



PERSONAL X HOME CARE
INGREDIENTS
catalog

Company Profile

Aekyung Chemical Care Chemicals Business Division manufactures a broad range of products which find application in the personal care industry as shampoos, conditioners, body washes, bubble bath, hand soaps, and facial cleansers.

HISTORY

• 1982~1990

- **1982 03** Establishment of Aekyung Shell CO.,LTD.
(50:50 joint venture with Shell Pacific Enterprises, LTD.)
- **1983 06** Completion of Aekyung Shell Daejeon plant
- **1989 05** Establishment of Aekyung Industry CO., LTD.

• 1991~2000

- **1994 03** Completion of Aekyung Shell Cheongyang Plant
- **08** Establishment of Aekyung Shell Central Research Center
- **1997 07** Expansion of AMDU manufacture plant in Cheongyang Plant
- **1998 09** Liquidation of joint venture relationship with Shell.
Changed CO., LTD. name to Aekyung Specialty Chemicals



2001~2010

- 2001 07** Completion of Aekyung Specialty Chemicals synthetic plant (Production of cationic and nonionic surfactants)
- 2004 11** Expansion of Aekyung Specialty Chemicals synthetic plant
- 2006 01** Environmental Management System Certification (ISO 14001)
- 2009 07** Merger to AK ChemTech CO., LTD (Aekyung P&C / Aekyung Specialty Chemicals / Aekyung Materials)

2011 ~ Present

- 2016 10** Headquarter moved to Seoul
- 2020 05** Establishment of Aekyung Special Paint CO., LTD. after dividing the Paint Business Division
- 2021 11** Merger to Aekyung Chemical CO., LTD. (AK ChemTech / Aekyung Petrochemical / Aekyung Chemical)

Domestic Sites

Headquarter

188, Yanghwa-ro, Mapo-gu, Seoul

R&D Center

120, Sinseongnam-ro, Yuseong-gu, Daejeon

Cheongyang Plant

1547-95, Chungui-ro, Jeongsan-myeon, Cheongyang-gun, Chungcheongnam-do

Daejeon Plant

174, Daehwa-ro 32beon-gil, Daedeok-gu, Daejeon

Ulsan Plant

81, Sanggae-ro, Nam-gu, Ulsan

Jeonju Plant

283, Wanjusandan 6-ro, Bongdong-eup, Wanju-gun, Jeollabuk-do

Overseas Sites

AK VINA

Sales Office : 125 Nguyen Van Thuong, Ward 25, Binh Thanh, Ho Chi Minh City, Vietnam
Plant : Go Dau Industrial Zone, Long Thanh District, Dong Nai Province, Vietnam

AEKYUNG(NINGBO) CHEMICAL

Zhejiang Province, China

AEKYUNG HONG KONG

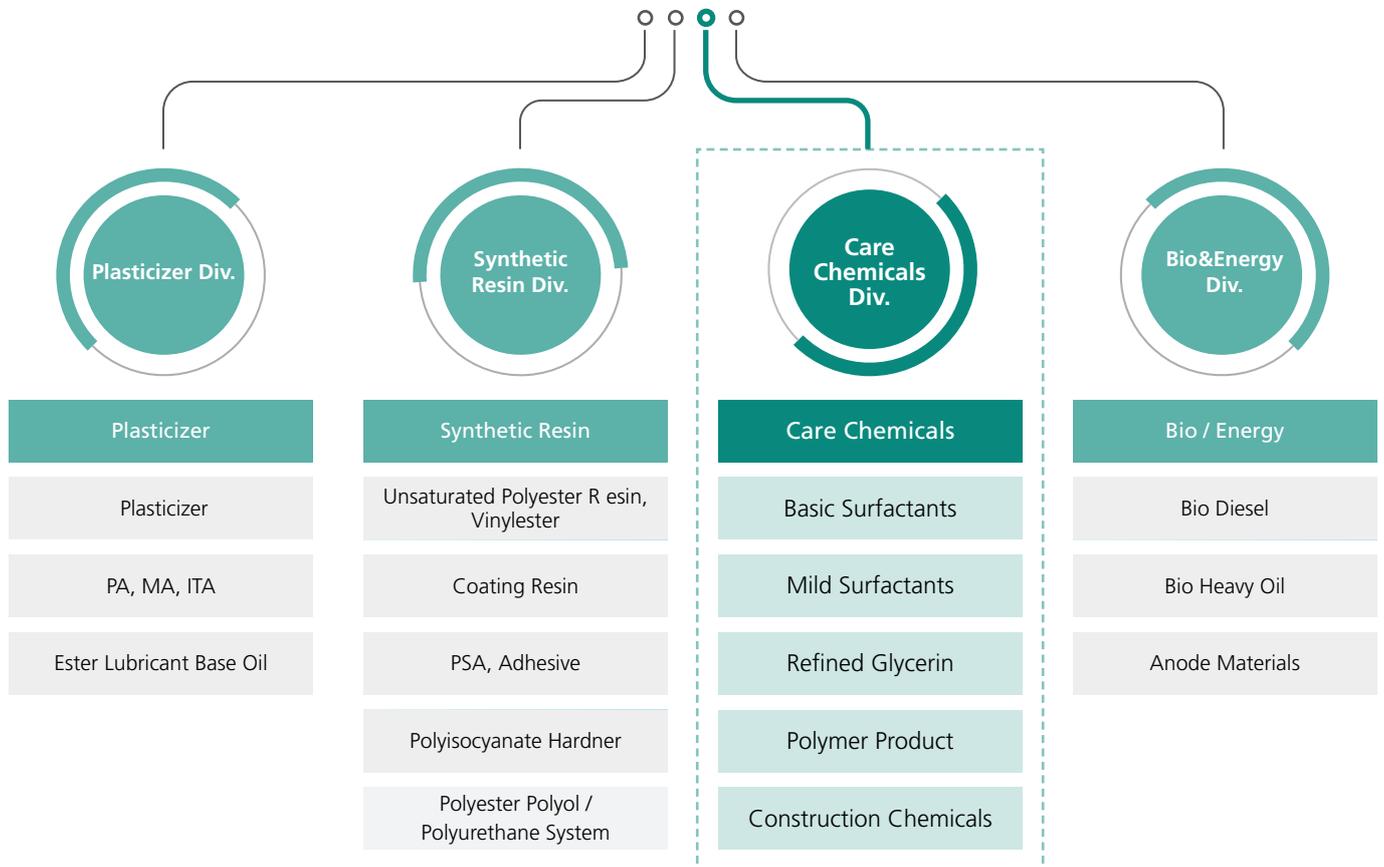
Hong Kong



Aekyung Group



Business Division



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Mild Surfactants

Amino Acid Derivatives

Product Name	INCI Name	Solid %	Form	Solvent	Packing	Application
Glycinate Derivatives	ASCO-MILD® PCGC-30	Potassium Cocoyl Glycinate	30	Liquid	Water	High foaming cleansers (facial cleansers, shampoos, body washes, hand soaps)
	ASCO-MILD® PCGC-30(S)	Potassium Cocoyl Glycinate	30	Liquid	Water	
	ASCO-MILD® PCGC-30(K)	Potassium Cocoyl Glycinate	30	Liquid	Water	
	ASCO-MILD® SCGC-25	Sodium Cocoyl Glycinate	25	Liquid	Water	High viscous cleansers (facial cleansers, shampoos, body washes, hand soaps)
	ASCO-MILD® SCGC-25(S)	Sodium Cocoyl Glycinate	25	Liquid	Water	
	ASCO-MILD® SLGC-25	Sodium Lauroyl Glycinate	25	Liquid	Water	Facial cleanser, body wash, dental care, shampoos, hair conditioners
ASCO-MILD® SLGC-25(S)	Sodium Lauroyl Glycinate	25	Liquid	Water		
Glutamate Derivatives	ASCO-MILD® SCGT-30	Disodium Cocoyl Glutamate	30	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)
	ASCO-MILD® SCGT-25(S)	Sodium / Disodium Cocoyl Glutamate	25	Liquid	Water	
	ASCO-MILD® SCGT-30(S)	Sodium / Disodium Cocoyl Glutamate	30	Liquid	Water	
	ASCO-MILD® TCGT-30(S)	TEA Cocoyl Glutamate	30	Liquid	Water	Conditioning shampoos
	ASCO-MILD® SLGT-30	Sodium Lauroyl Glutamate	30	Liquid	Water	Soaps, detergents, facial cleansing creams, shaving foams
	ASCO-MILD® SLGT-30(S)	Sodium Lauroyl Glutamate	30	Liquid	Water	
Alaninate Derivatives	ASCO-MILD® SCAN-30	Sodium Cocoyl Alaninate	30	Liquid	Water	Low irritation and hypoallergenic cleansers
	ASCO-MILD® SCAN-30(S)	Sodium Cocoyl Alaninate	30	Liquid	Water	
Taurate Derivatives	ASCO-MILD® SMTR-35	Sodium N-methyl Cocoyl Taurate	35	Paste	Water	All kinds of cleansers in wide pH
Sarcosinate Derivatives	ASCO-MILD® SLSS-30	Sodium Lauroyl Sarcosinate	30	Liquid	Water	Shampoos, soaps, facial cleanser, body wash, bathing materials
	ASCO-MILD® SLSS-30(S)	Sodium Lauroyl Sarcosinate	30	Liquid	Water	

• -(S) type : salt content 0.5% max

Alpha Olefin Sulfonates

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
ASCO® AOS-35	Sodium C14-16 Olefin Sulfonate	35	Liquid	Water			
ASCO® AOS-35(M)	Sodium C14-16 Olefin Sulfonate	35	Liquid	Water			
ASCO® AOS-40	Sodium C14-16 Olefin Sulfonate	40	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Sulfate-free and high foaming personal care products, household cleaners with excellent detergency in hard water AOS-40 : contain preservation (sodium benzoate)	
ASCO® AOS-40(M)	Sodium C14-16 Olefin Sulfonate	40	Liquid	Water			
ASCO® AOS-40(N)	Sodium C14-16 Olefin Sulfonate	40	Liquid	Water			
ASCO® AOS-1416(P)	Sodium C14-16 Olefin Sulfonate	93	Powder	-			Household cleaners (powder detergents), industrial cleaners, drymix additive for construction products AOS-1416(C) : contain sodium carbonate
ASCO® AOS-1416(C)	Sodium C14-16 Olefin Sulfonate	74	Powder	-	Paper bag, PP bag (25 kg)		
ASCO® AOS-1418(P)	Sodium C14-18 Olefin Sulfonate	93	Powder, Flake	-			

Sulfosuccinates

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application
ASCO® DLSS(N)	Disodium Laureth-3 Sulfosuccinate	30	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Personal care products with excellent foam stability
ASCO® LSA	Disodium Laureth-3 Sulfosuccinate / Sodium Lauryl Sulfoacetate	25	Liquid	Water		Mild and low irritation cleansers for baby

Mild Surfactants

Mild Betaines

Product Name	INCI Name	Solid %	Form	Solvent	Packing	Application
Alkyl Amidopropyl Betaines	AKTAINETM CAPB-35	Cocamidopropyl Betaine	35	Liquid	Water	Mild and deep clean cleansers with excellent foam stability, foaming agents, thickeners • CAPB-35, CAPB-35(L), CAPB-35(S), CAPB-45 : derived from fatty acid •CAPB-35(L) : low SMCA grade
	AKTAINETM CAPB-35(L)	Cocamidopropyl Betaine	35	Liquid	Water	
	AKTAINETM CAPB-35(S)	Cocamidopropyl Betaine	38	Liquid	Water	
	AKTAINETM CAPB-45	Cocamidopropyl Betaine	45	Liquid	Water	
Alkyl Betaines	AKTAINETM LPB-35	Lauramidopropyl Betaine	35	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg) All kinds of cleansers for high foaming and mild LPB-35 : derived from fatty acid
	AKTAINETM CB-35	Coco Betaine	35	Liquid	Water	Foaming facial cleansers, mild shower gels
Sulfo Betaines	AKTAINETM LB-35	Lauryl Betaine	35	Liquid	Water	Bubble baths, high foaming cleansers, foaming agents, thickeners
	AKTAINETM CAHS-50	Cocamidopropyl Hydroxy Sulfobetaine	50	Liquid	Water	Bubble baths, hydration cleansers
	AKTAINETM LHS-45	Lauryl Hydroxy Sulfobetaine	45	Liquid	Water	Nourishing and high foaming cleansers

Glucoside Derivatives

Product Name	INCI Name	Solid %	Form	Solvent	Packing	Application
APG(Decyl)	Decyl Glucoside	50	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Moisturizing and conditioning cleansers
APG(Lauryl)	Lauryl Glucoside	50	Liquid	Water		
APG(Coco)	Coco Glucoside	50	Liquid	Water		

Personal / Home Care Ingredients

Anionic Surfactants

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
ASCO® SLES-170	Sodium Laureth-1 Sulfate	70	Paste	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Personal care products, household cleaners, industrial and Institutional cleaners	
ASCO® SLES-226	Sodium Laureth-2 Sulfate	26	Liquid	Water			
ASCO® SLES-226(H)	Sodium Laureth-2 Sulfate	26	Liquid	Water			
ASCO® SLES-270	Sodium Laureth-2 Sulfate	70	Paste	Water			
ASCO® SLES-270 LD10	Sodium Laureth-2 Sulfate	70	Paste	Water			
ASCO® SLES-270LV	Sodium Laureth-2 Sulfate	70	Paste	Water		Personal care products, household cleaners, industrial and institutional cleaners	
Alkyl Ether Sulfates ASCO® SLES-328	Sodium Laureth-3 Sulfate	28	Liquid	Water			
ASCO® SLES-370	Sodium Laureth-3 Sulfate	70	Paste	Water			
ASCO® SLES-370 LD10	Sodium Laureth-3 Sulfate	70	Paste	Water			
ASCO® ALES-325	Ammonium Laureth-3 Sulfate	25	Liquid	Water			Products requiring work well in low pH (low irritation shampoos, clear shower gels)
ASCO® ALES-370	Ammonium Laureth-3 Sulfate	70	Paste	Water			
ASCO® SLES-430	Sodium Laureth Ethoxy Sulfate	30	Liquid	Water		Personal care products, household cleaners, industrial and institutional cleaners	
ASCO® SLES-475	Sodium Laureth Ethoxy Sulfate	75	Paste	Water			

• -(H) type : high pH / • -LD10 type : 1,4-Dioxane under 10ppm / • -LV type : low viscosity SLES (under 15,000 cPs)

Personal / Home Care Ingredients

Anionic Surfactants

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
ASCO® SLS-30	Sodium Lauryl Sulfate	30	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Personal care products (shampoos, bath products, shaving creams), household cleaners (rug shampoos, dishwash detergents, laundry detergents)	
ASCO® SLS-G	Sodium Lauryl Sulfate	95	Granule	-			
Alkyl Sulfates	ASCO® SLS-N	Sodium Lauryl Sulfate	95	Needle	-	Paper bag, PP bag (25 kg)	Powdered and tablet cleaners, concentrated laundry powders, dentifrice products, powdered bubble baths
	ASCO® SLS-P	Sodium Lauryl Sulfate	95	Powder	-		
ASCO® ALS-25	Ammonium Lauryl Sulfate	25	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Products requiring work well in low pH and low temperature (shampoos, hand soaps and bath products)	
ASCO® LAS-96	Linear Alkylbenzene Sulfonic Acid	96	Liquid	-			
ASCO® LAS-96(H)	Linear Alkylbenzene Sulfonic Acid	96.5	Liquid	-		All types of household cleaners, industrial cleaners, institutional cleaners, carwash detergents	
ASCO® LAS-90	Linear Alkylbenzene Sulfonic Acid	90	Liquid	-			
Alkylbenzene Sulfonates	ASCO® LAS-96(Q)	Linear Alkylbenzene Sulfonic Acid	96	Liquid	-	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	All types of household cleaners, industrial cleaners, institutional cleaners, carwash detergents, drilling fluid, EOR (enhanced oil recovery) 96(Q): high 2-phenyl isomer LAS
	ASCO® BAS-96	Dodecylbenzene Sulfonic Acid (Branched)	96	Liquid	-		Emulsifiers, degreasers, dry cleaning products, latex emulsifiers paint strippers
	ASCO® DBSS-25	Sodium Alkylbenzene Sulfonate (Linear)	25	Liquid	Water		Dishwash detergents, liquid laundry detergents latex emulsifiers
ASCO® DBSS	Linear Alkylbenzene Sulfonic Acid	96	Liquid	-		Industrial emulsifiers	
ASCO® LAS-97	Linear Alkylbenzene Sulfonic Acid	97.5	Liquid	-			

Cationic Surfactants

Product Name	INCI Name	Solid %	Form	Solvent	Packing	Application
AKCA™ EQ-FA	Dicocylethyl Hydroxyethylmonium Methosulfate	90	Paste	EtOH / IPA		Fabric softeners, antistatic agents EQ-FA : derived from fatty acid
AKCA™ EQ-PO	Dicocylethyl Hydroxyethylmonium Methosulfate	90	Paste	EtOH / IPA		Fabric softeners, antistatic agents EQ-PO : derived from palm oil
AKCA™ EQ-SO(E)	Dicocylethyl Hydroxyethylmonium Methosulfate	85	Paste	EtOH	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Fabric softeners, antistatic agents EQ-SO(E) : derived from soybean fatty acid
AKCA™ EQ-EO	Dicocylethyl Hydroxyethylmonium Methosulfate	95	Paste	EtOH		Fabric softeners, antistatic agents EQ-EO : derived from fatty acid, lash point higher than EQ-FA
AKCA™ OTMS	Octyltrimethylammonium Methosulfate	55	Liquid	Water		Emulsifiers, antistatic agents
AKCA™ CTAC-29	Cetrimonium Chloride	29	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Antistatic and softening agent , hair care (shampoos, conditioners & styling)
AKCA™ CTAC-50	Cetrimonium Chloride	50	Liquid	Water		
AKCA™ STAC-80*	Stearimonium Chloride	65	Paste	PG	Drum (200 kg)	
AKCA™ BKC-50*	Benzalkonium Chloride	50	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Antiseptic in body foam, hand soap, hand sanitizers, laundry, floor cleaning
AKCA™ BKC-80*	Benzalkonium Chloride	80	Liquid	Water / EtOH		

* to be launched soon

Personal / Home Care Ingredients

Amphoteric Surfactants

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application
AKTAINET™ CDP-W	Cocamidopropyl PG-dimonium Chloride Phosphate	30	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Hand washes, hand sanitizers, body scrubs, baby wipes
AKTAINET™ CDP-45	Cocamidopropyl PG-dimonium Chloride Phosphate	45	Liquid	Water		
AKTAINET™ LDP-PW	Linoleamidopropyl PG-dimonium Chloride Phosphate	30	Liquid	Water		Conditioners, shampoos, facial washes

Nonionic Surfactants

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
Alkanol Amides	AKNON™ CDE	Coco Diethanolamide	93	Liquid	-	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Viscosity builders, foam stabilizers, thickeners, emulsifiers CDE : glycerin-free
	AKNON™ CDE(G)	Coco Diethanolamide	84	Liquid	-		Viscosity builders, foam stabilizers, thickeners, emulsifiers CDE(G) : contain glycerin
	AKNON™ CME	Coco Monoethanolamide	92	Flake	-	Paper bag, PP bag (25 kg)	Viscosity builders, foam stabilizers, thickeners, emulsifiers
Amine Oxides	AKNON™ LAO	Lauryldimethylamine Oxide	33	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Shampoos, bubble baths, hand soaps, conditioners, foaming agents, emulsifiers and viscosity agents.
	AKNON™ CAO	Cocoyldimethylamine Oxide	30	Liquid	Water		
	AKNON™ CPAO	Cocamidopropylamine Oxide	33	Liquid	Water		

Silicone Emulsions

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
Dimethicone Type	ASCO® SEM-506	Dimethicone / Laureth-23 / Laureth-3	60	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	High gloss and conditioning shampoos, soft feeling conditioners
	ASCO® SEM-660	Dimethicone / Laureth-23 / Laureth-3	60	Liquid	Water		
	ASCO® SEM-660S	Dimethicone / Laureth-23 / Laureth-3	60	Liquid	Water		
	ASCO® SEM-670	Dimethicone / Laureth-23 / Laureth-3	70	Liquid	Water		
Amodimethicone Type	ASCO® SEM-115	Amodimethicone / C12-14 sec-Pareth-7	15	Liquid	Water		High gloss and conditioning shampoos, soft feeling conditioners, micro emulsions
	ASCO® SEM-120	Amodimethicone / C12-14 sec-Pareth-7	20	Liquid	Water		

Acrylate Polymer

Product Name	INCI Name	Solid %	Form	Solvent	Packing	Application
ASCO® LPO	Sodium Poly Acrylate	41	Liquid	Water	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Detergent builders, chelating agents, dispersants and de-flocculants
ASCO® LPO(N)	Sodium Poly Acrylate	43	Liquid	Water		
ASCO® LPO(A)	Poly Acrylic Acid	50	Liquid	Water		

Cosmetics Ingredients

Moisturizers

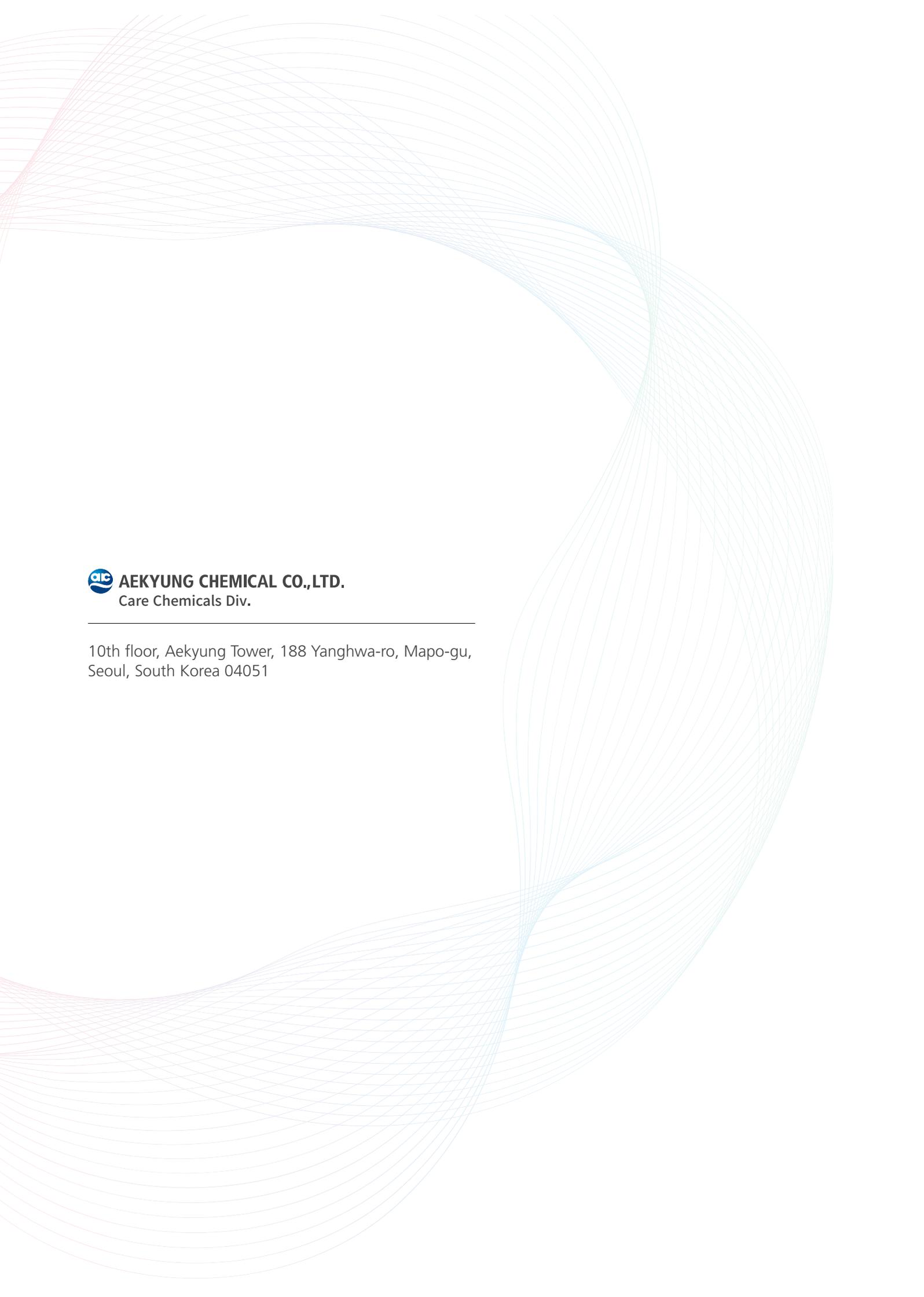
Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
Copolymer	AKNON™ PEGPPG 17/6	PEG/PPG 17/6 Copolymer	100	Liquid	-	Drum, IBC (200 kg, 1,000 kg, 1,050 kg)	Moisturizers for facial mask sheet and skin products
	AKCERINE™ 940GEN	Glycerin	94	Liquid	-		Industrial grade : alkyl resins, coating and anti-freezing agent
Refined Glycerin	AKCERINE™ 995USP	Glycerin	99.5	Liquid	-	Drum, ISO (250kg, 2,000 kg)	USP grade : cosmetics, polyether polyol, personal care products, food
	AKCERINE™ 997VEG	Glycerin	99.7	Liquid	-		100% Vegetable origin : cosmetics, personal care products, food

Sun Care

Product Name	INCI Name	Active %	Form	Solvent	Packing	Application	
	ASCO® TELIKA_SA	Titanium Dioxide / Aluminum Hydroxide / Stearic Acid	80	Powder	-		
	ASCO® TELIKA_100SA	Titanium Dioxide / Aluminum Hydroxide / Stearic Acid	88	Powder	-		
TiO ₂	ASCO® TELIKA_NC	Titanium Dioxide	99	Powder	-		
	ASCO® TELIKA_100NC	Titanium Dioxide	99	Powder	-		
	ASCO® ZINKA_30DM	Zinc Oxide / Hydrogen Dimethicone	96	Powder	-		
	ASCO® ZINKA_30M	Zinc Oxide / Methicone	96	Powder	-	Paper bag, PP bag (25 kg)	Cosmetics sunscreen, makeup powder
	ASCO® ZINKA_30D	Zinc Oxide / Dimethicone	96	Powder	-		
ZnO	ASCO® ZINKA_30AS	Zinc Oxide / Triethoxycaprylylsilane	96	Powder	-		
	ASCO® ZINKA_100AS	Zinc Oxide / Triethoxycaprylylsilane	98	Powder	-		
	ASCO® ZINKA_30NC	Zinc Oxide	99	Powder	-		
	ASCO® ZINKA_100NC	Zinc Oxide	99	Powder	-		

Products List of AK VINA

Category	Product Name	NCI Name	Page
Amino Acid Derivatives	ASCO-MILD® PCGC-30	Potassium Cocoyl Glycinate	6
	ASCO-MILD® PCGC-30(S)	Potassium Cocoyl Glycinate	6
	ASCO-MILD® PCGC-30(K)	Potassium Cocoyl Glycinate	6
	ASCO-MILD® SCGC-25	Sodium Cocoyl Glycinate	6
	ASCO-MILD® SCGC-25(S)	Sodium Cocoyl Glycinate	6
	ASCO-MILD® SLGC-25	Sodium Lauroyl Glycinate	6
	ASCO-MILD® SLGC-25(S)	Sodium Lauroyl Glycinate	6
	ASCO-MILD® SCGT-30	Disodium Cocoyl Glutamate	6
	ASCO-MILD® SCGT-25(S)	Sodium / Disodium Cocoyl Glutamate	6
	ASCO-MILD® SCGT-30(S)	Sodium / Disodium Cocoyl Glutamate	6
	ASCO-MILD® TCGT-30(S)	TEA Cocoyl Glutamate	6
	ASCO-MILD® SLGT-30	Sodium Lauroyl Glutamate	6
	ASCO-MILD® SLGT-30(S)	Sodium Lauroyl Glutamate	6
	ASCO-MILD® SCAN-30	Sodium Cocoyl Alaninate	6
	ASCO-MILD® SCAN-30(S)	Sodium Cocoyl Alaninate	6
	ASCO-MILD® SLSS-30	Sodium Lauroyl Sarcosinate	6
	ASCO-MILD® SLSS-30(S)	Sodium Lauroyl Sarcosinate	6
	Mild Betaines	AKTAINETM CAPB-35	Cocamidopropyl Betaine
AKTAINETM CAPB-35(L)		Cocamidopropyl Betaine	8
AKTAINETM CAPB-35(S)		Cocamidopropyl Betaine	8
AKTAINETM CAPB-45		Cocamidopropyl Betaine	8
AKTAINETM LPB-35		Lauramidopropyl Betaine	8
AKTAINETM CB-35		Coco Betaine	8
AKTAINETM LB-35		Lauryl Betaine	8
AKTAINETM CAHS-50		Cocamidopropyl Hydroxy Sulfobetaine	8
AKTAINETM LHS-45	Lauryl Hydroxy Sulfobetaine	8	
Cationic Surfactants	AKCATM EQ-FA	Dicocoylethyl Hydroxyethylmonium Methosulfate	11
	AKCATM EQ-PO	Dicocoylethyl Hydroxyethylmonium Methosulfate	11
	AKCATM EQ-SO(E)	Dicocoylethyl Hydroxyethylmonium Methosulfate	11
	AKCATM EQ-EO	Dicocoylethyl Hydroxyethylmonium Methosulfate	11
	AKCATM CTAC-29	Cetrimonium Chloride	11
	AKCATM CTAC-50	Cetrimonium Chloride	11
	AKCATM STAC-80	Stearimonium Chloride	11
	AKCATM BKC-50	Benzalkonium Chloride	11
	AKCATM BKC-80	Benzalkonium Chloride	11
Nonionic Surfactants	AKNONTM LAO	Lauryldimethylamine Oxide	12
	AKNONTM CAO	Cocoyldimethylamine Oxide	12
	AKNONTM CPAO	Cocamidopropylamine Oxide	12



 **AEKYUNG CHEMICAL CO.,LTD.**
Care Chemicals Div.

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Seoul, South Korea 04051



ASCO[®] series

ALPHA OLEFIN SULFONATE

Aekyung Chemical Company is providing
sulfate-free ingredients for the personal care market.



Alpha Olefin Sulfonate

- ASCO® AOS is a sulfate-free anionic surfactant for use in the personal care categories.
- ASCO® AOS provides outstanding detergency, and good foaming properties.

Sulfate-Free

Sulfate-free provides milder and less skin irritating foaming to hair and skin than SLES.

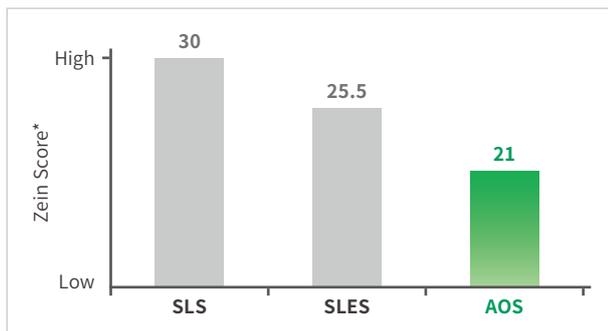
1,4-Dioxane Free

1,4-Dioxane is carcinogenic (NTP, IARC, US EPA, and etc).



Relative Mildness

Skin irritation potential of ASCO® AOS is lower than SLS or SLES surfactant.



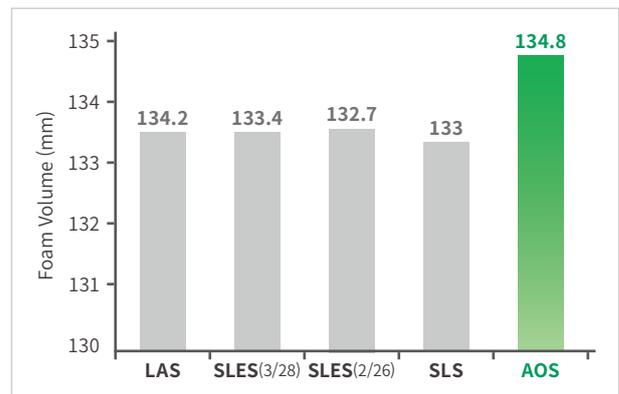
* The Zein test enables to determine the irritation potential of a surfactant. The irritation potential of the product is directly proportional to the quantity of dissolved proteins. The less zein score, the milder the surfactant.

EWG's Skin Deep® cosmetics data base



High-Foaming

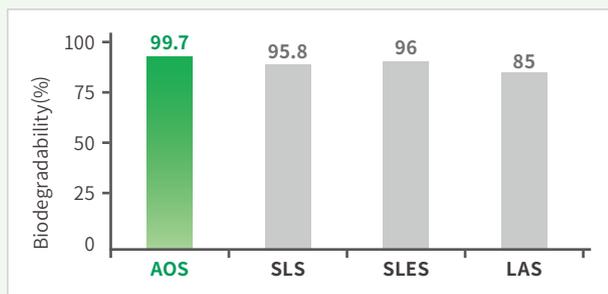
ASCO® AOS foam volume is similar to sulfate-based surfactant.



LAS : Linear Alkylbenzene Sulfonate
SLES : Sodium Laureth Sulfate

SLS : Sodium Lauryl Sulfate
AOS : Alpha Olefin Sulfonate

Biodegradability



* Ref. : ECHA (European Chemicals Agency)

Applications

- | | | | |
|--|----------------|--|-------------------|
| | Face cleansers | | Baby care |
| | Hair shampoos | | Laundry detergent |
| | Body washes | | Dish wash |
| | Hand wash | | Home care |



AKTAINE™ Series

BETAINE SURFACTANTS

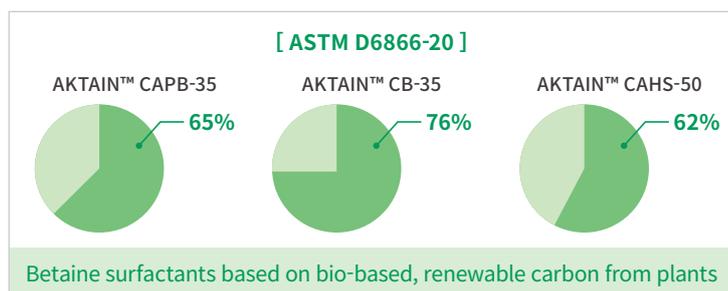
Aekyung Chemical is providing various grades of betaine products such as a **low salt** and **wide pH range** for the personal care market.



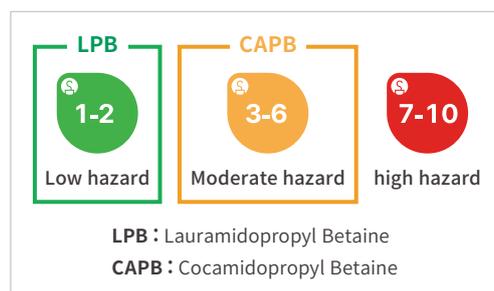
Betaine surfactants

- Mild amphoteric co-surfactants with **Excellent compatibility** with anionic, non-ionic and cationic surfactants.
- It provides **Good foaming** and **Viscosity building effect** with Anionic system.
- It **reduces Irritation** of Anionic surfactants to skin and eyes.
- It is **stable over a wide pH range**, thus providing the formulator with a flexible ingredient for use in many applications.

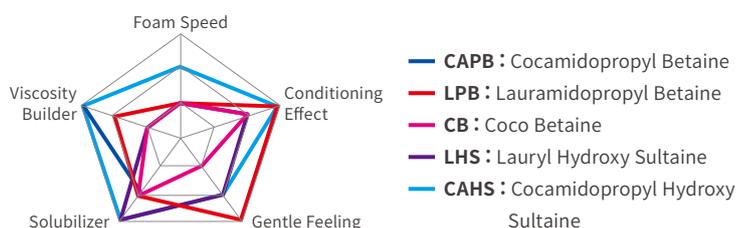
Bio-based Carbon content



EWG's Skin Deep®

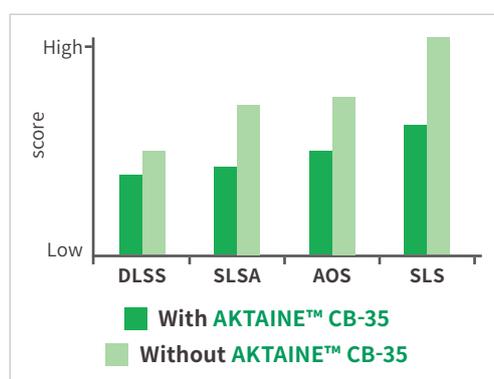


Feeling after application



AKTAIN™	CAPB	LPB	CB-35	LHS	CAHS
Foam Speed	++	+	+	+	++
Conditioning Effect	+++	++	++	++	+++
Gentle Feeling	+++	+++	+	++	++
Solubilizer	++	++	++	+++	+++
Viscosity Builder	+++	++	+	+	+++

Mildness (Skin irritation)



DLSS : Disodium Laureth Sulfosuccinate
 SLSA : Sodium Lauryl Sulfoacetate
 AOS : Alpha Olefin Sulfonate
 SLS : Sodium Lauryl Sulfate

What is AKTAIN CAPB-35(LS)?

- AKTAIN CAPB-35(LS) is **low salt (< 0.5%)** cocamidopropyl betaine.
- **Easy to adjust desired viscosity** in cleansing products such as shampoo, body wash and baby care.
- Its low salt content makes it great for use in hair dye shampoos that use direct dyes.
- And the low salt content **does not affect the corrosion of stainless steel**.



ASCO[®] SLES-270 LD Series

New release 2023

Emerging 1,4-Dioxane Regulation

What is 1,4-Dioxane ?

- 1,4-Dioxane is a synthetic chemical primarily used as a solvent and historically as a stabilizer for chlorinated solvents used in commercial and industrial application.
- It can also be found as an impurity in household products such as shampoos, toothpastes, and cleaning products.
- 1,4-Dioxane forms as a byproduct during the manufacturing process of certain surfactants and emulsifiers produced with ethylene oxide.
- 1,4-Dioxane is completely miscible in water.

What is concern about 1,4-Dioxane ?

- EPA has classified 1,4-Dioxane as “likely to be **carcinogenic to humans**” by all routes of exposure (per EPA IRIS 2013)
- 2016 report by the Department of Health and Human Services National Toxicology Program (NTP) found that 1,4-Dioxane is “reasonably anticipated to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in experimental animals”
- The data available from human epidemiological studies are not adequate to evaluate the relationship between **human cancer and exposure to 1,4-Dioxane**.

New York restricts 1,4-Dioxane in cleaning product

NY State legislature bill targets Home and Personal Care Product

- (2016) EPA found ≥ 1 ppb levels of 1,4-Dioxane in groundwater in NY : highest levels are in Long Island
- (2016) EPA risk assessments indicate that the drinking water concentration representing a cancer risk level for 1,4-Dioxane is 0.35ppb (EPA IRIS 2013)
- (June, 2019) New York Senate and Assembly passed a bill to limit present of 1,4-Dioxane in household, cosmetic and personal care product.
- **Status** : it has yet to be delivered to the Governor’s office. Decision by Dec. 31, 2019
- **Ongoing Actions** : ACI, HCPA and allied trades seeking chapter amendment.

NY Bill 1,4-Dioxane Limit Restrictions Summarized

Household Cleaning Products & Personal Care Products	<ul style="list-style-type: none"> • 2ppm by Dec. 31, 2022 • 1ppm by Dec. 31, 2023 • 2025 : Department of Environmental Conservation in consultation with the Department of Health can determine, by rule, if the “trace concentration threshold shall be lowered to better protect human health and the environment”
Cosmetic Products	<ul style="list-style-type: none"> • 10ppm by Dec. 31, 2022 • 2025 : Department of Environmental Conservation in consultation with the Department of Health can determine, by rule, if the “trace concentration threshold shall be lowered to better protect human health and the environment”

California’s Cleaning Product Right to Know

California Right to Know Act (2017)

- CPRKA
- SB 258

Manufacturers of cleaning products sold in California must post the following information (and more) on their websites by Jan 2020 and on labels by Jan 2021 :

- “Intentionally Added” ingredient
- “Nonfunctional Constituents” at concentrations at or above 100ppm
- 1,4-Dioxane specifically set at ≥ 10 ppm
- CAS
- Functional purpose served of intentionally added ingredient



ASCO® SLES-270 LD Series

Product Name	INCI Name	Active (%)	1,4-Dioxane Specification Limit (ppm)
ASCO® SLES-270 LD5	Sodium Laureth-2 Sulfate	70	5
ASCO® SLES-270 LD10	Sodium Laureth-2 Sulfate	70	10

Estimated Typical 1,4-Dioxane Contents in Products

Dishwashing Detergent

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
SLES (70%)	20 ~ 100	15 ~ 20	3.00 ~ 20.00
Nonionic Surfactant (Alkyl Ether)	1	0 ~ 5	0 ~ 0.05
Total 1,4-Dioxane			3.00 ~ 20.05

Dishwashing Detergent

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
ASCO® SLES-270 LD5	5	15 ~ 20	0.75 ~ 1.00
Nonionic Surfactant (Alkyl Ether)	1	0 ~ 5	0 ~ 0.05
Total 1,4-Dioxane			0.75 ~ 1.05

Liquid Laundry Detergent

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
SLES (70%)	20 ~ 100	5 ~ 15	1.00 ~ 15.00
Nonionic Surfactant (Alkyl Ether)	1	0 ~ 5	0 ~ 0.05
Total 1,4-Dioxane			1.00 ~ 15.05

Liquid Laundry Detergent

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
ASCO® SLES-270 LD5	5	5 ~ 15	0.25 ~ 0.75
Nonionic Surfactant (Alkyl Ether)	1	0 ~ 5	0 ~ 0.05
Total 1,4-Dioxane			0.25 ~ 0.80

Hair Shampoo

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
SLES (70%)	20 ~ 100	10 ~ 20	2.00 ~ 20.00
Betaine, Alkanolamide, APG, Amino Acid	0	2 ~ 5	0
PQ10, Guar, EQ	0	0.1 ~ 3	0
EGDS, EGMS	1	0 ~ 5	0 ~ 0.05
Carbomer	1	2 ~ 5	0.02 ~ 0.05
Emollients, Extract	0	0 ~ 3	0
Tween, LAE	10	0 ~ 2	0 ~ 0.20
EDTA	0	0 ~ 1	0
Total 1,4-Dioxane			2.02 ~ 20.30

Hair Shampoo

Description	Typical 1,4-DO (ppm)	Typical Use Levels (%)	1,4-DO in the bottle (ppm)
ASCO® SLES-270 LD5	5	10 ~ 20	0.50 ~ 1.00
Betaine, Alkanolamide, APG, Amino Acid	0	2 ~ 5	0
PQ10, Guar, EQ	0	0.1 ~ 3	0
EGDS, EGMS	1	0 ~ 5	0 ~ 0.05
Carbomer	1	2 ~ 5	0.02 ~ 0.05
Emollients, Extract	0	0 ~ 3	0
Tween, LAE	10	0 ~ 2	0 ~ 0.20
EDTA	0	0 ~ 1	0
Total 1,4-Dioxane			0.2 ~ 1.30

SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200
AKTAINETM CAPB-35(M)

Date of issue: 2023-07-31

Revision date:

Version: 1.0

1. IDENTIFICATION

A. Product name

- AKTAINETM CAPB-35(M)

B. Recommended use and restriction on use

- General use : Shampoo, soap, body wash, foam agent, wetting agent
- Restriction on use : Do not use for any other purpose.

C. Manufacturer / Supplier / Distributor information

o Manufacturer information

- Company name : AEKYUNG CHEMICAL CO., LTD.
- Address : #1547-95, Chungui-Ro, Cheongsan-Myeon, Chungnam, Korea
- Emergency telephone number : +82-41-940-6114

o Supplier/Distributor information

- Company name : AEKYUNG CHEMICAL CO., LTD.
- Address : 9th Floor, AekyungTower, #188, Yanghwa-ro, Mapo-gu, Seoul, Republic of Korea, 04051
- Emergency telephone number :

2. HAZARD IDENTIFICATION

A. GHS Classification

- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category2
- Skin sensitization : Category1
- Chronic aquatic toxicity : Category3

B. GHS label elements

o Hazard symbols



o Signal words

- Warning

o Hazard statements

- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H412 Harmful to aquatic life with long lasting effects

o Precautionary statements

1) Prevention

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

2) Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment

- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.

3) Storage

- Not applicable

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification

- Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Water	Dihydrogen oxide	7732-18-5	64.3 ~ 65.00
3-Amino-N-(carboxymethyl)-N,N-dimethyl 1-propanaminium N-coco acyl derivs., hydroxides, inner salts	Cocamidopropyl Betaine	61789-40-0	28.00 ~ 32.00
Sodium chloride	Sodium chloride	7647-14-5	4.50 ~ 6.00
Benzoic acid, sodium salt	Sodium Benzoate	532-32-1	0.10

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Wash thoroughly after handling.

C. Inhalation contact

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Avoid use of water jet for extinguishing
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

B. Specific hazards arising from the chemical

- Causes serious eye irritation
- Causes skin irritation
- Harmful to aquatic life with long lasting effects
- May cause an allergic skin reaction

C. Special protective actions for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.

B. Environmental precautions

- If large amounts have been spilled, inform the relevant authorities.
- Prevent runoff and contact with waterways, drains or sewers.

C. Methods and materials for containment and cleaning up

- Appropriate container for disposal of spilled material collected.
- Dike for later disposal.
- Disposal of waste shall be in compliance with the Wastes Control Act
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.
- If the storage temperature is not observed, be sure to check the pH and appearance of the product before use.

B. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.
- Do not apply direct heat.
- Do not use damaged containers.
- The temperature of storage area is 15~30°C. Minimize temperature changes in the storage area.
- Do not store below 4°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o **ACGIH TLV**
 - Not applicable
- o **OSHA PEL**
 - Not applicable

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

- o **Respiratory protection**
 - Any air-purifying respirator with a full facepiece and an organic vapor canister.
 - Any chemical cartridge respirator with a full facepiece and organic vaporcartridge(s).
 - Any chemical cartridge respirator with organic vapor cartridge(s).

- Consider warning properties before use.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Respiratory protection is ranked in order from minimum to maximum.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- **Eye protection**
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- **Hand protection**
 - Wear appropriate chemical resistant glove.
- **Skin protection**
 - Wear appropriate chemical resistant protective clothing.
- **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Clear Liquid
- Color	Pale yellow
B. Odor	Not available
C. Odor threshold	Not available
D. pH	4.50~5.50 (5% Soln.)
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Soluble in water
M. Vapour density	Not available
N. Specific gravity(Relative density)	1.045 ~ 1.055
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	357.62

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- **Respiratory tracts**
 - Not available

- **Oral**
 - Not available
- **Eye/Skin**
 - Causes skin irritation
 - May cause an allergic skin reaction

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- **Acute toxicity**
 - * **Oral**
 - LD50 : > 5,000 mg/kg (Rat, OECD Guideline 401)
 - * **Dermal**
 - LD50 : > 2,000 mg/kg (Rat, OECD Guideline 402)
 - * **Inhalation**
 - Not available
- **Skin corrosion/irritation**
 - Causes skin irritation
- **Serious eye damage/irritation**
 - Causes serious eye irritation
- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - May cause an allergic skin reaction
- **Carcinogenicity**
 - * **IARC**
 - Not available
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - Not available
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Not available
- **Reproductive toxicity**
 - Not available
- **STOT-single exposure**
 - Not available
- **STOT-repeated exposure**
 - Not available
- **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - EC50 : 2.0 mg/L (96hr, Zebrafish)
- **Crustaceans**
 - EC50 : 6.4 mg/L (48hr, Daphnia magna) ; OECD guideline 202
- **Algae**
 - EC50 : 30 mg/L (48hr, Algae)

B. Persistence and degradability

- **Persistence**
 - Not available
- **Degradability**
 - Not available

C. Bioaccumulative potential

- **Bioaccumulative potential**
 - Not available
- **Biodegradation**
 - 84% (30d, OECD 301D), 100%(28d, OECD 301E)

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG CODE/IATA DGR Packing group

- Not applicable

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Air transport(IATA): Not subject to IATA regulations.
- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- **POPs Management Law**
 - Not applicable
- **Information of EU Classification**
 - * **Classification**
 - Not applicable
- **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29CFR1910.119)**
 - Not applicable
 - * **CERCLA Section 103 (40CFR302.4)**
 - Not applicable
 - * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable

- * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable
- * **EPCRA Section 313 (40CFR372.65)**
 - Not applicable
- **Rotterdam Convention listed ingredients**
 - Not applicable
- **Stockholm Convention listed ingredients**
 - Not applicable
- **Montreal Protocol listed ingredients**
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2023-07-31

C. Revision number and Last date revised

-

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).

MSDS

(Material Safety Data Sheet)

Material name	CAS No.	KE No.	UN No.	EU No.
Sodium C14- 16 Olefin Sulfonate	68439- 57- 6	KE- 32477		931- 534- 0

1. Chemical Product and Company Identification

- a. Product Name ASCO® AOS- 40
- b. Recommendation & Limit of the product
- Recommendation of the product Surface- active agents
 - Limit the use Do not use for any other purpose
- c. Supplier Information
- Company Name Aekyung Chemical Co., Ltd
 - Address #1547- 95, Chungui- Po, Cheongsan- Myeon, Chungnam, Korea
 - Tel +82- 41- 940- 6112

2. Hazards Identification

- a. Classification of the substance or mixture

Skin corrosive / irritation 2 category

Serious eye damage / eye irritation 1 category

- b. GHS Label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements

Prevention

P264 Wash hands thoroughly after handling

Corresponding

P280 Wear protective gloves/protective clothing/eye protection/face protection

P302+P352 If on skin, gently wash with plenty of soap and water

P321 Specific treatment is urgent.

P332+P313 Contact a doctor if skin irritation occurs.

P362+P364 Take off contaminated clothing and wash before reuse.

P305+P351+P338 IF ON SKIN: Wash with plenty of water/...

P310 Immediately call a POISON CENTER/doctor/...

Storage

Not applicable

Disposal

Not applicable

- c. Other hazards which do not result in classification

Not available.

3. Composition and Information on Ingredients

Composition

Chemical name	Common name and Synonym	CAS No.	%
Sodium C14- 16 Olefin Sulfonate	AOS (Alpha- Olefine sulfonates)	68439- 57- 6	38.00 ~ 40.00
Tetradecene		1120- 36- 1	0.00 ~ 2.50
Hexadecene		26952- 14- 7	
Sodium sulfate		7757- 82- 6	0.00 ~ 1.50
Sodium benzoate		532- 32- 1	0.00 ~ 0.07
Water		7732- 18- 5	55.93 ~ 62.00

4. First Aid Measures

- a. Eye contact
Immediately hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes
- b. Skin contact
Immediately flush body and clothes with large amounts of water, using safety shower if available.
Quickly remove all contaminated clothing, including footwear.
Wash skin and hair with running water.
Continue flushing with water until advised to stop by the Poisons Information Center.
Transport to hospital, or doctor
- c. Inhalation
If fumes or combustion products are inhaled remove from contaminated area.
Lay patient down. Keep warm and rested.
Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
Apply artificial respiration if not-breathing, preferably with a demand valve resuscitator, bag- valve mask device, or pocket mask as trained. Perform CPR if necessary.
Transport to hospital, or doctor, without delay.
- d. Ingestion
For advice, contact a Poisons Information Center or a doctor at once

5. Fire and Explosion Data

- a. Flammability of the Product
Not available.
- b. Auto- Ignition Temperature
Not available.
- c. Flash Points
Not available.
- d. Flammable Limits
Not available.
- e. Products of Combustion
These products are carbon oxides (CO, CO₂), sulfur oxides (SO₂, SO₃...).
- f. Fire Hazards in Presence of Various Substances
Slightly flammable to flammable in presence of heat.
- g. Explosion Hazards in Presence of Various Substances
Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of open flames and sparks
- h. Fire Fighting Media and Instructions
SMALL FIRE: Use DRY chemical powder, LARGE FIRE: Use water spray, fog or foam.
Do not use water jet
- i. Special Remarks on Fire Hazards
When heated to decomposition it emits toxic fumes of sulfur oxides, and sodium oxide
- j. Special Remarks on Explosion Hazards
Not available.

6. Accidental Release Measures

- | | |
|----------------|--|
| a. Small Spill | <p>Remove all ignition sources.
 Clean up all spills immediately.
 Avoid contact with skin and eyes.
 Control personal contact by using protective equipment.
 Use dry clean up procedures and avoid generating dust.
 Place in a suitable labelled container for waste disposal.</p> |
| b. Large Spill | <p>Clear area of personnel and move upwind.
 Alert Emergency Responders and tell them location and nature of hazard.
 Wear full body protective clothing with breathing apparatus.
 Prevent, by any means available, spillage from entering drains or water course.
 Consider evacuation.
 Stop leak if safe to do so.
 Contain spill with sand, earth or vermiculite.
 Collect recoverable product into labeled containers for recycling.
 Neutralize/decontaminate residue.
 Collect solid residues and seal in labeled drums for disposal.
 Wash area and prevent runoff into drains.
 After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
 If contamination of drains or waterways occurs, advise emergency services</p> |

7. Handling and Storage

- | | |
|--|---|
| a. Precautions for safe handling | <p>Use material after mixing enough and check pH value if stored for over 3 months or at high temperature condition.
 Use material after melting evenly, in case material is frozen in winter.
 Do not open drums when melting material.
 When melting material, proceed within 48 hours at no higher than 50 degrees.
 Avoid direct contact of a heater with drums or materials when melting material.</p> |
| b. Conditions for safe storage (including incompatibilities) | <p>Store and handle in accordance with all current regulations.
 Store in cool place. Keep containers dry and well-ventilated place.
 Minimize temperature change. Optimal storage temperature is 15 ~ 30°C.
 Keep material separated from incompatible substances.</p> |

8. Exposure Controls/Personal Protection

- | | |
|---|--|
| a. Engineering Controls | <p>Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.</p> |
| b. Personal Protection | <p>Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves</p> |
| c. Personal Protection in Case of a Large Spill | <p>Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product</p> |
| d. Exposure Limits | <p>Not available</p> |

9. Physical and Chemical Properties

- | | |
|------------------|----------------------|
| a. Appearance | Liquid |
| b. Color | Yellow |
| c. Odor | Not available |
| d. pH | 6.0 ~ 8.0 (at 25 °C) |
| e. Melting point | Not available |
| f. Boiling point | Not available |
| g. Flash point | Not available |

h. Evaporation Rate	Not available
i. Flammable	Not available
j. Upper Explosive Limit	Not available
k. Vapour Pressure (mmHG)	Not available
l. Solubility in water (g/L)	400000 mg/l (25°C)
m. Relative Vapor Density (air=1)	Not available
n. Specific Gravity (water=1)	Not available
o. Water partition coefficient	Not available
p. Auto- ignition temperature	Not available
q. Decomposition Temp	Not available
r. Viscosity	Not available
s. Molecular Weight	316

10. Stability and Reactivity Data

a. Stability	The product is stable
b. Instability Temperature	Not available
c. Conditions of Instability	Excess heat, dust generation, incompatible materials
d. Incompatibility with various substances	Reactive with oxidizing agents
e. Corrosivity	Non-corrosive in presence of glass
f. Special Remarks on Reactivity	Not available
g. Special Remarks on Corrosivity	Not available
h. Polymerization	Will not occur

11. Toxicological Information

a. Routes of Entry	Not available
b. Toxicity to Animals	Oral : LD50 > 2000 mg/kg Rat (OECD 401, ECHA) Dermal : LD50 6300- 13500 mg/kg Rabbit (OECD 402, ECHA)
c. Chronic Effects on Humans	Not available
d. Other Toxic Effects on Humans	Not available
e. Special Remarks on Toxicity to Animals	Not available
f. Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects based on animal test data. No human data found.
g. Special Remarks on other Toxic Effects on Humans	Eyes: Causes moderate eye irritation. Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May cause allergic respiratory reaction. Ingestion: Causes gastrointestinal tract irritation with nausea, vomiting, hypermotility, diarrhea, and bloating. May also affect behavior (ataxia, somnolence), and cardiovascular system. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause allergic dermatitis. Ingestion: Prolonged or repeated ingestion may affect the liver. Inhalation: Prolonged or repeated inhalation may cause allergic respiratory reaction (asthma).

12. Ecological Information

a. Ecotoxicity	LC50 1- 10 mg/l 96 hr Brachydanio rerio (Fish) (OECD 203, ECHA)
b. BOD5 and COD	Not available
c. Products of Biodegradation	92 (%) after 28 day (OECD 306, ECHA)
d. Toxicity of the Products of Biodegradation	Not available
e. Special Remarks on the Products of Biodegradation	Condensability : BCF 70.79

13. Disposal Considerations

a. Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations
b. Disposal Considerations	Dispose of contents in accordance with applicable laws

14. Transport Information

a. UN number	Not available
b. Shipping Name	Not available
c. Dangerous goods class	Not available
d. Packing group	Not available
e. Marine pollutant	Not available
f. Special safety measures	
In case of fire emergency	Not available
In case of spill emergency	Not available

15. Other Regulatory Information

a. Federal and State Regulations	Not available
b. Other Regulations	Not available
c. Other Classifications	Not available

16. Other Information

a. References	<p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)(상선)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)(pH)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)(m.p)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis) (Solubility)</p> <p>Quantitative Structure Activity Relation(QSAR)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)(Oral)</p> <p>OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpw/)(Dermal)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis) (Skin corrosive/skin irritation)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis) (Serious eye damage/eye irritation)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)</p> <p>International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis) SIDS(Fish)</p> <p>The ECOTOXology database (ECOTOX)(http://cfpub.epa.gov/ECOTOX/quick_query.htm) (Crustacea)</p> <p>Quantitative Structure Activity Relation(QSAR)(Persistence)</p> <p>Quantitative Structure Activity Relation(QSAR)(Condensability)</p> <p>IUCLID(Biodegradation)</p>
b. Other Special Considerations	Not available
c. Created	2012-12-08
d. Last Updated	2022-04-01

Our data and the MSDS is written, provided by the Korea Occupational Safety and Health Agency with reference to the MSDS edit, modify some data.

MSDS

(Material Safety Data Sheet)

Material name	CAS No.	KE No.	UN No.	EU No.
Sodium Lauryl Ether Sulfate	68891- 38- 3	KE- 32439		500- 234- 8

1. Chemical Product and Company Identification

a. Product Name	ASCO® SLES- 270 LD5
b. Recommendation & Limit of the product	
Recommendation of the product	Surfactant
Limit the use	Do not use for any other purpose.
c. Supplier Information	
Company Name	Aekyung Chemical Co., Ltd
Address	#1547- 95, Chungui- Ro, Cheongsan- Myeon, Chungnam, Korea
Tel	+82- 41- 940- 6112

2. Hazards Identification

a. Classification of the substance or mixture	
Skin corrosive/skin irritation Category 2	
Serious eye damage/eye irritation Category 1	
b. GHS Label elements, including precautionary statements	
Pictograms	
Signal word	Danger
Hazard statements	H315 Causes skin irritation H318 Causes serious eye damage
Precautionary statements	
Prevention	P264 Wash hands thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Corresponding	P310 If on eye, Immediately call a POISON CENTER or doctor/physician. P302+P352 If on skin, wash with plenty of soap and water, P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 Specific treatment P332+P313 If skin irritation occurs, get medical advice/attention. P362+P364 Take off contaminated clothing and wash before reuse.
Storage	Not applicable
Disposal	Not applicable
c. Other hazards which do not result in classification	Not applicable

3. Composition and Information on Ingredients

Composition

Chemical name	Common name and Synonym	CAS No.	%
Sodium Laureth Sulfate	Sodium Lauryl Ether Sulfate	68891- 38- 3	68.00 ~ 72.00
Laureth- 2		68439- 50- 9	0.00 ~ 2.00
Sodium sulfate		7757- 82- 6	0.00 ~ 1.00
Water		7732- 18- 5	25.00 ~ 32.00

4. First Aid Measures

a. Eye contact	<p>Do not rub your eyes.</p> <p>Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.</p> <p>Get medical attention immediately.</p> <p>Remove contact lenses if worn.</p>
b. Skin contact	<p>Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.</p> <p>Wash contaminated clothing thoroughly before re- using.</p> <p>Go to the hospital immediately if symptoms(flare, irritate) occur.</p> <p>Wash thoroughly after handling.</p>
c. Inhalation	<p>When exposed to large amounts of steam and mist, move to fresh air.</p> <p>Take specific treatment if needed.</p>
d. Ingestion contact	<p>Please be advised by doctor whether induction of vomit is demanded or not.</p> <p>Rinse your mouth with water immediately.</p>
e. Delayed and immediate effects and also chronic effects from short and long term exposure	<p>Not available</p>
f. Notes to physician	<p>Notify medical personnel of contaminated situations and have them take appropriate protective measures.</p>

5. Fire and Explosion Data

a. Suitable (Unsuitable) extinguishing media	<p>Dry chemical, carbon dioxide, regular foam extinguishing agent, spray</p> <p>Avoid use of water jet for extinguishing</p>
b. Specific hazards arising from the chemical	<p>Not available</p>
c. Special protective actions for firefighters	<p>In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.</p> <p>Do not access the tank on fire.</p> <p>Use appropriate extinguishing measure suitable for surrounding fire.</p> <p>Wear appropriate protective equipment.</p> <p>Keep containers cool with water spray.</p> <p>Vapor or gas is burned at distant ignition sources can be spread quickly.</p>

6. Accidental Release Measures

a. Personal precautions, protective equipment and emergency procedures	<p>Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.</p> <p>Ventilate closed spaces before entering.</p> <p>Do not touch spilled material. Stop leak if you can do it without risk.</p> <p>Move container to safe area from the leak area.</p> <p>Do not direct water at spill or source of leak.</p> <p>Avoid skin contact and inhalation.</p>
b. Environmental precautions	<p>Prevent runoff and contact with waterways, drains or sewers.</p> <p>If large amounts have been spilled, inform the relevant authorities.</p>
c. Methods and materials for containment and cleaning up	<p>Large spill : Stay upwind and keep out of low areas. Dike for later disposal.</p> <p>Notification to central government, local government. When emissions at least of the standard amount</p> <p>Dispose of waste in accordance with local regulation.</p> <p>Appropriate container for disposal of spilled material collected.</p> <p>Small leak: sand or other non-combustible material, please let use absorption.</p> <p>Wipe off the solvent.</p> <p>Dike for later disposal.</p>

7. Handling and Storage

- | | |
|---|--|
| a. Precautions for safe handling | Use material after mixing enough and check pH value if stored for over 3 months or at high temperature condition.
Use material after melting evenly, in case material is frozen in winter.
Do not open drums when melting material.
When melting material, proceed within 48 hours at no higher than 50 degrees.
Avoid direct contact of a heater with drums or materials when melting material. |
| b. Conditions for safe storage
(including incompatibilities) | Store and handle in accordance with all current regulations.
Store in cool place. Keep containers dry and well-ventilated place.
Minimize temperature change. Optimal storage temperature is 15 ~ 30°C.
Keep material separated from incompatible substances. |

8. Exposure Controls/Personal Protection

- | | |
|---|--|
| a. Exposure limits | |
| ACGIH TLV | Not applicable |
| OSHA PEL | Not applicable |
| b. Engineering controls | Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume. |
| c. Individual protection measures, such as
personal protective equipment | |
| Respiratory protection | Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
Respiratory protection is ranked in order from minimum to maximum.
Consider warning properties before use.
Any chemical cartridge respirator with organic vapor cartridge(s).
Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
Any air-purifying respirator with a full facepiece and an organic vapor canister.
For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece. |
| Eye protection | Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
Provide an emergency eye wash station and quick drench shower in the immediate work area. |
| Hand protection | Wear appropriate glove. |
| Skin protection | Wear appropriate clothing. |
| Others | Not applicable |

9. Physical and Chemical Properties

- | | |
|-----------------------------------|--|
| a. Appearance | Pourable Gelled Liquid |
| b. Color | Not available |
| c. Odor | Not available |
| d. pH | 7.0- 9.0 (5% soln., 25°C) |
| e. Melting point | No answer |
| f. Boiling point | No answer |
| g. Flash point | No answer |
| h. Evaporation Rate | No answer |
| i. Flammable | Burning time (s) : >2400 (EU method A10, reference ; Spilker (2009)) |
| j. Upper Explosive Limit | No answer |
| k. Vapour Pressure (mmHG) | No answer |
| l. Solubility in water (g/L) | No answer |
| m. Relative Vapor Density (air=1) | No answer |
| n. Specific Gravity (water=1) | No answer |
| o. Water partition coefficient | No answer |
| p. Auto-ignition temperature | No answer |

- | | |
|-----------------------|-----------|
| q. Decomposition Temp | No answer |
| r. Viscosity | No answer |
| s. Molecular Weight | 384 |

10. Stability and Reactivity Data

- | | |
|---------------------------------------|---|
| a. Chemical Stability | This material is stable under recommended storage and handling conditions. |
| b. Possibility of hazardous reactions | Hazardous Polymerization will not occur. |
| c. Conditions to avoid | Avoid contact with incompatible materials and condition.
Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces |
| d. Incompatible materials | Not available |
| e. Hazardous decomposition products | May emit flammable vapour if involved in fire. |

11. Toxicological Information

- | | |
|---|---|
| a. Routes of Entry | |
| Respiratory | No answer |
| Oral | No answer |
| Eye | Causes serious eye damage |
| Skin | Causes skin irritation |
| b. Human Health Hazard information | |
| Acute toxicity | Oral: LD50 4,100 mg/kg rat (ECHA, OECD Guideline 401)
Dermal: LD50 >2,000 mg/kg rat (GLP, ECHA, OECD Guideline 402)
Inhalation: Not applicable |
| Serious eye damage | Method : rabbit irritating (R36)
1.2 of max. 4 (mean) (Time point: 24+48+72 h) (fully reversible)
0.8 of max. 2 (mean) (Time point: 24+48+72 h) (fully reversible)
2.8 of max. 3 (mean) (Time point: 24+48+72 h) (fully reversible)
(OECD Guideline 404, GLP, ECHA), reference : (Krelling, R. & Jung R.1989) |
| Skin corrosion or skin irritation | Irritant. May cause blisters
Method : rabbit (New Zealand White) irritating (R38) 3.2 of max. 4 (mean) (fully reversible) (OECD Guideline 404, GLP, ECHA), reference : (Pels Rijcken, W.R. 1994) |
| c. Chronic Effects on Humans | Not applicable |
| d. Other Toxic Effects on Humans | Not applicable |
| e. Special Remarks on Toxicity to Animals | Serious eye damage
skin irritation |
| f. Special Remarks on Chronic Effects on Humans | Not applicable |
| g. Special Remarks on other Toxic Effects on Humans | Serious eye damage
skin irritation |

12. Ecological Information

- | | |
|--|--|
| a. Ecotoxicity | |
| Fish | LC50 (96 h) 7.1 mg/L (OECD Guideline 203, reference : Scholz, N. (1995)) |
| Daphnia magna | EC50 (48 h) 7.4 mg/L (OECD Guideline 202, reference : Scholz, N. (1993a)) |
| Algae | EC50 (72 h) 27.7 mg/L (OECD Guideline 201, reference : Scholz, N. (1993b)) |
| b. BOD5 and COD | EU Method C.4- D
74 after 28 d (O2 consumption) (based on COD value) (Zielinski, J. (2007)) |
| c. Products of Biodegradation | Biodegradability was determined to be 68% or 74 % (COD) and 60% (ThOD). |
| d. Toxicity of the Products of Biodegradation | Not available |
| e. Special Remarks on the Products of Biodegradation | Not applicable |

13. Disposal Considerations

- | | |
|-------------------------------------|--|
| a. Disposal methods | Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
If water separation is possible, pre-process with Water separation process. |
| b. Special precautions for disposal | The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
Dispose of waste in accordance with all applicable laws and regulations. |

14. Transport Information

- | | |
|----------------------------|-----------|
| a. UN number | No answer |
| b. Shipping Name | No answer |
| c. Dangerous goods class | No answer |
| d. Packing group | No answer |
| e. Marine pollutant | No answer |
| f. Special safety measures | |
| In case of fire emergency | No answer |
| In case of spill emergency | No answer |

15. Other Regulatory Information

- | | |
|----------------------------------|-----------|
| a. Federal and State Regulations | No answer |
| b. Other Regulations | No answer |
| c. Other Classifications | No answer |

16. Other Information

- | | |
|---------------------------------|--|
| a. References | https://echa.europa.eu/registration-dossier/-/registered-dossier/15687#SubNav7 (ECHA) |
| b. Other Special Considerations | No answer |
| c. Created | 2023-03-20 |
| d. Last Updated | |

Our data and the MSDS is written, provided by the Korea Occupational Safety and Health Agency with reference to the MSDS edit, modify some data.

AEKYUNG CHEMICAL CO., LTD.