

Elevance Inherent® C12 Methyl Ester

Introduction

The following tables convey the results of a broad compatibility study of Elevance Inherent® C12 Methyl Ester. The information provided below can be used as a guideline to assist in material selection pertaining to the preparation of blends and finished products, product packaging and application uses. It is advisable that materials' compatibility be verified by the user assessing Elevance Inherent® C12 Methyl Ester under the actual circumstances for processing.

Metals Compatibility¹

Alloy	Elevance Inherent® C12 Methyl Ester
Aluminum (Al2024-T3)	A ^a
Clad Aluminum (Al2024-T3)	A ^a
Aluminum (Al7075-T6)	A ^a
Clad Aluminum (Al7075-T6)	A ^a
Aluminum (Al5083)	A ^a
Galvanized Mild Steel (C1010)	A ^a
Galvanized Steel (G90)	A ^a
Stainless Steel (304L)	A ^a
Stainless Steel (316L)	A ^a
Admiralty Brass (CDA443)	A ^a
Copper (CDA110)	A ^a

Rating ²	Apparent Corrosion Rate (mmpy)	Rating ¹	Observations
A	± 10	a	No change
B	± 20	b	Speckled
C	± 30	c	More dull
-	-	d	Brighter

¹ ASTM F483-09 – Total Immersion Corrosion Test for Aircraft Maintenance Chemicals

² Boeing Document D6-17487 – Evaluation of Airplane Maintenance Materials

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Plastics Compatibility¹

Plastic	Elevance Inherent® C12 Methyl Ester
Nylon	D
High density polyethylene	B
Acrylic	D
Polyvinylchloride (PVC)	C
Chlorinated PVC	D
Polypropylene	B
Polyethylene terephthalate	A
Level 5 Fluorinated HDPE ²	**

Rating	Criteria
A	No weight change
B	< 5% weight change
C	5-10% weight change
D	> 10% weight change

¹ ASTM D543-06 – Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents

** Elevance lab testing for 8 weeks at ambient, 110°F and 122°F showed Level 5 Fluorinated HDPE containers suitable and acceptable for storing Elevance Inherent® C12 Methyl Ester. Users are advised to test their Level 5 Fluorinated HDPE containers with Elevance Inherent® C12 Methyl Ester for at least a week at 110°F for possible supplier variations with the Level 5 fluorinated HDPE containers.

Seal & Gasket Compatibility¹

Gaskets and Seals	Elevance Inherent® C12 Methyl Ester	Elevance Inherent® C12 Methyl Ester
	50 °C	RT
Buna N	D	D
Fluoroelastomer (Viton®)	C	B
Silicone rubber	D	D
Red rubber	D	D
Nitrile rubber	D	D
Neoprene	D	D
EPDM rubber	D	D
Natural gum rubber	D	D
Fluoroelastomer (FKM)	C	B

Rating	Criteria
A	No weight change
B	1-10% weight change
C	11-20% weight change
D	21% + weight change

¹ASTM D7216-09 – Standard Test Method for Determining Automotive Engine Oil Compatibility with Typical Seal Elastomers (ERS modification)

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Materials Compatibility

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