



STEPAN[®] C-25, C-42, and C-65 Methyl Esters

Product Name

Chemical Description

The STEPAN Methyl Esters are methyl esters of fatty acids derived from vegetable oils. Stepan C-25 Methyl Ester is a methyl caprylate/caprate methyl ester blend. Stepan C-42 Methyl Ester is a methyl laurate/myristate methyl ester blend. Stepan C-65 Methyl Ester is a methyl palmitate/oleate methyl ester blend.

Applications

Stepan Methyl Esters can be used as either solvents or cosolvents, crop oils or carrier oils in oils in agricultural applications.

CAS Registry Nos.

STEPAN C-25
68937-83-7

STEPAN C-42
111-82-0, 124-10-7

Composition

C ₆ (Methyl Caproate), %	2	---
C ₈ (Methyl Caprylate), %	60	---
C ₁₀ (Methyl Caprate), %	37	---
C ₁₂ (Methyl Laurate), %	---	72
C ₁₄ (Methyl Myristate), %	---	26
Other Methyl Esters, %	1	2

CAS Registry Nos

STEPAN C-65
67762-38-3

Composition

C ₁₂ (Methyl Laurate), %	0.5
C ₁₄ (Methyl Myristate), %	2.5
C ₁₆ (Methyl Palmitate), %	45
C ₁₈ (Methyl Oleate-Stearate), %	52

Typical Properties

	STEPAN C-25	STEPAN C-42
Appearance at 25°C	Clear Liquid	Clear Liquid
Density at 25°C, g/ml (lbs/U.S. gal)	0.87 (7.3)	0.87 (7.3)
Moisture, %	0.1 max.	0.1 max.
Viscosity at 25°C, cps	2	7
Flash Point, PMCC, °C (°F)	78 (173)	>93 (>201)
Saponification Value	332	253
Acid Number	1.0 max.	0.6 max.
Iodine Number	1.0 max.	0.3 max.
Melting Point, °C (°F)	-37 (-35)	-5 (23)
Boiling Point, °C (°F)	>100 (>212)	>260 (>500)
Color, Gardner	1 max.	1 max.
VOC, CARB, Attachment B, %	98	22
Solubility		
Water	Insoluble	Insoluble
Methanol	Soluble	Soluble
Kerosene	Soluble	Soluble
Xylene	Soluble	Soluble

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Typical Properties

	STEPAN C-65
Appearance at 25°C.....	Clear Liquid
Density at 25°C, g/ml (lbs/U.S. gal).....	0.87 (7.2)
Moisture, %	0.1 max.
Viscosity at 25°C, cps	7
Flash Point, PMCC, °C (°F).....	>94 (>201)
Saponification Value	199
Acid Number	1.0 max.
Iodine Number.....	40
Melting Point, °C (°F)	14 (57)
Boiling Point, °C (°F)	>260 (>500)
Color, Gardner	2 max.
VOC, CARB, Attachment B, %.....	0.7
Solubility	
Water.....	Insoluble
Methanol.....	Soluble
Kerosene	Soluble
Xylene	Soluble

Clearances

STEPAN Methyl Esters are approved for use as inert ingredients under U.S. EPA 40 CFR 180.910.

STEPAN C-25 methyl ester is listed in United States (TSCA 68937-83-7), China (IECSC 68937-83-7), Europe (EINECS 273-094-6), Japan (ENCS 7-670), Korea (ECL Serial No. KE-15055), Canada (DSL 111-11-5, 110-42-9), New Zealand (NZIoC 68937-83-7), Philippines (PICCS 68937-83-7) and Australia (AICS 68937-83-7).

STEPAN C-42 methyl ester is listed in United States (TSCA 111-82-0, 124-10-7), Europe (EINECS 203-911-3, 204-680-1), Japan (ENCS 2-798, 2-798), Canada (DSL 111-82-0, 124-10-7), Australia (AICS 111-82-0, 124-10-7), Philippines (PICCS 111-82-0, 124-10-7), Korea (ECL Serial No. KE-12876, KE-33354), China (IECSC 111-82-0, 124-10-7), and New Zealand (NZIoC 111-82-0, 124-10-7).

STEPAN C-65 methyl ester is listed in Europe (EINECS 267-015-4), Japan (ENCS 2-798), Korea (ECL 9212-2881), Canada (DSL 67762-38-3) and Australia (AICS 67762-38-3), United States (TSCA 67762-38-3), China (IECSC 67762-38-3), New Zealand (NZIoC 67762-38-3) and Philippines (PICCS 67762-3-3).

Storage & Handling

Normal safety precautions (i.e. gloves and safety goggles) should be employed when handling STEPAN Methyl Esters. Use products away from sparks and open flame in a well-ventilated area. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling materials. Product temperatures over 130°F (54°C) are not recommended.

Storage Information: STEPAN Methyl Esters can be stored in vessels of carbon steel, but 316 or 304 stainless steel is preferred. Tanks should be closed with venting through a gooseneck vent. The methyl esters should be stored between 90-110°F (32-43°C). External steam panel coils can be used if heating is required. Pumps, pipes, and transfer lines can be carbon steel, but 316 or 304 stainless steel is preferred. Rubber hoses are not recommended for extended use as methyl esters attack rubber. Drums should be stored in sealed containers at a temperature of 90-110°F (32-43°C). Storage under nitrogen will prevent degradation of the product over time.

Standard Packaging: STEPAN C-25, C-42, and C-65 Methyl Esters are available in bulk quantities.

Product Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

Additional Safety Information

A Material Safety Data Sheet is available upon request.

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