

COSMACOL® NII-9 Emulsifier

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Technical Data Sheet

Description

Sasol North America Inc.'s COSMACOL® NII-9 Emulsifier is a biodegradable, nonionic surfactant derived from a C12-C13 alcohol blend that is approximately 50% branched. This 9-mole ethoxylate is made using Sasol North America Inc.'s patented NOVEL® technology, which yields products with lower free alcohol, PEG levels, and melting ranges when compared to the traditional base-catalyzed methods. COSMACOL® NII-9 Emulsifier is essentially 100% active and has the following structural formula:

$R - CH_2 - O - (CH_2CH_2O)_9 - H$ where $R = C_{11}H_{23}$ or $C_{12}H_{25}$ (mixture of linear and mono-branched)

COSMACOL® NII-9 Emulsifier is readily soluble in water. It is registered under the INCI name of C12-13 Pareth-9.

Applications

The emulsifying power of COSMACOL® NII-9 Emulsifier makes this product an effective solubilizer for fragrances and polar essential oils used in lotions, hair care products, and perfumes. COSMACOL® NII-9 Emulsifier also exhibits good detergent properties and is used in many cleanser, body wash, and shampoo formulations.

Properties

Typical physical properties are listed in the table to the right. Actual properties may vary from lot to lot.

Contact Information

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Typical Properties	COSMACOL® NII-9
Average Molecular Wt.	589
Color, APHA	< 50
Hydroxyl Number	92 – 100
Water, Wt %	< 0.1
Glycol, Wt %	< 2
Free Alcohol, wt%	< 1
Density, g/mL @ 20°C	1.01
Flash Point (PM), °C (°F)	>204 (>400)
Cloud Point, 5% Saline, °C (°F)	58 – 68 (136 – 154)
1% in H ₂ O, °C (°F)	69 – 85 (156 – 185)
Melting Range, °C (°F)	8 – 13 (46 – 55)
Boiling Point, °C (°F)	> 260 (> 500)
Viscosity, cSt @ 40°C	32
pH, 1% in IPA / Water	6 – 8
Vapor Pressure, psi @ 65°C	0.14
Vapor Density	20
Avg. EO Content, moles	9
Avg. EO Content, Wt. %	67
Free EO, PPM	< 1
HLB, calculated	13.5

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For detailed safety and handling information regarding these products, please refer to the respective Sasol North America Material Safety Data Sheet.

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