

AMIDET®

NM

**THICKENER
EMULSIFIER / SOLUBILIZER
FOAM BOOSTER
MILD & SKIN-COMPATIBLE**

**YOUR STRONG PARTNER
FOR SUCCESSFUL
FORMULATIONS**

KAO SURFACTANTS TECHNOLOGY AT YOUR SERVICE



AMIDET® N, multifunctionality at its best

AMIDET® N is a natural multifunctional liquid surfactant for cosmetic rinse-off products. Its INCI name is PEG-4 Rapeseedamide.

It is an environmentally friendly, preservative-free and cost-effective thickening agent. Furthermore, its high concentration allows the reduction of the carbon footprint related to economic logistics and transport.

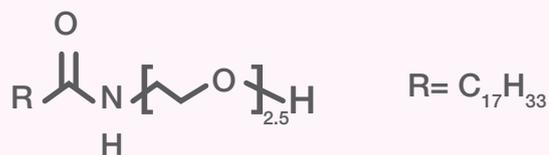
This polyvalent surfactant has the ability to act, not only as a high performance thickener and foam booster, but also as a **strong solubilizer and emulsifier, especially for silicone derivatives, perfumes and vegetable oils.**

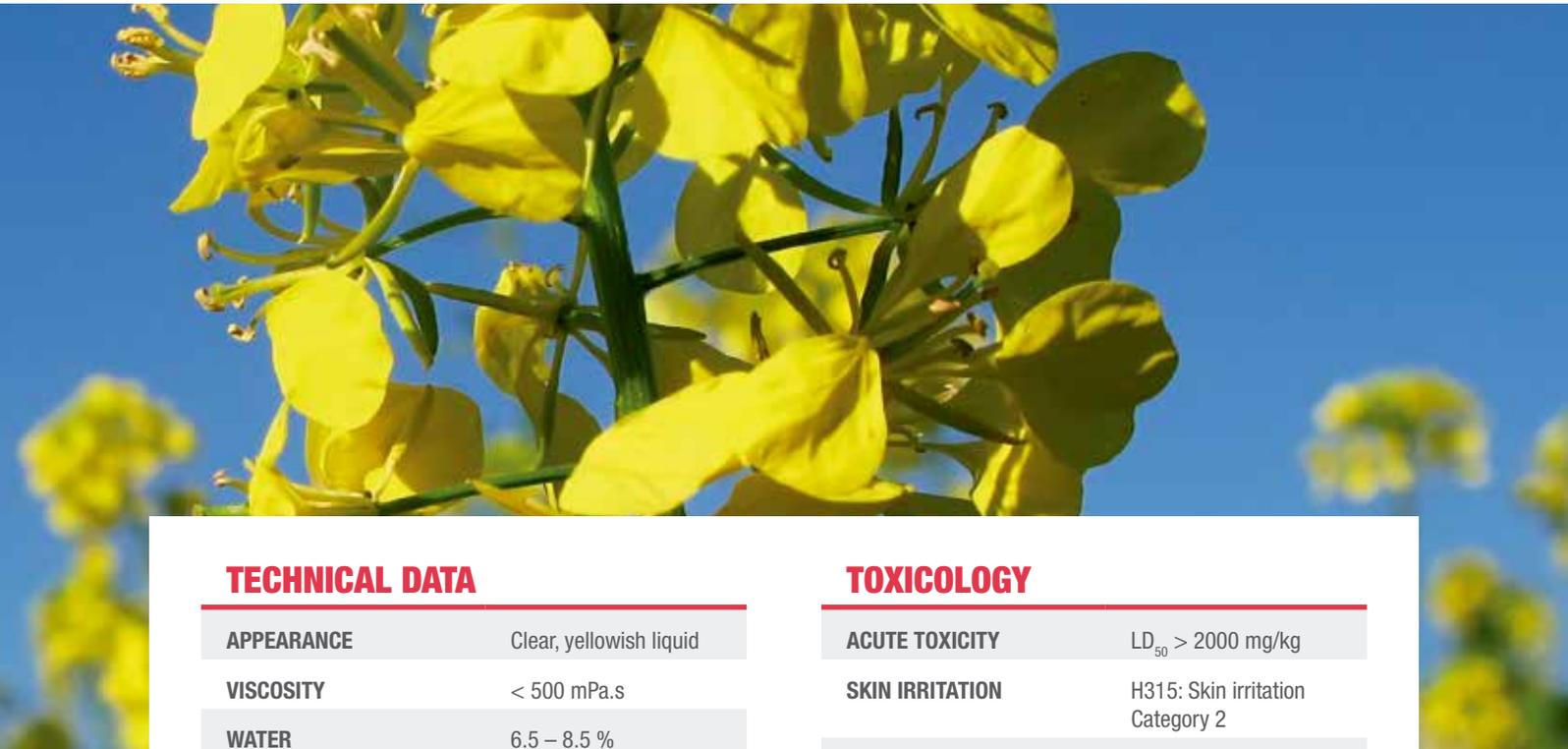
PRODUCT INFORMATION

AMIDET® N is a highly concentrated, low-viscous ethoxylated fatty acid alkanolamide with a clear yellowish liquid appearance. It is based on renewable European rapeseed oil, a vegetable oil rich in C18 unsaturated fatty acid.

AMIDET® N shows good aerobic and anaerobic biodegradability, and also has a good aquatic toxicological profile. This green behavior makes it suitable for European Ecolabel and "Nordic Swan"-labeled formulations.

AMIDET® N. PEG-4 Rapeseedamide





TECHNICAL DATA

APPEARANCE	Clear, yellowish liquid
VISCOSITY	< 500 mPa.s
WATER	6.5 – 8.5 %
pH (1% IN WATER)	9.2 – 10.2
ACTIVE MATTER	91.5 – 93.5 %

ECOLOGY

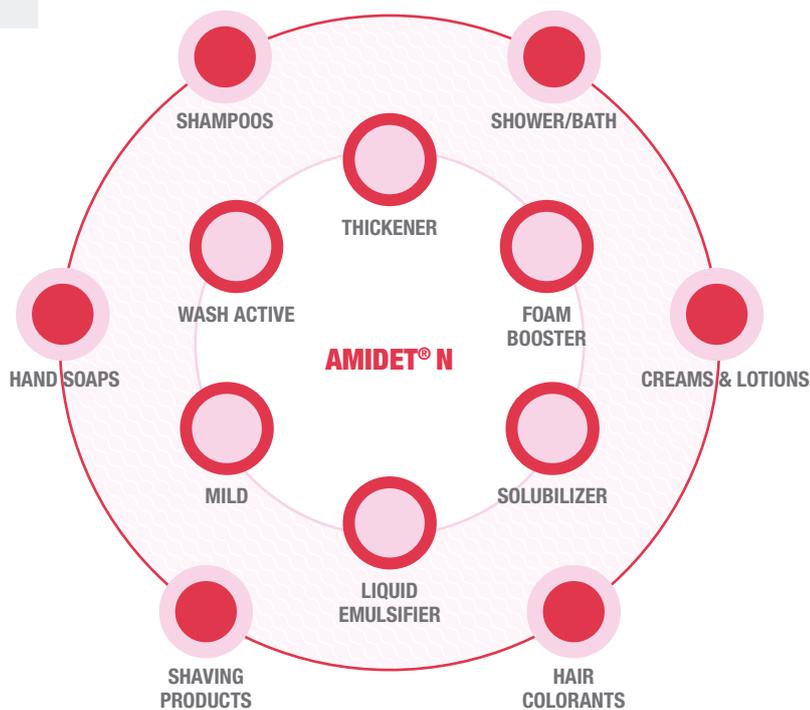
Aerobic biodegradation	Readily biodegradable
Anaerobic biodegradation	Readily biodegradable
Aquatic toxicity	> 10 mg/L

TOXICOLOGY

ACUTE TOXICITY	LD ₅₀ > 2000 mg/kg
SKIN IRRITATION	H315: Skin irritation Category 2
EYE IRRITATION	No known critical effects
SENSITIZATION	Non-sensitizer
GENE TOXICITY	Non-mutagenic



AMIDET® N is easily dispersed in water and the formulations turn transparent when other surfactants are used.



MAIN PROPERTIES

THICKENER

AMIDET® N offers excellent thickening properties in various surfactant systems at low concentrations. Besides, it is compatible with other substances like inorganic salts and polymeric organic thickeners.

Quite often, the addition of inorganic salts does not provide enough thickening effect, while ionic polymer thickeners normally show inactivation reactions and are difficult to process. Thanks to its liquid form, it can also be formulated at room temperature.

By adding AMIDET® N, these problems can be solved and the viscosity is easily adjusted.

AMIDET® N also shows superior thickening properties for milder surfactant systems like the combination of Ether carboxylates and APGs used for extremely mild cleansing products.

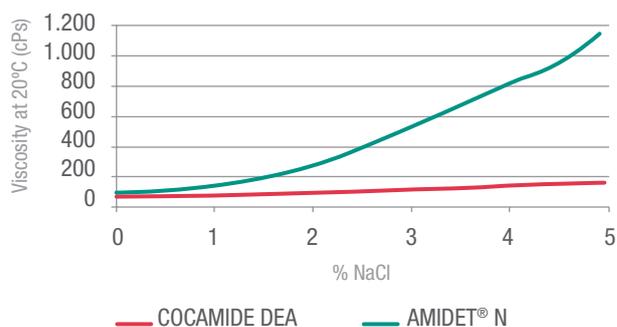
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BABY SHAMPOO	%
AKYPO® RLM 45CA Laureth-6 Carboxylic acid	7.9
AMIDET® N PEG-4 Rapeseedamide	5
OXIDET® L-75C Cocamidopropylamine Oxide	25
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Transparent Liquid
pH (100%)	6.0 - 7.0
Viscosity at 20°C (cPs)	1450 approx.

*Additives: Perfume, dyes, preservatives, etc.

VERY MILD FORMULATION %

AKYPO® RLM 45N Sodium Laureth-6 Carboxylate	9
Decyl Glucoside	15
*THICKENER	5

*THICKENER ABILITY Very Mild Formulation



EMULSIFIER /SOLUBILIZER

AMIDET® N can effectively help to incorporate dimethicones into formulations, due to its emulsifying properties in oil-in-water (O/W) systems. The blend of silicone, AMIDET® N and water (ratio 3:1:1) leads to a very stable viscous gel which, when incorporated into cleansing products, gives a milky appearance and good stability.

In order to maximize the performance of the product as a solubilizing and emulsifying agent, it is recommended that a premix be prepared of AMIDET® N with hydrophobic components before adding it to the formulation.

Ref. C-210

SHAMPOO

	%
EMAL® 227E Sodium Laureth Sulfate	29.6
BETADET® S-20 Lauryl Hydroxysultaine	7.5
DANOX® PL-10 Pearllizing Concentrate	4
LEVENOL® H&B Glycereth-2 Cocoate	2
AKYPO® FOAM RL40 Sodium Laureth-5 Carboxylate	3.3
AMIDET® N PEG-4 Rapeseedamide	2.1
Glycerine	1
Ucare™ JR-30M Polyquaternium-10	0.3
Vitamin E Acetate	0.2
Dow Corning® 200F 350cst Dimethicone	0.5
Procapil™ Apigenin + Oleoic Acid + Biotinoyl Tripeptide-1	1
Borago officinalis	0.2
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Pearled Viscous Gel
pH (100%)	6.0 approx
Viscosity at 20°C (cPs)	16000 approx

The combination of AMIDET® N, PEG-40 Hydrogenated Castor Oil and water (ratio 12:7:1) acts synergistically, improving the solubilizing effect of the individual surfactants in water-based formulations and even in aqueous/alcoholic media. This mixture allows the solubilization of large quantities of oils, extracts, etc., and of difficult ones like Jojoba Oil.

SOLUBILIZER 0.5% Jojoba Oil 2% Jojoba Oil

	0.5% Jojoba Oil	2% Jojoba Oil
PEG-40 Hydrogenated Castor Oil	Turbid/separation	White/separation
AMIDET® N	Turbid/separation	White/separation
Blend	Clear	Clear

Ref. C-209

SHOWER GEL

	%
EMAL® 270D Sodium Laureth Sulfate	11.4
AMIDET® N PEG-4 Rapeseedamide	6
BETADET® HR Cocamidopropyl Betaine	13.3
AKYPO® RLM 45 CA Laureth-6 Carboxylic acid	4.3
FINDET® ARH/52 PEG-40 Hydrogenated Castor Oil	3.5
Glycerine	2
Sunflower Oil	0.7
Olive Oil	0.7
Aculyn™ 60 PEG-150 Distearate	0.7
Petrolatum	0.5
Jaguar® C-17 Hydroxypropyl Guar Hydroxypropyl Trimonium Chloride	0.2
Ucare™ JR-30M Polyquaternium-10	0.1
Preservative	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Clear Yellowish Gel
pH (100%)	5.5
Viscosity at 20°C (cPs)	8000

*Additives: Perfume, dyes, preservatives, etc.

MAIN PROPERTIES

FOAM BOOSTER

It is well known that alkanolamides enhance the foam stability of many surfactant mixtures. AMIDET®N is particularly effective for SLES-based (based on Sodium Laureth Sulfate) formulations as well as for SLES-free surfactant mixtures. The relatively low foam ability of cosmetic products in the presence of sebum or oil is substantially improved after the addition of small amounts of AMIDET® N. AMIDET® N also increases the speed of foam formation.

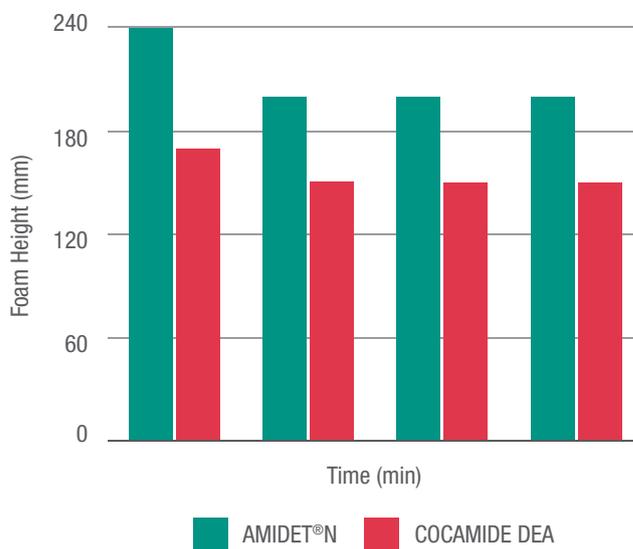
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2-in-1 ANTI-DANDRUFF SHAMPOO

	%
EMAL® 270D Sodium Laureth Sulfate	13.5
AKYPO® FOAM RL40 Sodium Laureth-5 Carboxylate	5
LEVENOL® H&B Glycereth-2 Cocoate	2
AMIDET® N PEG-4 Rapeseedamide	1
Dow Corning 200 350 cst Dimethicone	0.5
TETRANYL® U Undecylenamidopropyltrimonium Methosulfate	0.5
Jaguar C-162 Hydroxypropyl Guar Hydroxypropyl TC	0.1
EDTA.Na₄	0.2
Carbopol ETD 2020 Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.5
Ucare LR 400 Polyquaternium-10	0.2
Zinc Pyrion 48% micronized Zinc Pyrithione	2
DANOX® PL-10 Pearllizing Concentrate	4
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Blue pearled viscous liquid
pH (100%)	6.0 - 7.0
Viscosity at 20°C (cPs)	12.500 approx. (0.5% NaCl)

*Additives: Perfume, dyes, preservatives, etc.

FOAM BEHAVIOR
SLES/THICKENER (10:2)
ROSS MILES: 0.1% A.M.; 37°C; 15° GH



Ref. C-167

BODY MOISTURIZING SHAMPOO

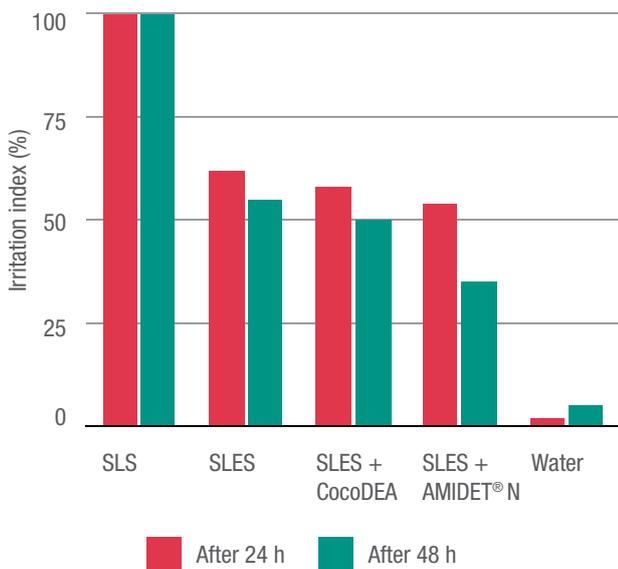
	%
EMAL® 227E Sodium Laureth Sulfate	30
AKYPO® RLM 45CA Laureth-6 Carboxylic acid	2.3
BETADET® S-20 Lauryl Hydroxysultaine	4.2
LEVENOL® H&B Glycereth-2 Cocoate	2
AMIDET® N PEG-4 Rapeseedamide	2
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Clear Viscous Liquid
pH (100%)	5.5 - 6.5
Viscosity at 20°C (cPs)	6200 approx.



MILD & SKIN-COMPATIBLE

An important requirement for any cosmetic product is the need for high skin compatibility under normal conditions of use. As pure substance, AMIDET® N is noticeably less irritating than typical alkanolamides and has a remarkable irritation-reducing effect on SLES-based formulations.

HUMAN PATCH TEST



*Additives: Perfume, dyes, preservatives, etc.

Ref. C-229

INTIMATE HYGIENE

%

BETADET® HR Cocamidopropyl Betaine	18.3
AMIDET® N PEG-4 Rapeseedamide	5.3
AKYPO® SOFT100 BVC Sodium Laureth-11 Carboxylate	4.3
EXCEPARL® LM-LC Lauryl Lactate	0.6
Chamomile Extract	0.2
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Clear Liquid
pH (100%)	5.0 approx.
Viscosity at 20°C (cPs)	4000 approx.

Ref. C-170

BODY MOISTURIZING SHAMPOO

%

EMAL® 227E Sodium Laureth Sulfate	30
AKYPO® RLM 45CA Laureth-6 Carboxylic acid	2.3
BETADET® SHR Cocamidopropyl Hydroxysultaine	3.6
LEVENOL® H&B Glycereth-2 Cocoate	2
AMIDET® N PEG-4 Rapeseedamide	2
Additives*	q.s.
Deionized Water	Up to 100
Appearance (20°C)	Clear Viscous Liquid
pH (100%)	5.5 - 6.5
Viscosity at 20°C (cPs)	7500 approx. (0.9% NaCl)



KAO CHEMICALS EUROPE

www.kaochemicals-eu.com



Enriching lives,
in harmony with nature.

Kao Corporation, S.A.

Puig dels Tudons, 10
E-08210 Barberà del Vallès
(Barcelona) Spain
Tel.: +34 93 7399-300
Fax: +34 93 7399-377
e-mail: marketing@kao.es

Kao Chemicals GmbH

Kupferstrasse 1
D-46446 Emmerich, Germany
Tel.: +49 (0) 2822 711-0
Fax: +49 (0) 2822 711-201
e-mail: sales@kaochemicals.de

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OUR CHEMICALS, YOUR BUSINESS

