

Product Bulletin

Product Name	NINOL® 40-CO																																	
Chemical Structure	$\begin{array}{c} \text{O} \\ \\ \text{R} - \text{C} - \text{N}(\text{CH}_2\text{CH}_2\text{OH})_2 \end{array}$ <p style="text-align: center;">R = cochin oil</p>																																	
Chemical Description	NINOL 40-CO is a cochin oil based amide produced via type 1:1 reaction between one mole of the ester of the fatty acid and one mole of the diethanolamine.																																	
CAS Reg. No.	68603-42-9																																	
INCI Name	Cocamide DEA																																	
Applications	<p><u>Functional Properties</u></p> <ul style="list-style-type: none"> • Viscosity booster • Imparts humectancy • Foam booster • Economical • Foam stabilizer <p><u>End Product Uses</u></p> <ul style="list-style-type: none"> • Shampoos • Bubble baths • Light duty liquids 																																	
Typical Properties	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Appearance at 25°C.....</td> <td style="width: 33%;">Amber colored, viscous liquid</td> <td style="width: 33%;">Pour Point, °C (°F).....</td> <td style="width: 33%;">3 (38)</td> </tr> <tr> <td>Actives, %</td> <td>100</td> <td>Viscosity, cps at 25°C.....</td> <td>1172</td> </tr> <tr> <td>Color, Gardner</td> <td>4 max.</td> <td>Viscosity, cps at 60°C.....</td> <td>129</td> </tr> <tr> <td>Free Amine, as DEA, %</td> <td>4.4</td> <td>Flash Point (PMCC), °C (°F).....</td> <td>>94 (>201)</td> </tr> <tr> <td>pH, 1% aqueous.....</td> <td>10.7</td> <td>Density, g/ml (lbs/U.S. gal).....</td> <td>0.995 (8.3)</td> </tr> <tr> <td>Cloud Point (as is), °C (°F).....</td> <td>-1 (30)</td> <td>RVOC, U.S. EPA, %.....</td> <td>0</td> </tr> <tr> <td>Boiling Point °C (°F)</td> <td>>150 (>302)</td> <td>Preservative</td> <td>Not required</td> </tr> <tr> <td>Freeze Point °C (°F).....</td> <td>0 (32)</td> <td></td> <td></td> </tr> </table>		Appearance at 25°C.....	Amber colored, viscous liquid	Pour Point, °C (°F).....	3 (38)	Actives, %	100	Viscosity, cps at 25°C.....	1172	Color, Gardner	4 max.	Viscosity, cps at 60°C.....	129	Free Amine, as DEA, %	4.4	Flash Point (PMCC), °C (°F).....	>94 (>201)	pH, 1% aqueous.....	10.7	Density, g/ml (lbs/U.S. gal).....	0.995 (8.3)	Cloud Point (as is), °C (°F).....	-1 (30)	RVOC, U.S. EPA, %.....	0	Boiling Point °C (°F)	>150 (>302)	Preservative	Not required	Freeze Point °C (°F).....	0 (32)		
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Environmental Effects	Product is readily biodegradable. A detailed biodegradation statement is available upon request.																																	
Health Effects	NINOL 40-CO is practically non-toxic orally (LD ₅₀ is between 5 and 10 g/kg) and causes mild skin and moderate eye irritation.																																	
Storage & Handling	<p>Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling NINOL 40-CO. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.</p> <p>It is recommended that NINOL 40-CO be stored in sealed containers and kept at temperatures not exceeding 120°F (49°C). As with all DEA amides, if overheating does occur, amide ester will be formed. To reverse the reaction, NINOL 40-CO should be stored at room temperature for approximately one week. Failure to do so may result in formulation products with decreased foam and low viscosity.</p> <p><u>Bulk Storage Information:</u> Tanks, piping and centrifugal pumps of carbon steel are recommended. Recommended storage for bulk tanks is 85-105°F (29-41°C).</p> <p><u>Standard Packaging:</u> NINOL 40-CO is available in bulk and 55 gallon drums.</p>																																	
Workplace Exposure	Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.																																	
Clearances	The international inventories (country clearances) of NINOL 40-CO can be found in Section 15 of the Safety Data Sheet (SDS). It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used. If you have any further questions regarding inventories, please contact North America Technical Service at techserv@stepan.com .																																	



Formulations

SHOWER SOAP

Ingredients	Wt. % (as is)	Function
BIO-TERGE® AS-40	30.00	Primary Surfactant
STEPANOL® AM	20.00	Secondary Surfactant
NINOL 40-CO	4.00	Viscosity & Foam Booster
Hallstar EGDS (Hallstar Co.)	0.75	Pearlizing Agent
Polyquaternium-7	0.50	Film Former
Citric Acid (50%)	q.s.	pH Adjuster
Fragrance, Dye, Preservative	q.s.	
Sodium Chloride	q.s.	Thickener
Deionized Water	q.s. to 100.0	Solvent, Carrier

Mixing Procedure:

Combine the first five components in Deionized Water and heat to 70°C. Mix until all of the Hallstar EGDS is completely dispersed. Cool to 35°C with mixing. Adjust pH to 6.0-7.0 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Appearance at 25°C	Pearlescent, light yellow liquid
pH (as is).....	6.0 - 7.0
Viscosity Profile at 25°C:	
as is	50 cps
with 0.5% sodium chloride	180 cps
with 1.0% sodium chloride	840 cps

LIQUID HAND SOAP

Ingredients	Wt. % (as is)	Function
BIO-TERGE AS-40	10.00	Primary Surfactant
STEPANOL AM	8.74	Co-surfactant
STEPANOL WAT	6.25	Co-surfactant
NINOL 40-CO	3.00	Viscosity & Foam Booster
Citric Acid (50%)	q.s.	pH Adjuster
Fragrance, Dye, Preservative	q.s.	
Sodium Chloride	q.s.	Thickener
Deionized Water	q.s. to 100.0	Solvent, carrier

Mixing Procedure:

Add first four components to Deionized Water and mix until homogeneous. Adjust pH to 5.5-6.5 with citric acid. Add fragrance, dye and preservative, if desired. Adjust to desired viscosity with sodium chloride.

Physical Properties:

Appearance at 25°C	Clear, yellow liquid
pH (as is).....	5.5 - 6.5
Viscosity Profile at 25°C:	
as is	10 cps
with 2% sodium chloride.....	430 cps
with 3% sodium chloride	

Product Stewardship

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

Additional Safety Information

A Safety Data Sheet is available upon request.



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