

# Materials Compatibility

## Elevance Inherent® C10 Methyl Ester

### Introduction

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The following tables convey the results of a broad compatibility study of Elevance Inherent® C10 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® C10 Methyl Ester under the actual circumstances for processing.

### Metals Compatibility<sup>1</sup>

Alloy	Elevance Inherent® C10 Methyl Ester
Aluminum (Al2024-T3)	A <sup>a</sup>
Clad Aluminum (Al2024-T3)	A <sup>a</sup>
Aluminum (Al7075-T6)	A <sup>a</sup>
Clad Aluminum (Al7075-T6)	A <sup>a</sup>
Aluminum (Al5083)	A <sup>a</sup>
Galvanized Mild Steel (C1010)	A <sup>a</sup>
Galvanized Steel (G90)	A <sup>a</sup>
Stainless Steel (304L)	A <sup>a</sup>
Stainless Steel (316L)	A <sup>a</sup>
Admiralty Brass (CDA443)	A <sup>a</sup>
Copper (CDA110)	A <sup>a</sup>

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

<sup>1</sup> ASTM F483-09 – Total Immersion Corrosion Test for Aircraft Maintenance Chemicals

<sup>2</sup> Boeing Document D6-17487 – Evaluation of Airplane Maintenance Materials

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### Plastics Compatibility<sup>1</sup>

Plastic	Elevance Inherent® C10 Methyl Ester (50 °C)
Nylon	D
High density polyethylene	B
Acrylic	D
Polyvinylchloride (PVC)	D
Chlorinated PVC	D
Polypropylene	C
Polyethylene terephthalate	A

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

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

### Seal & Gasket Compatibility<sup>1</sup>

Gaskets and Seals - 50 °C	Elevance Inherent® C10 Methyl Ester 50 °C	Elevance Inherent® C10 Methyl Ester RT
Buna N	D	D
Fluoroelastomer (Viton®)	C	D
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	D

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

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

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