

## SAFETY DATA SHEET

ISSUANCE DATE: May 12, 2015

SDS # 15-202

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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

L'Oreal Canada  
4895 rue Hickmore  
Ville St-Laurent, H4Y 1K5  
Canada

#### Emergency Telephone Number

1-800-535-5053 US (International: 352-323-3500)  
In Canada – 1-613-996-6666 (Canutec) (\*666 cellular)

#### For further information:

1-732-499-2741

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


**Product Name:** Aqueous Perm Wave Waving/Reforming Lotions containing Ethanolamine

**Recommendations on use:** Cosmetic product used on hair before application of Neutralizer/Bonding Lotion.

**Restrictions on use:** For external use only. Use only as directed.

### SECTION 2: HAZARDS IDENTIFICATION

#### Signal Word: WARNING

Symbol	Classification	Hazard Statement	Prevention Statements
	Eye Irritation Category 2A	Causes serious eye irritation	<ul style="list-style-type: none"> <li>Wear eye protection/face protection</li> </ul>
See symbol above	Acute Toxicity Oral Category 4	Harmful if swallowed	<ul style="list-style-type: none"> <li>Wash eyes and all skin surfaces contacted thoroughly after handling.</li> <li>Do not eat, drink or smoke when using this product</li> </ul>
See symbol above	Acute Toxicity Inhalation Category 4	Harmful if inhaled	<ul style="list-style-type: none"> <li>Avoid breathing mist/vapors/spray.</li> <li>Use only outdoors or in a well-ventilated area.</li> </ul>

See symbol above	Skin Irritation Category 2	Causes skin irritation	<ul style="list-style-type: none"> <li>Wear nitrile or vinyl gloves.</li> </ul>
See symbol above	Skin Sensitizer Category 1	May cause an allergic skin reaction	<ul style="list-style-type: none"> <li>Contaminated work clothing must not be allowed out of the workplace.</li> </ul>

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.

Hazards Not Otherwise Classified: None.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Only hazardous constituents associated with the product are listed below

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
Ammonium Thioglycolate	5421-46-5	<13%
Behentrimonium Chloride	68607-24-9	< 4%
Diammonium Dithioglycolate	68223-93-8	< 4%
Ethanolamine	141-43-5	<2.5%

## SECTION 4: FIRST AID MEASURES

### Response Statements:

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

**IF ON SKIN:** Wash with plenty of water. Wash contaminated clothing before reuse. **If skin irritation or rash occurs:** Get medical advice/attention. See product label for specific treatment advice.

**IF INHALED:** Remove person to fresh air and keep in a position comfortable for breathing. Call a Poison Control Center if you feel unwell.

**IF SWALLOWED:** Immediately call a poison center or get medical advice/attention. Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious individual. Consult a physician or Poison Control Center immediately.

**SYMPTOMS/EFFECTS:** Causes serious eye irritation. Harmful if swallowed. Harmful if inhaled. Causes skin irritation. May cause an allergic skin reaction.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Consult product labeling. No special advice.

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## SECTION 5: FIRE-FIGHTING MEASURES

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### Notes for Non-Emergency Personnel:

**EXTINGUISHING MEDIA:** In case of fire use carbon dioxide, dry chemical and/or foam for extinction. Water spray may be used to soak other materials surrounding the product, to prevent the spread of the fire. Selection of a fire extinguisher should also be appropriate to address the location of the fire and equipment involved. Please review the tools available at your location to ensure proper availability of equipment.

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

**SPECIAL FIRE FIGHTING PROCEDURES:** Follow National Fire Protection Association Guidelines or local guidelines appropriate for emergency response.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Observe all appropriate precautions for handling hazardous materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal degradation may produce oxides of carbon, sulfur, hydrocarbons, and/or derivatives.

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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 preliminary control of the chemical release is hazardous. Hazardous locations include areas where ignition sources cannot be controlled. 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 while wearing the protective equipment as noted below. Clean the area with detergent and water. Prohibit discharge to drains, soil, surface and ground waters. Dispose in accordance with Section 13 of this document.

**PERSONAL PROTECTIVE EQUIPMENT:** Nitrile or vinyl 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. Respiratory protection may include the use of organic vapor cartridges. Refer to Section 8 for additional information.

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

**ACCIDENTAL RELEASE MEASURES:** Dike and contain the free liquid and absorb on vermiculite or spill pillows/pads. Place spent absorbents in UN specification drums for disposal. Wash area completely with water. Take care to avoid contact with wet surfaces or walkways that may become slick when residue is present. Prohibit discharge to drains, soil, surface and ground waters.

Recommendations for personal protective equipment selection are noted above. 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. Employees should be advised to wear appropriate protective equipment in the manufacturing environment. See section 8 of this document for protective equipment selection. All manufacturing should be performed indoors, in an enclosed environment.

Maintain a clean work environment which includes use of properly functioning containers, proper housekeeping practices.

## CONDITIONS FOR SAFE STORAGE:

**Storage precautions for unpackaged product (manufacturing environment):** Store in a well-ventilated place and keep cool. Keep containers closed when not in use. Minimize inventory. Appropriate fire suppression and detection equipment should be utilized. Store on spill pallets or other locations where spill containment will be easily accessible.

**Storage precautions for packaged product:** Store locked-up. See consumer packaging.

Keep away from open drains and access to the environment.

**Incompatible materials:** Oxidizing agents, acids, bases. Store away from incompatible materials.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**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>
Ethanolamine (141-43-5)	OSHA PEL	3	6	--	--
	ACGIH TLV	3	7.5	6	15
	NIOSH REL	3	8	6	15

**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 utilized. This ventilation should be compatible with the control of toxic materials. Exhaust ventilation should be utilized to maintain air concentrations of material below the occupational exposure guidelines noted above.

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: Explosion proof. Mechanical (general): Explosion proof.

**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 of this document 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 liquid material, safety glasses with side shields/goggles are recommended.

**Skin Protection (Non-Emergency):** None required for product use. For handling large quantities of material, such as in product manufacturing, nitrile or vinyl 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. Ensure that the respirator meets current local occupational health and safety standards. Organic vapor cartridges should be utilized with filtering respiratory protection.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE:</b>	Clear, thin liquid
<b>ODOR:</b>	Not Available
<b>ODOR THRESHOLD:</b>	Not Available
<b>pH:</b>	9.6 – 10.2
<b>MELTING/FREEZING POINT:</b>	<b>F:</b> Not Available <b>C:</b> Not Available
<b>BOILING POINT:</b>	<b>F:</b> Not Available <b>C:</b> Not Available
<b>FLASH POINT:</b>	<b>F:</b> N/A <b>C:</b> N/A <b>METHOD USED:</b>
<b>EVAPORATION RATE:</b>	< 1 <b>(Butyl acetate = 1)</b>
<b>FLAMMABILITY:</b>	Not Available
<b>FLAMMABLE LIMITS IN AIR:</b>	ETHANOLAMINE: 23.5% UEL; 3.0% LEL
<b>VAPOR PRESSURE (mmHg):</b>	Not Available
<b>VAPOR DENSITY (AIR = 1):</b>	@ 70F: N/A @ 21 C: N/A
<b>RELATIVE DENSITY (H<sub>2</sub>O = 1):</b>	0.98 – 1.05 @ 25 C
<b>SOLUBILITY IN WATER:</b>	Not Available
<b>PARTITION COEFFICIENT:</b>	Not Available
<b>AUTOIGNITION TEMPERATURE:</b>	Not Available
<b>DECOMPOSITION TEMPERATURE:</b>	Not Available
<b>VISCOSITY:</b>	Not Available

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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):** Oxidizing agents, acids, and bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal degradation may produce oxides of carbon, sulfur, hydrocarbons, and/or derivatives.

## SECTION 11: TOXICOLOGICAL INFORMATION

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

### POTENTIAL HEALTH EFFECTS

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

**SKIN CORROSION/IRRITATION:** Causes skin irritation

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

**RESPIRATORY/SKIN SENSITIZATION:** May cause an allergic skin reaction.

**INGESTION:** Harmful if swallowed

**INHALATION:** Harmful if inhaled

**ROUTES OF EXPOSURE:** Inhalation, eyes, skin, ingestion

**SYMPTOMS:** Causes serious eye irritation. Harmful if swallowed. Harmful if inhaled. Causes skin irritation. May cause an allergic skin reaction.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** None known.

#### **ACUTE TOXICOLOGY DATA FOR COMPONENTS**

Material	Route	Species	Test Results
Ammonium Thioglycolate	Oral LD <sub>50</sub>	Rat (OECD 403)	50-200 mg/kg bw
Ammonium Thioglycolate	LC <sub>50</sub> (4h)	Rat	> 2.75 mg/L air
Ammonium Thioglycolate	Dermal LD <sub>50</sub>	Rat (OECD 402)	> 2,000 mg/kg bw
Behentrimonium Chloride	Oral LD <sub>50</sub>	Rat (OECD 401)	3190 mg/kg bw
Behentrimonium Chloride	Inh. LC <sub>50</sub> (1h)	Rat (OECD 403 eq)	>6mg/L air
Diammonium Dithioglycolate	Oral LD <sub>50</sub>	Rat (OECD 423)	300-500 mg/kg bw
Diammonium Dithioglycolate	Dermal LD <sub>50</sub>	Rat (OECD 402)	>960 mg/kg bw
Ethanolamine	Oral LD <sub>50</sub>	Rat (OECD 401 eq)	1,510 mg/kg bw
Ethanolamine	Dermal LD <sub>50</sub>	Rat (OECD 402 eq)	2,504 mg/kg bw
Ethanolamine	Inh. LC <sub>50</sub> (6hr)	Rat	> 1,300 mg/m <sup>3</sup> air

#### **Skin Corrosion/Irritation:**

<i>Ammonium Thioglycolate</i>	Slightly Irritating (Rabbit, OECD 404)
<i>Behentrimonium Chloride</i>	Irritating (Rabbit, OECD 404)
<i>Diammonium Dithioglycolate</i>	Not Irritating (Rabbit, OECD 404)
<i>Ethanolamine</i>	Corrosive (Rabbit, OECD 404)

#### **Serious Eye Damage/Irritation:**

<i>Ammonium Thioglycolate</i>	Slightly Irritating (Rabbit, OECD 405)
<i>Behentrimonium Chloride</i>	Irritating (Rabbit, OECD 405)
<i>Diammonium Dithioglycolate</i>	Not Irritating (Rabbit, OECD 405)
<i>Ethanolamine</i>	Corrosive (Rabbit, OECD 405)

#### **Respiratory Irritation:**

None

#### **Skin Sensitization:**

<i>Ammonium Thioglycolate</i>	Sensitizing (mouse, OECD 429)
<i>Behentrimonium Chloride</i>	Not sensitizing (in vivo, OECD 406)
<i>Diammonium Dithioglycolate</i>	Not Sensitizing (in vivo, OECD 429)
<i>Ethanolamine</i>	Not sensitizing (Guinea Pig)

## CHRONIC HEALTH HAZARDS:

### REPEAT DOSE TOXICITY:

NOAEL (Ammonium Thioglycolate, oral): 20 mg/kg/bw/day male/female rats  
 NOAEL (Behentrimonium Chloride, oral): 10 mg/kg/bw/day male/female rats (nominal, OECD 407)  
 NOAEL (Diammonium Dithioglycolate, oral): 20 mg/kg/bw/day male/female rats (OECD 408)  
 NOAEL (Ethanolamine, oral): 300 mg/kg bw/day (Rat, OECD 416)

### CARCINOGENICITY:

Component Name (CAS-No.)	OSHA	ACGIH	NTP	IARC
None established	--	--	--	--

### MUTAGENICITY:

*Ammonium Thioglycolate* A variety of *in vitro* (OECD 471) and *in vivo* (OECD 474) tests have produced negative results  
*Behentrimonium Chloride* A variety of *in vitro* tests have produced negative results (OECD 476)  
*Diammonium Dithioglycolate* A variety of *in vitro* tests have produced negative results (OECD 473)  
*Ethanolamine* A variety of *in vitro* and *in vivo* tests have produced negative results.

### REPRODUCTIVE TOXICITY:

*Ammonium Thioglycolate* NOEL: ≥ 40 mg/kg bw/day  
*Behentrimonium Chloride* NOAEL: 75 mg/kg bw/day (Rat, OECD 421)  
*Diammonium Dithioglycolate* NOEL: ≥ 20 mg/kg bw/day (Rat, OECD 416)  
*Ethanolamine* NOAEL: 300 mg/kg bw/day (Rat, OECD 416)

### DEVELOPMENTAL TOXICITY/TERATOGENICITY:

*Ammonium Thioglycolate* NOAEL: 75 mg/kg bw/day (Rat, OECD 414)  
*Behentrimonium Chloride* NOAEL: 30 mg/kg bw/day (Rat, OECD 421)  
*Diammonium Dithioglycolate* NOAEL: > 100 mg/kg bw/day (Rat, OECD 414)  
*Ethanolamine* NOAEL: 450 mg/kg bw/day (Rat, OECD 414)

## SECTION 12: ECOLOGICAL INFORMATION

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
Ammonium Thioglycolate	LC <sub>50</sub> (OECD 203)	>100 mg/L	Oncorhynchus mykiss	96 h
Behentrimonium Chloride	LC <sub>50</sub> (OECD 203)	3.5 mg/L	Danio Rerio	96 h
Diammonium Dithioglycolate	LC <sub>50</sub> (OECD 203)	>100 mg/L	Oncorhynchus mykiss	96 h
Ethanolamine	LC <sub>50</sub> (ASTM D1345-70)	170 mg/L	Carassius auratus	96 h

### ACUTE TOXICITY TO AQUATIC INVERTEBRATES

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Ammonium Thioglycolate	EC <sub>50</sub> (OECD 202)	100 mg/L	Daphnia Magna	48 h
Behentrimonium Chloride	EC <sub>50</sub> (OECD 202)	1.39 mg/L	Daphnia Magna	48 h
Diammonium Dithioglycolate	EC <sub>50</sub> (OECD 202)	>100 mg/L	Daphnia magna	48 h
Ethanolamine	EC <sub>50</sub> (84/449/EEC C.2)	65 mg/L	Daphnia Magna	48 h



## TOXICITY TO AQUATIC PLANTS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Ammonium Thioglycolate	EC <sub>50</sub> (OECD 201)	13 mg/L	Pseudokirchneriella Subcapitata	72 h
Behentrimonium Chloride	EC <sub>50</sub> (OECD 201)	3.48 mg/L	Desmodesmus Subspicatus	72 h
Diammonium Dithioglycolate	EC <sub>50</sub> (OECD 201)	> 100 mg/L	Pseudokirchneriella Subcapitata	72 h

## TOXICITY TO MICROORGANISMS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Ammonium Thioglycolate	EC <sub>50</sub> (OECD 209)	530 mg/L	Activated Sludge	3 h
Behentrimonium Chloride	EC <sub>50</sub> (OECD 209)	43 mg/L	Activated Sludge	3 h

## PERSISTENCY AND DEGRADABILITY:

*Ammonium Thioglycolate*      Readily Biodegradable – OECD 301 A – 21 % @ 28d  
*Behentrimonium Chloride*      Readily Biodegradable – OECD 301 B  
*Ethanolamine:*                  Readily Biodegradable – OECD 301 A – >90% (21 d)

## BIOACCUMULATIVE POTENTIAL:

*Ethanolamine*                  log Pow: -1.91 @ 25°C (OECD 107) – Not expected to bioaccumulate

## SECTION 13: DISPOSAL CONSIDERATIONS

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:** Appropriate containers should be utilized which may include fiberboard boxes for products and metal or plastic drums for liquids.

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

## RCRA HAZARD CLASS: NOT APPLICABLE

Follow all local governmental requirements intended for disposal.

## SECTION 14: TRANSPORT INFORMATION

### 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 (Domestic/International)

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

Please be aware of carrier transport variations before shipping hazardous materials.



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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:** Class D; Division 2, Subdivision B; Irritation/Sensitization

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 is the first issuance of this document.

Author: Lalita Vedantam (Corporate Regulatory Services)