

## SAFETY DATA SHEET

ISSUANCE DATE: July 24, 2014

SDS # 99-009

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

L'Oreal USA Products, Inc.  
111 Terminal Avenue  
Clark, NJ 07066

**Emergency Telephone Number**  
1-800-535-5053 (International: 352-323-3500)

**For further information:** 1-732-499-2741

**Poison Control Number:** 1-412-390-3326


**Product Name: Water-Based Shampoos and Body Cleansers**

**Recommendations on use:** For cleansing of hair and/or body.

**Restrictions on use:** For external use only. Use only as directed. Products which are labeled "For Adult Use Only" should not be used by children. Bath products intended for children should not be used for prolonged periods due to possible skin and/or urinary tract irritation with immersion.

### SECTION 2: HAZARDS IDENTIFICATION

**Signal Word: WARNING**

	Eye Irritation Category 2A	Causes serious eye irritation	<ul style="list-style-type: none"><li>Wash hands and face thoroughly after handling.</li><li>Wear eye protection/face protection; eye protection appropriate for the manufacturing operation being performed should be used (goggles or face shield).</li></ul>
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This material is considered hazardous by the US Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200)

**General Precautionary Statements:** Keep out of reach of children. Read label before use. Discontinue use if rash, redness, or itching occurs.

**Additional Precautionary Statements for Immersion Products:** Excessive use or prolonged exposure may cause irritation to urinary tract. Avoid contact with eyes.

**Hazards Not Otherwise Classified:** Prolonged contact may cause irritation of skin and mucous membranes. May cause gastrointestinal disturbance and diarrhea if ingested.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Only hazardous constituents associated with the product are listed below**

**INGREDIENT:**

Sodium Lauryl Sulfate  
Sodium Laureth Sulfate

**CAS NO.**

85586-07-8  
3088-31-1

**% WT**

≤ 40%  
≤ 30%

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Coco-Betaine	68424-94-2	≤ 16%
Cocamidopropyl Betaine	61789-40-0	≤ 16%
Disodium Cocoamphodipropionate	68604-71-7	≤ 16%
Ammonium Lauryl Sulfate	2235-54-3	≤ 12%
Disodium Laureth Sulfosuccinate	39354-45-5	≤ 13%
Sodium Lauryl Sulfoacetate	1847-58-1	≤ 13%
Sodium Lauroyl Sarcosinate	137-16-6	≤ 9%
Disodium Cocoamphodiacetate	68650-39-5	≤ 8%
Sodium Cocoyl Isethionate	61789-32-0	≤ 8%
Cocamide MEA	68140-00-1	≤ 5%

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## SECTION 4: FIRST AID MEASURES

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**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing for at least 20 minutes or until material is sufficiently removed from the eye. **If eye irritation persists:** Get medical advice/attention.

**IF ON SKIN:** Wash with plenty of water. **If skin irritation occurs:** Get medical attention. Remove all contaminated clothing and laundry before reuse. If irritation of the urinary tract should occur following use of a bath product, consult a physician.

**IF INHALED:** Remove individual to fresh air and keep in a rest position comfortable for breathing. Call a poison control center if you feel unwell.

**IF SWALLOWED:** Immediately call a poison control center or consult a physician. Do not induce vomiting. Never give anything by mouth to an unconscious individual.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Most common symptoms include irritating properties to eyes, skin, and/or exposed mucous membranes.

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## SECTION 5: FIRE-FIGHTING MEASURES

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### Notes for Non-Emergency Personnel:

**EXTINGUISHING MEDIA:** Product is not flammable. Selection of a fire extinguisher should be appropriate to address the location of the fire and other materials involved.

### Notes for those trained to participate in an emergency:

**SPECIAL FIRE FIGHTING PROCEDURES:** Firefighters should wear self-contained breathing apparatus and full protective gear.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Not known

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal degradation may produce oxides of carbon and sulfur.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### Notes for non-emergency personnel:

Consult trained response personnel for clean-up of large spills or locations where providing control of the release is hazardous. Isolate the area and deny entry to unnecessary and unprotected personnel. Sections 2, 5, 7 and 8 of this document should be consulted upon use of material, to become knowledgeable of the material's hazards and how to control associated risks.



If the location is not hazardous and only a small amount of material is released: Control the spill using absorbent pads, paper towels or sponges while wearing the protective equipment as noted below. Wash area completely with water. Prohibit discharge to drains, soil, surface and ground waters. Dispose in accordance with Section 13 of this document.

**PERSONAL PROTECTIVE EQUIPMENT:** Plastic or rubber gloves, safety glasses/goggles, protective clothing (e.g. apron) may be required for clean-up of large spills. Respiratory protection is typically not necessary, but may be used depending upon the size of the spill and occupational exposure limits. Refer to Section 8 for additional information.

**Notes for those trained in an emergency:**

**ACCIDENTAL RELEASE MEASURES:** Dike and contain any free liquid then absorb on vermiculite or spill pillows/pads. Solidified materials should be placed in sturdy containers for disposal. Wash area completely with water. Take care to avoid contact with wet surfaces or walkways that may become slick when product is present. Prohibit discharge to drains, soil, surface and ground waters. Dispose in accordance with Section 13 of this document.

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## SECTION 7: HANDLING AND STORAGE

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**Precautions for safe handling:**

Do not eat, drink, or smoke while working with hazardous materials. Avoid contact with eyes, clothing, and prolonged contact with skin (other than areas of application). Employees should be advised to wear appropriate protective equipment in the manufacturing environment. Refer to Section 8 for personal protective equipment selection. All manufacturing should be performed indoors, in an enclosed environment.

Maintain a safe work environment, including proper housekeeping practices and structurally sound/compatible containers.

**Incompatible Materials:** None known.

**Conditions for safe storage of unpackaged product (manufacturing environment):** Store in the original tightly capped containers away from sunlight and other heat sources. Keep in a cool and well-ventilated area. Keep container closed when not in use. Store on spill pallets or in other locations where spill containment will be easily accessible.

Keep away from open drains and protect from releases to the environment.

**Storage precautions for packaged product** – see consumer packaging. No special precautions.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**CONTROL PARAMETERS:** These criteria have been published by the referenced authority to establish exposure limits in the work environment. Employee work areas should be monitored to ensure that permissible limits are not exceeded during the work day. These references do not coincide with product use. These references are meant to be in association with the manufacturing environment.

**OCCUPATIONAL EXPOSURE VALUES:**

Component Name (CAS-No.)	Reference	TWA		STEL/CEILING	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
No OEVs have been established for noted constituents.	OSHA PEL	--	--	--	--
	ACGIH TLV	--	--	--	--
	NIOSH REL	--	--	--	--

**WORK HYGIENIC PRACTICES:** Ensure all work surfaces are maintained, to prevent contamination.

**ENGINEERING CONTROLS:** None required for product use. For handling large quantities of material, such as in the manufacturing of product, ventilation should be considered to control nuisance odors associated with product fragrance.

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Local exhaust ventilation is not typically required for product use. For handling large quantities of material, such as in the manufacturing of product -- Local Exhaust: consistent with nuisance odor removal. Mechanical (general): consistent with nuisance odor removal.

**PERSONAL PROTECTIVE EQUIPMENT:** Consistent with good hygiene practices, personal protective equipment (PPE) should be used in conjunction with other control measures including engineering controls, ventilation and isolation. See also Section 5 for PPE advice, in the event of an emergency.

**Eye/Face Protection (Non-Emergency):** None required for product use. For handling of large quantities of material, safety glasses with side shields/goggles are recommended. Face shields may be required where possibility of a large splash to the face could occur.

**Skin Protection (Non-Emergency):** None required for product use. For handling large quantities of material, such as in product manufacturing, plastic or rubber gloves should be considered for use. Tyvek clothing may also be suitable for handling large quantities of material in the manufacturing environment.

**Respiratory Protection (Non-Emergency):** Respiratory protection is not required for product use. For manufacturing of product, respiratory protection may be considered to control nuisance odors. Ensure that the respirator meets current local occupational health and safety standards.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE:</b>	Colored, transparent or opaque, semi-viscous liquid		
<b>ODOR:</b>	Pleasant odor		
<b>ODOR THRESHOLD:</b>	Not Available		
<b>pH:</b>	3.5 – 9.0		
<b>MELTING/FREEZING POINT:</b>	<b>F:</b> ~32	<b>C:</b> ~0	
<b>BOILING POINT:</b>	<b>F:</b> ~212	<b>C:</b> ~100	
<b>FLASH POINT:</b>	<b>F:</b> >200	<b>C:</b> >93.4	<b>METHOD USED:</b> Closed cup
<b>EVAPORATION RATE:</b>	<1 (Butyl acetate = 1)		
<b>FLAMMABILITY:</b>	Not Applicable to Liquids		
<b>FLAMMABLE LIMITS IN AIR:</b>	Not Available		
<b>VAPOR PRESSURE (mmHg):</b>	@ <b>F:</b> N/A	<b>C:</b> N/A	
<b>VAPOR DENSITY (AIR = 1):</b>	@ <b>F:</b> N/A	<b>C:</b> N/A	
<b>RELATIVE DENSITY (H<sub>2</sub>O = 1):</b>	~1		
<b>SOLUBILITY IN WATER:</b>	Freely soluble		
<b>PARTITION COEFFICIENT:</b>	Not Available		
<b>AUTOIGNITION TEMPERATURE:</b>	Not Available		
<b>DECOMPOSITION TEMPERATURE:</b>	Not Available		
<b>VISCOSITY:</b>	Viscous flowing liquid		

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## SECTION 10: STABILITY AND REACTIVITY

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**REACTIVITY:** Material is not considered reactive under typical handling and storage conditions.

**STABILITY:** Product is stable.

**POSSIBILITY OF HAZARDOUS REACTIONS:** None known. Hazardous polymerization is not expected to occur.

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBILITY (MATERIAL TO AVOID):** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon and sulfur, hydrocarbons, and/or derivatives.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### **ACUTE HEALTH EFFECTS:**

**SKIN CORROSION/IRRITATION:** Overexposure may cause skin irritation or dryness

**SERIOUS EYE DAMAGE/IRRITATION:** Causes serious eye irritation

**RESPIRATORY/SKIN SENSITIZATION:** None expected

**INGESTION:** May cause gastrointestinal disturbance or diarrhea

**INHALATION:** None expected

**ROUTES OF EXPOSURE:** Eyes and skin

**SYMPTOMS:** Symptoms may include watering, stinging or itching eyes with direct contact. Prolonged contact may cause irritation of skin and mucous membranes. May cause gastrointestinal disturbance and diarrhea if ingested.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Existing dermatological conditions (such as eczema) may be exacerbated.

### ACUTE TOXICOLOGY DATA FOR COMPONENTS

Where information is not listed specifically for constituents, published information was not available.

Material	Route	Species	Test Results
Sodium Lauryl Sulfate (28.2%)	Oral LD <sub>50</sub>	Rat	6,000 mg/kg
Sodium Lauryl Sulfate	Dermal LD <sub>50</sub>	Rabbit	ca.600 mg/kg
Sodium Lauryl Sulfate	LC <sub>50</sub> (4 hr)	Rat	8.67 mg/L
Sodium Laureth Sulfate	Oral LD <sub>50</sub>	Rat	4,100 mg/kg bw
Sodium Laureth Sulfate	Dermal LD <sub>50</sub>	Rabbit	> 2,000 mg/kg bw
Coco-Betaine	Oral LD <sub>50</sub>	Rat	6,900 mg/kg
Coco-Betaine	Dermal LD <sub>50</sub>	Rat	> 2.0 g/kg
Cocamidopropyl Betaine (30.6% Active sol.)	Oral LD <sub>50</sub>	Rat	4900 mg/kg bw
Cocamidopropyl Betaine (31% Active sol.)	Dermal LD <sub>50</sub>	Rat	> 2000 mg/kg
Disodium Cocoamphodipropionate	Oral LD <sub>50</sub>	Rat	> 5.0 ml/kg
Disodium Cocoamphodipropionate	Dermal LD <sub>50</sub>	Rat (OECD 402)	> 2,000 mg/kg bw
Ammonium Lauryl Sulfate	Oral LD <sub>50</sub>	Rat	> 135 mg/kg bw
Disodium Cocoamphodiacetate	Oral LD <sub>50</sub>	Rats/Mice	> 5.0 to 16.60 g/kg
Disodium Cocoamphodiacetate	Dermal LD <sub>50</sub>	Rats/Mice	> 10.0 ml/kg
Sodium Lauroyl Sarcosinate	Oral LD <sub>50</sub>	Rat	4.2 - 5 mg/kg
Sodium Lauryl Sulfoacetate	Oral LD <sub>50</sub>	Rat	5,750 mg/kg

Material	Route	Species	Test Results
Disodium Laureth Sulfosuccinate (40%)	Oral LD <sub>50</sub>	Rat	> 2,000 mg/kg
Disodium Laureth Sulfosuccinate (30-40%)	Dermal LD <sub>50</sub>	Rabbit	> 2,000 mg/kg
Sodium Cocoyl Isethionate	Oral LD <sub>50</sub>	Rat (OECD 401)	> 2,000 mg/kg bw
Cocamide MEA	Oral LD <sub>50</sub>	Mice	>10 g/kg
Cocamide MEA	Dermal LD <sub>50</sub>	Rabbits	>2 g/kg

## Skin Corrosion/Irritation:

<i>Sodium Lauryl Sulfate:</i>	Slightly – Moderately Irritating: 0.5% - 10%; Skin Corrosion/Severe Irritation: 10% - 30% (Rat)
<i>Sodium Laureth Sulfate:</i>	Not Irritating: 5% - 5.6%; Minimally Irritating: 6 - 10%; Severely Irritating: > 25% (Rat)
<i>Coco-Betaine:</i>	Not Irritating: 7.5%; Slightly Irritating: 15%; Mildly Irritating: 30% (Rat); Not Irritating: 6.0% (Human)
<i>Cocamidopropyl Betaine:</i>	Slightly irritating: 10% (Human)
<i>Disodium Cocoamphodipropionate:</i>	Not Irritating (Rabbit)
<i>Ammonium Lauryl Sulfate:</i>	Slightly Irritating: 25%
<i>Disodium Laureth Sulfosuccinate:</i>	Not irritating: 3%
<i>Sodium Lauryl Sulfoacetate:</i>	Moderate Irritant – 100%
<i>Sodium Lauroyl Sarcosinate:</i>	Not Irritating: 30% (Rat)
<i>Disodium Cocoamphodiacetate:</i>	Irritating: 4.0% (Rat)
<i>Sodium Cocoyl Isethionate:</i>	Slightly Irritating (Rabbit) OECD 404
<i>Cocamide MEA:</i>	Slightly Irritating: 50% (Rabbit); Not Irritating: 50% (Human)

## Serious Eye Damage/Irritation:

<i>Sodium Lauryl Sulfate:</i>	Mildly Irritating: 5.1%; Moderately Irritating: 10%; Severely Irritating: 21% (Rat)
<i>Sodium Laureth Sulfate:</i>	Mildly Irritating: 1.3 – 7.5%; Moderately Irritating: 10 – 17.5%; Severely Irritating: >20% (Rat)
<i>Coco-Betaine:</i>	Not Irritating: 4.5% (Rat); Moderately Irritating: 10%, (Rabbit);
<i>Cocamidopropyl Betaine:</i>	Slightly Irritating: 10% (Human)
<i>Disodium Cocoamphodipropionate:</i>	Not Irritating: 7.5%; Risk of Serious Eye Damage: 40%
<i>Ammonium Lauryl Sulfate:</i>	Irritating: 20% (Rabbit)
<i>Disodium Laureth Sulfosuccinate:</i>	Irritating: 10%; Eye Damage: 25% (Rabbit)
<i>Sodium Lauryl Sulfoacetate:</i>	Possibly Irritating
<i>Sodium Lauroyl Sarcosinate:</i>	Not Irritating: 5%; Slightly Irritating: 10% (Rabbit)
<i>Disodium Cocoamphodiacetate:</i>	Moderately - Severely Irritating: 10-12%
<i>Sodium Cocoyl Isethionate:</i>	Irritating (Rabbit) OECD 405
<i>Cocamide MEA:</i>	Irritating after prolonged contact

## Respiratory Irritation:

<i>Sodium Lauryl Sulfate:</i>	15% - 25% - Inhibition of Respiration (Mice and Rabbits)
<i>Sodium Laureth Sulfate:</i>	Causes Respiratory Irritation.
<i>Coco-Betaine:</i>	Possibly Irritating
<i>Cocamidopropyl Betaine:</i>	Not Irritating
<i>Sodium Lauroyl Sarcosinate:</i>	Possibly Irritating
<i>Cocamide MEA:</i>	Possibly Irritating

## Skin Sensitization:

<i>Sodium Lauryl Sulfate:</i>	Possibly sensitizing with repeated contact.
<i>Sodium Laureth Sulfate:</i>	Not Sensitizing: 0.1% (Topical Application); Slightly Sensitizing: 0.1% (Intradermal) (Guinea Pig)
<i>Coco-Betaine:</i>	Not Sensitizing: 0.75% (Guinea Pig); Slightly Sensitizing: 0.15% (Intradermal) (Guinea Pig)
<i>Cocamidopropyl Betaine:</i>	Possibly sensitizing with repeated contact.
<i>Disodium Cocoamphodipropionate:</i>	Not Sensitizing (Human)
<i>Ammonium Lauryl Sulfate:</i>	Not sensitizing: 25% (Repeat Insult Patch Test)
<i>Sodium Lauryl Sulfoacetate:</i>	Not Sensitizing: 2% (Guinea pig)
<i>Sodium Lauroyl Sarcosinate:</i>	Not Sensitizing: 5%
<i>Sodium Cocoyl Isethionate:</i>	Not Sensitizing: (Guinea pig) OECD 406
<i>Disodium Cocoamphodiacetate:</i>	Not Sensitizing: 28.1%

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## CHRONIC HEALTH HAZARDS:

### REPEAT DOSE TOXICITY:

NOAEL ( <i>Sodium Lauryl Sulfate</i> , oral):	100 mg/kg/day; Rat
NOAEL ( <i>Sodium Laureth Sulfate</i> , oral):	>225 mg/kg bw/day; Rat
NOAEL ( <i>Cocamidopropyl Betaine</i> ):	500 mg/kg; Rat
LOAEL ( <i>Cocamidopropyl Betaine</i> ):	1,000 mg/kg; Rat
NOAEL ( <i>Disodium Cocoamphodipropionate</i> , oral):	1,000 mg/kg bw/day; Rat (OECD 422)
NOAEL ( <i>Disodium Laureth Sulfosuccinate</i> ):	300 mg/kg; Rat
NOAEL ( <i>Sodium Lauryl Sulfoacetate</i> , oral):	75 mg/kg/day; Rat
NOAEL ( <i>Sodium Lauroyl Sarcosinate</i> ):	1,000 mg/kg/day; Rat
NOAEL ( <i>Disodium Cocoamphodiacetate</i> , oral):	16.60g/kg; Rat
NOAEL ( <i>Sodium Cocoyl Isethionate</i> , oral):	≥ 1,000 mg/kg bw/day; Rat (OECD 407)
NOAEL ( <i>Sodium Cocoyl Isethionate</i> , dermal):	≥ 2,070 mg/kg bw/day; Rat (OECD 410)
NOAEL ( <i>Cocamide MEA</i> , oral):	> 750 mg/kg bw/day in olive oil; Rat

### MUTAGENICITY:

<i>Sodium Lauryl Sulfate</i> :	A variety of <i>in vitro</i> and <i>in vivo</i> tests have produced negative results.
<i>Sodium Laureth Sulfate</i> :	A variety of <i>in vitro</i> and <i>in vivo</i> tests have produced negative results.
<i>Coco-Betaine</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Cocamidopropyl Betaine</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Disodium Cocoamphodipropionate</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Disodium Laureth Sulfosuccinate</i> :	A variety of <i>in vitro</i> and <i>in vivo</i> tests have produced negative results.
<i>Sodium Lauryl Sulfoacetate</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Sodium Lauroyl Sarcosinate</i> :	A variety of <i>in vitro</i> and <i>in vivo</i> tests have produced negative results.
<i>Disodium Cocoamphodiacetate</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Sodium Cocoyl Isethionate</i> :	A variety of <i>in vitro</i> tests have produced negative results.
<i>Cocamide MEA</i> :	A variety of <i>in vitro</i> tests have produced negative results.

### REPRODUCTIVE TOXICITY

<i>Sodium Lauryl Sulfate</i> :	No adverse effect was seen on fertility.
<i>Sodium Laureth Sulfate</i> :	NOAEL > 3%; 300 mg/kg/day. No adverse effects after 0.1% solutions.
<i>Coco-Betaine</i> :	No adverse effect was seen on fertility.
<i>Cocamidopropyl Betaine</i> :	No adverse effect was seen on fertility.
<i>Disodium Cocoamphodipropionate</i> :	NOAEL: 1,000 mg/kg (Rat) (OECD 422)
<i>Disodium Laureth Sulfosuccinate</i> :	No adverse effect was seen on fertility.
<i>Sodium Lauryl Sulfoacetate</i> :	NOAEL: 1000 mg/kg bw (OECD 421)
<i>Sodium Lauroyl Sarcosinate</i> :	No adverse effect was seen on fertility.
<i>Cocamide MEA</i> :	No adverse effect was seen on fertility.

### DEVELOPMENTAL TOXICITY/TERATOGENICITY

<i>Sodium Lauryl Sulfate</i> :	NOAEL: 300 mg/kg/day; LOAEL: 600 mg/kg/day (Mice/Rat)
<i>Sodium Laureth Sulfate</i> :	NOAEL: 1,000 mg/kg bw/day (OECD 414 – Rat)
<i>Coco-Betaine</i> :	No indication for genotoxic or teratogenic effects
<i>Disodium Cocoamphodipropionate</i> :	No teratogenic effects (Rat) (OECD 422)
<i>Disodium Laureth Sulfosuccinate</i> :	NOAEL: > 50 mg/kg bw/day
<i>Sodium Lauryl Sulfoacetate</i> :	NOAEL: 1000 mg/kg bw (OECD 421)
<i>Sodium Lauroyl Sarcosinate</i> :	NOAEL: > 1,000 mg/kg/day (Rat)
<i>Disodium Laureth Sulfosuccinate</i> :	NOAEL: > 50 mg/kg bw/day
<i>Cocamide MEA</i> :	No indication for genotoxic or teratogenic effects

## SECTION 12: ECOLOGICAL INFORMATION

The product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices. Additional information is available from the supplier on request.

Contact with the environment should be avoided. Spills and leaks should be immediately cleaned up and removed. All precautions should be taken to prevent contact with the environment. Published information regarding ingredients listed on this document area found below; where data is not listed, documentation was unavailable.

### ACUTE AND PROLONGED TOXICITY TO FISH

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Sodium Laureth Sulfate	LC <sub>50</sub>	7.1 mg/L	Danio Rerio	96 h
Sodium Laureth Sulfate	LC <sub>50</sub>	7.1 mg/L	Danio Rerio	96 h
Coco-Betaine	LC <sub>50</sub>	2 mg/L	Golden Orfe	96 h
Cocamidopropyl Betaine	LC <sub>50</sub>	1.0-10.0 mg/L	Golden Orfe	96 h
Ammonium Lauryl Sulfate	LC <sub>50</sub>	1.5 mg/L	Fathead Minnow	48 h
Sodium Lauryl Sulfoacetate	LC <sub>50</sub>	4.2 mg/L (OECD 203)	Not Reported	96 h
Sodium Lauroyl Sarcosinate	LC <sub>50</sub>	107 mg/L	Danio Rerio	96 h
Disodium Cocoamphodiacetate	LC <sub>50</sub>	> 1 – 10 mg/L	Not Reported	96 h
Sodium Cocoyl Isethionate	LC <sub>50</sub>	31.6 mg/L (OECD 203)	Danio Rerio	96 h
Cocamide MEA	LC <sub>50</sub>	23 - >100 mg/L	Danio Rerio	96 h

### ACUTE TOXICITY TO AQUATIC INVERTEBRATES

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Sodium Lauryl Sulfate	EC <sub>50</sub>	5.55 mg/L	Ceriodaphnia Dubia	48 h
Sodium Laureth Sulfate	EC <sub>50</sub>	7.4 mg/L	Daphnia Magna	48 h
Coco-Betaine	EC <sub>50</sub>	6.5mg/L	Brachydanio Rerio	48 h
Cocamidopropyl Betaine	EC <sub>50</sub>	2 mg/L	Brachydanio Rerio	96 h
Ammonium Lauryl Sulfate	EC <sub>50</sub>	5-37 mg/L	Daphnia Magna	24 h
Sodium Lauryl Sulfoacetate	EC <sub>50</sub>	5.9 mg/L (OECD 201)	Daphnia Magna	48 h
Sodium Lauroyl Sarcosinate	EC <sub>50</sub>	29.7 mg/L	Daphnia Magna	48 h
Disodium Cocoamphodiacetate	EC <sub>50</sub>	25 mg/L	Daphnia Magna	48 h
Sodium Cocoyl Isethionate	EC <sub>50</sub>	> 32 mg/L (OECD 202)	Daphnia Magna	48 h

### TOXICITY TO AQUATIC PLANTS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Sodium Lauryl Sulfate	EC <sub>50</sub>	> 120mg/L	Green Algae	72 h
Sodium Laureth Sulfate	EC <sub>50</sub>	27 mg/L	Desmodesmus Subspicatus	72 h
Coco-Betaine	EC <sub>50</sub>	6mg/L	Not Reported	72h
Cocamidopropyl Betaine	EC <sub>50</sub>	1.0 – 10 mg/L	Desmodesmus Subspicatus	72 h
Sodium Lauryl Sulfoacetate	EC <sub>50</sub>	1.9 mg/L	EC Biomass	96 h
Sodium Lauroyl Sarcosinate	EC <sub>50</sub>	86 mg/L	Desmodesmus Subspicatus	72 h
Disodium Cocoamphodiacetate	EC <sub>50</sub>	>100 mg/L	Not Reported	72 h
Sodium Cocoyl Isethionate	EC <sub>10</sub>	0.3 mg/L (OECD 201)	Pseudokirchneriella subcapitata	72 h
Cocamide MEA	EC <sub>50</sub>	26 mg/L	Not Reported	96 h



## TOXICITY TO MICROORGANISMS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Sodium Lauryl Sulfate	EC <sub>50</sub>	0.38 mg/l	Photobacterium Phoshoreum	15 mins
Sodium Laureth Sulfate	EC <sub>50</sub>	>10g/L	Pseudomonas Putida	16 h
Coco-Betaine	EC <sub>50</sub>	>85 m/L	Not Reported	72 h
Cocamidopropyl Betaine	EC <sub>50</sub>	>100 mg/L	Pseudomonas Putida	72 h
Disodium Cocoamphodipropionate	EC <sub>50</sub>	1,000 mg/L (OECD 209)	Activated Sludge	3 h
Sodium Lauroyl Sarcosinate	EC <sub>50</sub>	> 10mg/L (GESIO 1994)	Not Reported	72 h
Disodium Cocoamphodiacetate	EC <sub>50</sub>	>100 mg/L	Not Reported	72 h
Sodium Cocoyl Isethionate	EC <sub>50</sub>	>1,000 mg/L(OECD 209)	Activated Sludge	3 h

### PERSISTENCY AND DEGRADABILITY:

<i>Sodium Lauryl Sulfate:</i>	Readily biodegradable (95% in 28 days) – OECD 301
<i>Sodium Laureth Sulfate:</i>	Readily biodegradable; Half Life: 30 days (soil)
<i>Coco-Betaine:</i>	Readily biodegradable (84%)
<i>Cocamidopropyl Betaine:</i>	Readily and rapidly degradable. (> 60% BOD/COD, > 70% DOC) (OECD 301)
<i>Disodium Cocoamphodipropionate:</i>	Not readily biodegradable
<i>Ammonium Lauryl Sulfate</i>	Readily biodegradable (100% in 28 to 55 days)
<i>Sodium Lauroyl Sarcosinate:</i>	Readily biodegradable (90.9%/ in 20 days).
<i>Disodium Cocoamphodiacetate:</i>	Readily biodegradable (83% in 28 days) – OECD 302 B
<i>Sodium Cocoyl Isethionate:</i>	Readily biodegradable (78% in 28 days) – OECD 301 D
<i>Cocamide MEA:</i>	Fully degradable (28-day)

### BIOACCUMULATIVE POTENTIAL:

<i>Sodium Laureth Sulfate:</i>	Not considered to be bioaccumulative.
<i>Sodium Lauryl Sulfate:</i>	Low bioaccumulation potential.
<i>Coco-Betaine:</i>	Not suspected to be bioaccumulative.
<i>Sodium Lauroyl Sarcosinate:</i>	Bioaccumulation and bioconcentration is expected because of the relatively high water solubility.
<i>Sodium Cocoyl Isethionate:</i>	Not expected to bioaccumulate (log Pow: -0.41)
<i>Cocamide MEA:</i>	Potentially bioaccumulative (log P >4)

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## SECTION 13: DISPOSAL CONSIDERATIONS

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Those responsible for the performance of disposal, recycling or reclamation activities should refer to Section 8 of this document for advice on personal protective equipment and exposure controls.

**WASTE DISPOSAL CONTAINERS:** Containers should be completely closed and meet applicable carrier transport requirements. No governmental agency specification packaging is required for this product. Fiberboard boxes for packaged products and metal/poly drums for liquid material may be used. Packaging materials should not include incompatible materials.

**WASTE DISPOSAL METHOD:** As manufactured, this product does not exhibit any RCRA characteristics of hazardous waste. Controlled incineration at a licensed waste facility is the recommended technology for treatment and disposal. Material must not be disposed of through sewage.

**RCRA HAZARD CLASS:** Not regulated.

Follow all local governmental requirements intended for disposal.

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## SECTION 14: TRANSPORT INFORMATION

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### North American Ground Transportation

- **IN CONSUMER PACKAGING:** Not regulated
- **OTHER THAN CONSUMER PACKAGING:** Not regulated

### Transport Via Water

- **IN CONSUMER PACKAGING:** Not regulated
- **OTHER THAN CONSUMER PACKAGING:** Not regulated

### Transport Via Air

- **IN CONSUMER PACKAGING:** Not regulated
- **OTHER THAN CONSUMER PACKAGING:** Not regulated

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## SECTION 15: REGULATORY INFORMATION

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**National Fire Protection Association Codes:** Health: 2 Fire: 0 Reactivity: 0 Other: None

**Workplace Hazardous Materials Identification System (WHIMS):** Division 2, Subdivision B; Eye Irritation

This regulatory information represents the product in its consumer packaging.

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## SECTION 16: OTHER INFORMATION

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**PREPARATION INFORMATION:** This document replaces the version dated June 21, 2013 and all previous versions of material safety data sheets related to this product.

Preparer: Ronald Weslosky/Chandra L. Jennings