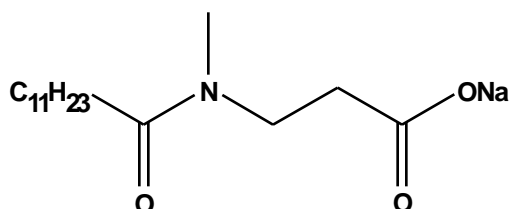


Introduction of SOFTILT®AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

1 Features of SOFTILT®AS-L

★ Chemical structure of SOFTILT®AS-L



INCI NAME :

SODIUM LAUROYL METHYLAMINOPROPIONATE

CAS No. : 21539-58-2

EINECS No. : 244-429-3

Appearance : Colorless – light yellow liquid

Odor : Slight specific odor

Concentration : 30%

pH (3% aq) : 8.0~9.5

Color (APHA) : 100 max.

Sodium chloride (%) : 0.3 max.

● Amino acid based surfactant made from N-methyl-β-alanine

It's an amino acid based surfactant for a mild image. And it has the structure of β-alanine that is the amino acid exists naturally.

● High foaming ability between mild acidity and basicity

A fine, rich foam can be obtained in a wide pH.

● Viscosity improving ability in mild acidity

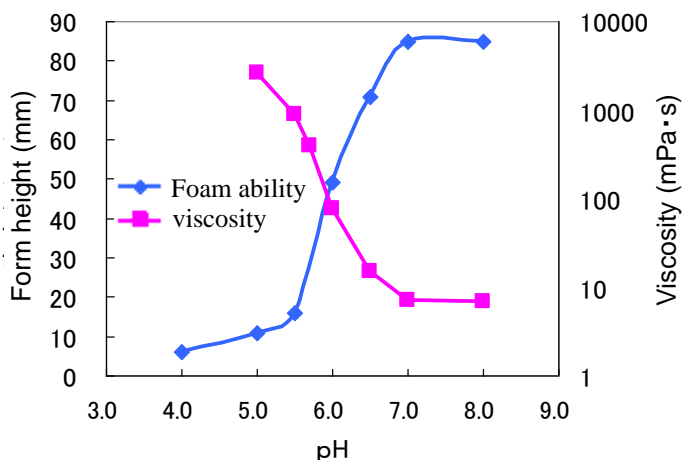
Remarkable viscosity improving behavior is shown by combining with the ampholytic surfactant in acidulous.

● Good complex formational ability

The effect of hair conditioning at the rinse time is demonstrated by the complex formative ability with cationic polymer.

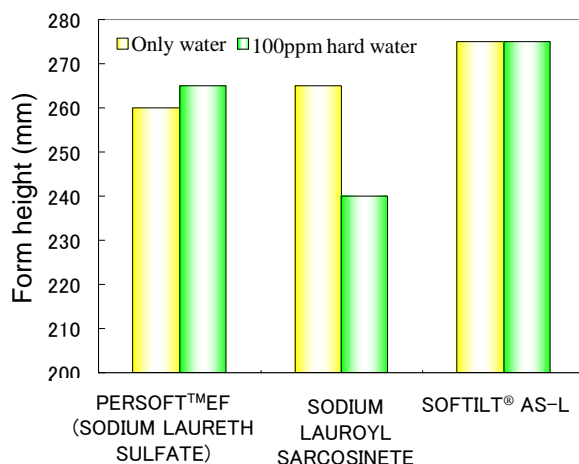
2 Basic properties

Foaming ability in each pH (1wt%, 40°C) * with MILLSER
Viscosity in each pH (30wt%, 25°C) * B type viscometer



▶ SOFTILT®AS-L can control physical properties by changing the pH.

Foaming ability in hard water (1wt%, 40°C)
*** Ross Miles method**



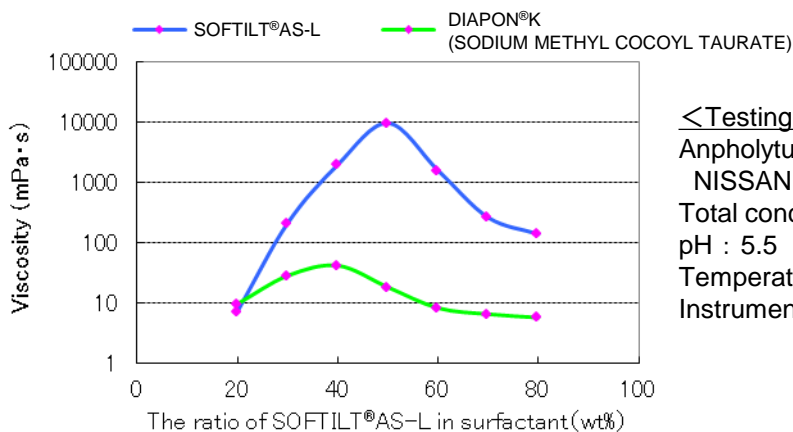
▶ SOFTILT®AS-L can make a rich foam in hard water.

Introduction of SOFTILT®AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

3 Functionality

Viscosity behavior when combining with ampholytic surfactant

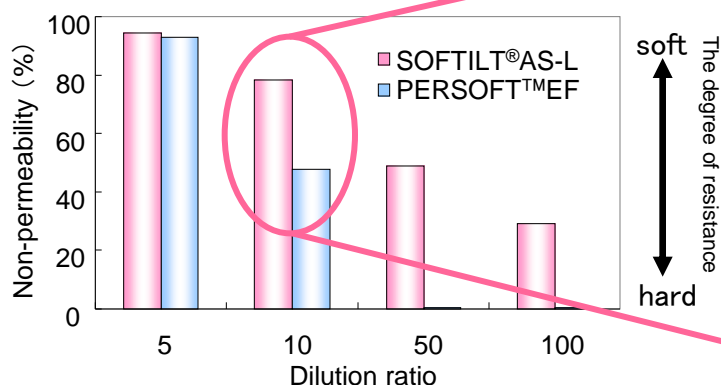


<Testing condition>

Anpholytuc surfactant :
NISSAN ANON BDF-R (COCAMIDOPROPYL BETAINE)
Total concentration of surfactant : 20wt%
pH : 5.5
Temperature : 25°C
Instrument : B type viscometer

SOFTILT®AS-L acts by combining with the ampholytic surfactant as a cleaning agent and a viscosity improver. It has remarkable viscosity improving behavior compared to other amino acid based surfactants.

Complex formation with cationic polymer



<Testing condition>

Formulation :

Anionic surfactant (Concentration : 10wt%)
NISSAN ANON BDF-R (Concentration : 5wt%)
Polymer JR-30M (0.5wt%)

Anionic surfactant :

SOFTILT®AS-L
PERSOFT™EF (SODIUM LAURETH SULFATE)

pH : 6.0

Temperature : 25°C

Instrument : UV·Vis absorptiometer

Operation : The mixed solution was diluted with the ion exchange water (to 5 ~ 100 times), and the permeability of 500 nm was measured

* Non-permeability (%) = 100 - permeability (%)

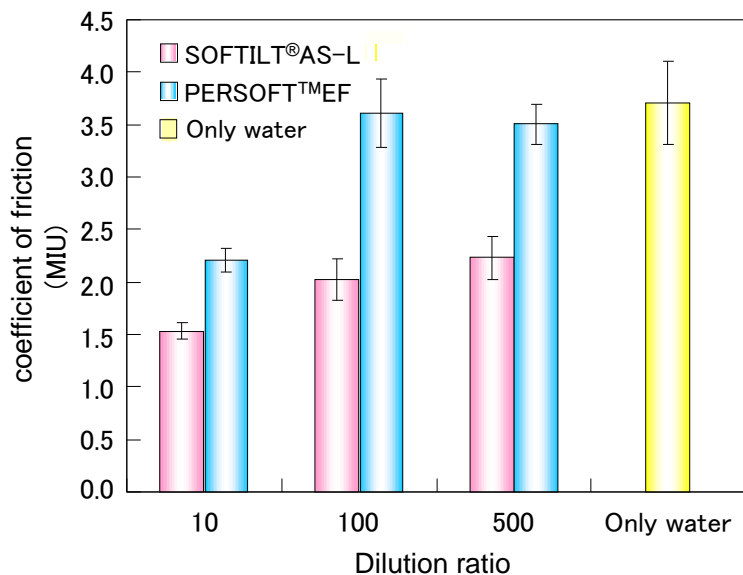
The effect of hair conditioning at the rinse time is demonstrated by the complex formative ability with cationic polymer.

Introduction of SOFTILT®AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

NOF CORPORATION
Oleo & Speciality Chemicals Div.

Reduction effect of the coefficient of friction



<Testing condition>

Formulation :

Anionic surfactant (Concentration : 10wt%)
NISSAN ANON BDF-R (Concentration : 5wt%)
Polymer JR-30M (0.5wt%)

Anionic surfactant :

SOFTILT®AS-L
PERSOFT™EF (SODIUM LAURETH SULFATE)

Instrument : Friction tester (KES-SE)

Temperature : 25°C

Humidity : 50%

Friction sensor : 100mm² silicone

Weight : 50g

Sample movement speed : 1mm/sec



Hair samples fixed to a dish base



Measurement

➡ At the rinse time, formed complexes demonstrate the hair conditioning effect and give smooth feeling of hair.

Introduction of SOFTILT®AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

4 Formulation (Hair shampoo)

Hair shampoo that is not creaky when rinsing it

Ingredients	INCI name	Wt%
PERSOFT™EF	SODIUM LAURETH SULFATE	30.0
NISSAN ANON™BDF-R	COCAMIDOPROPYL BETAINE	9.0
SOFTILT®AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	9.0
NISSAN ANON™LA	DISODIUM LAURYLIMINODIACETATE	2.0
STAFOAM™DL	LAURAMIDE DEA	2.0
UNIGLY®MK-207	PEG-7 GLYCERYL COCOATE	1.0
Polymer JR-30M	POLYQUATERNIUM-10	0.5
Citric acid	CITRIC ACID	Proper quantity
Water	WATER	Balance
Appearance	Colorless – light yellow liquid	
pH	5.8	
Viscosity (mPa·s)	2,350	

Amino acid based gentle hair shampoo

Ingredients	INCI name	Wt%
SOFTILT®AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	25.0
NISSAN ANON™BDF-R	COCAMIDOPROPYL BETAINE	25.0
DIAPON®HF-SF	SODIUM METHYL CAPROYL TAURATE	6.0
Polymer JR-30M	POLYQUATERNIUM-10	0.5
Citric acid	CITRIC ACID	Proper quantity
Water	WATER	Balance
Appearance	Colorless – light yellow liquid	
pH	5.8	
Viscosity (mPa·s)	1,650	

Introduction of SOFTILT® AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

5 Formulation (Facial wash)

Soap based facial wash paste that doesn't stretch

Ingredients	INCI name	Wt%
NAA®-122	LAURIC ACID	3.0
NAA®-142	MYRISTIC ACID	20.0
NAA®-160	PALMITIC ACID	5.0
NAA®-180	STEARIC ACID	1.0
UNISTER™ E-286	GLYCOL DISTEARATE	2.5
STAFOAM™ DL	LAURAMIDE DEA	1.0
MONOGLY™ MB	GLYCERYL STEARATE	1.0
1,3-BG	BG	7.0
RG-S	GLYCERIN	7.0
SOFTILT® AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	17.0
NISSAN ANON™ LA	DISODIUM LAURYLIMINODIACETATE	5.0
SUNAMID® C-3	SODIUM PEG-4 COCAMIDE SULFATE	5.0
48% KOH	POTASSIUM HYDROXIDE	12.0
Water	WATER	Balance
Appearance	White paste	
pH	8.5	

Acidulous tidy facial wash gel

Ingredients	INCI name	Wt%
SOFTILT® AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	41.0
NISSAN ANON™BDF-R	COCAMIDOPROPYL BETAINE	41.0
NISSAN ANON™LA	DISODIUM LAURYLIMINODIACETATE	5.5
DIAPON®K-SF	SODIUM METHYL COCOYL TAURATE	1.0
RG-S	GLYCERIN	9.0
MERQUAT PLUS 3330	POLYQUATERNIUM-39	1.0
Citric acid	CITRIC ACID	Proper quantity
Water	WATER	Balance
Appearance	Colorless – light yellow liquid	
pH	5.8	
Viscosity (mPa·s)	2,650	

Introduction of SOFTILT®AS-L

N-dodecanoyl-N-methyl-β-alanine sodium salt

6 Formulation (Body shampoo)

Soap based body shampoo that doesn't stretch

Ingredients	INCI name	Wt%
NAA®-122	LAURIC ACID	6.0
NAA®-142	MYRISTIC ACID	7.0
NAA®-160	PALMITIC ACID	2.0
UNISTER™E-286	GLYCOL DISTEARATE	2.0
PG	PROPYLENE GLYCOL	5.0
SOFTILT®AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	13.0
PERSOFT™EF	SODIUM LAURETH SULFATE	6.0
NISSAN ANON™BDF-R	COCAMIDOPROPYL BETAINE	5.0
48% KOH	POTASSIUM HYDROXIDE	6.5
MERQUAT 550	POLYQUATERNIUM-7	1.0
Water	WATER	Balance
Appearance	White liquid	
pH	8.7	
Viscosity (mPa·s)	3,800	

Acidulous tidy body shampoo

Ingredients	INCI name	Wt%
SOFTILT®AS-L	SODIUM LAUROYL METHYLAMINOPROPIONATE	39.0
NISSAN ANON™BDF-R	COCAMIDOPROPYL BETAINE	20.0
PERSOFT™EF	SODIUM LAURETH SULFATE	6.0
DIAPON®K-SF	SODIUM METHYL COCOYL TAURATE	3.0
NISSAN ANON™LA	DISODIUM LAURYLIMINODIACETATE	2.5
MERQUAT 550	POLYQUATERNIUM-7	1.0
Citric acid	CITRIC ACID	Proper quantity
Water	WATER	Balance
Appearance	Colorless – light yellow liquid	
pH	5.8	
Viscosity (mPa·s)	1,150	