytic Stability, TAN Change ²	0.01	mg KOH/g	0.01	mg KOH/g	ASTM D2619
Thermal	Typical Value	(English)	Typical Value	(SI)	Test Based On
Density Correction Factor ²	7.33E-4	(g/cm ³)/°C	7.33E-4	(g/cm ³)/°C	ASTM D1250
Fire Point, COC ²	576	°F	302	°C	ASTM D92
Flash Point, PMCC ²	464	°F	240	°C	ASTM D93
Evaporation Loss ² (401°F (205°C), 6.5 hr)	1.0	wt%	1.0	wt%	ASTM D972 (mod)
Performance	Typical Value	(English)	Typical Value	(SI)	Test Based On
RPVOT					ASTM D2272
Neat ²	310	min	310	min	
With AO ³	> 1210	min	> 1210	min	
Biodegradation ²	< 1.0	%	< 1.0	%	OECD 301F
Solubility	Typical Value	(English)	Typical Value	(SI)	Test Based On
Aniline Point ²	16.5	°F	-8.6	°C	ASTM D611
Kauri-Butanol Value ²	35.0		35.0		ASTM D1133
Elastomer Compatibility, Fluoroelastomer	Typical Value	(English)	Typical Value	(SI)	Test Based On
Volume Change ²	2.3	%	2.3	%	ASTM D471
Hardness Change ²	-3		-3		ASTM D471
Tensile Strength Change ²	-20.7	%	-20.7	%	ASTM D471
Elongation Change ²	9.2	%	9.2	%	ASTM D471



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Elastomer Compatibility, Nitrile	Typical Value	(English)	Typical Value	(SI)	Test Based On
Volume Change ²	14.5	%	14.5	%	ASTM D471
Hardness Change ²	-10		-10		ASTM D471
Tensile Strength Change ²	-0.5	%	-0.5	%	ASTM D471
Elongation Change ²	-18.8	%	-18.8	%	ASTM D471
Elastomer Compatibility, Polyacrylate	Typical Value	(English)	Typical Value	(SI)	Test Based On
Volume Change ²	18.1	%	18.1	%	ASTM D471
Hardness Change ²	-16		-16		ASTM D471
Tensile Strength Change ²	-24.3	%	-24.3	%	ASTM D471
Elongation Change ²	-15.1	%	-15.1	%	ASTM D471