

## SAFETY DATA SHEET

ISSUANCE DATE: August 25, 2016

SDS #00-12-123-0

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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

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

**Emergency Telephone Number:**

1-800-535-5053 (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:** L'Oreal Professionnel Bonding Technical Step 2

**Recommendations on use:** Personal care product used on hair for cosmetic enhancement.

**Restrictions on use:** For external use only. Use only as directed. Avoid direct contact with eyes.

### 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>Wash hands thoroughly after handling.</li> <li>Wear eye protection appropriate for the manufacturing operation being performed (goggles or face shield).</li> </ul>
See symbol above	Skin Sensitizer Category 1	May cause an allergic skin reaction	<ul style="list-style-type: none"> <li>Avoid breathing mist/vapors/spray.</li> <li>Contaminated work clothing must not be allowed out of the workplace.</li> <li>Wear nitrile or vinyl protective gloves</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

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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Only hazardous constituents associated with the product are listed below

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
Maleic Acid	110-16-7	≤ 1.9%
Behentrimonium Methosulfate	81646-13-1	≤ 1.0%
Ethanolamine	141-43-5	< 1.0%

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## SECTION 4: FIRST AID MEASURES

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### 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. **If skin irritation or rash occurs:** Get medical advice/attention. Wash contaminated clothing before reuse.

**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:** 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. 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, foam and/or water spray to extinguish. 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:** None required.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal degradation may produce oxides of carbon, 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. Solidified materials should be placed in sturdy containers for disposal. Place spill residual in appropriate containers for disposal. Wash area completely with water. 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 chemical 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. Store where releases can easily be contained.

**Storage precautions for packaged product:** See consumer packaging.

Keep away from open drains and access to the environment.

**Incompatible materials:** None known.

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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>
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. 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.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE:</b>	Cream – White		
<b>ODOR:</b>	Characteristic		
<b>ODOR THRESHOLD:</b>	Not Available		
<b>pH:</b>	3.0 – 4.0		
<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> > 212	<b>C:</b> > 100	<b>METHOD USED:</b> Closed cup
<b>EVAPORATION RATE:</b>	Not Available ( <b>Butyl acetate = 1</b> )		
<b>FLAMMABILITY:</b>	Not Applicable to Liquids		
<b>FLAMMABLE LIMITS IN AIR:</b>	Not Applicable		
<b>VAPOR PRESSURE (mmHg):</b>	@ F: Not Available @ C: Not Available		
<b>VAPOR DENSITY (AIR = 1):</b>	@ F: Not Available @ C: Not Available		
<b>RELATIVE DENSITY (H<sub>2</sub>O = 1):</b>	≥ 0.98		
<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		

**VISCOSITY:** Not Available

## SECTION 10: STABILITY AND REACTIVITY

**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:** Thermal degradation may produce oxides of carbon, 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:** None expected

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

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

**INGESTION:** Harmful if swallowed

**INHALATION:** None expected

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

**SYMPTOMS:** Causes serious eye 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
Maleic Acid	Oral LD <sub>50</sub>	Rat (OECD 401 eq.)	708 mg/kg bw
Maleic Acid	Dermal LD <sub>50</sub>	Rabbit	1,560 mg/kg bw
Maleic Acid (RA MA)	Inh. LC <sub>50</sub> (1hr)	Rat	> 0.72 mg/L air
Behentrimonium Methosulfate (RA BTAC)	Oral LD <sub>50</sub>	Rat (OECD 401 eq.)	> 3,190 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

Note: RA MA – Read Across Maleic Anhydride  
RA BTAC – Read Across Behentrimonium Chloride

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

*Maleic Acid:* Irritating (Human)

*Behentrimonium Methosulfate:* Irritating (Rabbit, OECD 404) – RA BTAC

*Ethanolamine:* Corrosive (Rabbit, OECD 404)

**Serious Eye Damage/Irritation:**

*Maleic Acid:* Severely Irritating (Rabbit)  
*Behentrimonium Methosulfate:* Corrosive (Rabbit, OECD 405) – RA BTAC  
*Ethanolamine:* Corrosive (Rabbit, OECD 405)

**Respiratory Irritation:**

*Maleic Acid:* Irritating

**Skin Sensitization:**

*Maleic Acid:* Sensitizing (Mouse, OECD 429)  
*Behentrimonium Methosulfate:* Not sensitizing (Guinea Pig, OECD 406)  
*Ethanolamine:* Not Sensitizing (Guinea Pig)

**CHRONIC HEALTH HAZARDS:**

**REPEAT DOSE TOXICITY:**

NOEL (Maleic Acid, oral): 60 mg/kg bw/d (90d) (Dog, OECD 409 eq.) – RA MA  
 NOAEL (Behentrimonium Methosulfate, oral): 10 mg/kg bw/d (28d) (Rat, OECD 407) – GI tract effects – RA BTAC  
 NOAEL (Ethanolamine, oral): 300 mg/kg bw/day (Rat, OECD 416)

**CARCINOGENICITY:**

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

**MUTAGENICITY:**

*Maleic Acid:* A variety of *in vitro* test have produced negative results.  
*Behentrimonium Methosulfate:* A variety of *in vitro* tests have produced negative results. – RA BTAC  
*Ethanolamine:* A variety of *in vitro* and *in vivo* tests have produced negative results.

**REPRODUCTIVE TOXICITY:**

*Maleic Acid:* LOEL: 20 mg/kg bw/d (Rat, OECD 416 eq.) – RA MA  
*Behentrimonium Methosulfate:* NOAEL: 75 mg/kg/day (Rat, OECD 421) – No effects on fertility – RA BTAC  
*Ethanolamine:* NOAEL: 300 mg/kg bw/day (Rat, OECD 416)

**DEVELOPMENTAL TOXICITY/TERATOGENICITY:**

*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
Maleic Acid	LC <sub>50</sub> (DIN 38412, Pt. 15)	1.73 mg/L	Leuciscus idus	48 h
Behentrimonium Methosulfate – RA BTAC	LC <sub>50</sub> (OECD 203)	0.5 – 1.0 mg/L	Danio rerio	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
Maleic Acid	EC <sub>50</sub> (DIN 38412, Pt. 11)	160 mg/L	Daphnia magna	48 h
Behentrimonium Methosulfate – RA BTAC	EC <sub>50</sub> (OECD 202)	1.39 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
Maleic Acid	EC <sub>50</sub> (OECD 201)	> 150 mg/L	Pseudokirchneriella subcapitata	72 h
Behentrimonium Methosulfate – RA BTAC	EC <sub>50</sub> (OECD 201)	3.48 mg/L	Desmodesmus subspicatus	72 h
Ethanolamine	EL <sub>50</sub> (92/69/EEC C.3)	15 mg/L	Green Algae	72 h

## TOXICITY TO MICROORGANISMS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Maleic Acid	EC <sub>10</sub> (DIN 38412, Pt. 8)	44.6 mg/L	Pseudomonas putida	18 h
Behentrimonium Methosulfate – RA BTAC	EC <sub>50</sub> (OECD 209)	43 mg/L	Activated Sludge	3 h
Ethanolamine	EC <sub>10</sub> (OECD 209)	> 1,000 mg/L	Activated Sludge	30 min

## PERSISTENCY AND DEGRADABILITY:

Maleic Acid: Readily Biodegradable – OECD 301 B – 97% (28d)  
 Behentrimonium Methosulfate: Readily Biodegradable – OECD 301 B – 80% (28d) – RA BTAC  
 Ethanolamine: Readily Biodegradable – OECD 301 A – >90% (21d)

## BIOACCUMULATIVE POTENTIAL:

Maleic Acid: log Pow: -2.61 (OECD 107); BCF: 3.162 – Not expected to bioaccumulate  
 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 cardboard boxes for products, metal or plastic drums.

**WASTE DISPOSAL METHOD:** This product is not considered a federal RCRA hazardous wastes when intended for disposal. Controlled incineration at a licensed waste facility is the recommended technology for treatment and disposal. This material must not be disposed 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 (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: 1 Reactivity: 0 Other: None

**Workplace Hazardous Materials Identification System:** Class D; Division 2, Subdivision B; Eye Irritation/Skin 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: Ronald Weslosky (Corporate Regulatory Services)