

SAFETY DATA SHEET

ISSUANCE DATE: March 23, 2016

SDS # 00-22-007-0

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 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: Redken pH Bonder Step 1

Recommendations on use: Personal care product to be applied to the hair for cosmetic effect.

Restrictions on use: For external use only. Use only as directed. Avoid direct contact with eyes. See product packaging/insert for skin allergy test conditions.

SECTION 2: HAZARDS IDENTIFICATION

Signal Word: DANGER

Symbol	Classification	Hazard Statement	Prevention Statements
	Eye Damage Category 1	Causes serious eye damage	<ul style="list-style-type: none"> Wear eye protection appropriate for the manufacturing operation being performed (goggles or face shield).
	Skin Sensitizer Category 1	May cause an allergic skin reaction	<ul style="list-style-type: none"> Avoid breathing mist/vapors. Contaminated work clothing must not be allowed out of the workplace. Wear nitrile or vinyl protective gloves
No symbol required	Skin Irritation Category 2	Causes skin irritation	<ul style="list-style-type: none"> Wash hands thoroughly after handling.

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>
Maleic Acid	110-16-7	≤ 10.7%
Ethanolamine	141-43-5	≤ 5.4%

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:** Immediately call a Poison Control Center or get medical advice/attention.

IF ON SKIN: Wash with plenty of water. **If skin irritation or rash occurs:** Get medical advice/attention. Take off contaminated clothing and wash it before reuse. See product labeling/insert for additional treatment recommendations.

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 damage. May cause an allergic skin reaction. Causes skin irritation.

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

SECTION 5: FIRE-FIGHTING MEASURES

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: Observe all appropriate precautions for handling hazardous materials.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

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.

SECTION 7: HANDLING AND STORAGE

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. Refer to Section 8 for protective equipment selection. All manufacturing should be performed indoors, in an enclosed environment. Employees should be advised not to handle hazardous products in close proximity to incompatible materials.

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: Oxidizers, strong acids and organic compounds. 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 ³	ppm	mg/m ³
Ethanolamine (141-43-5)	OSHA PEL	3	6	--	--
	ACGIH TLV	3	7.5	6	15
	NIOSH REL	3	8	6	15

No occupational exposure values have been published for other constituents noted in Section 3.

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 hazardous 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): Gloves should be worn when mixing kit components and applying mixture. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid		
ODOR:	Not Available		
ODOR THRESHOLD:	Not Available		
pH:	2.8 – 3.2		
MELTING/FREEZING POINT:	F: Not Available C: Not Available		
BOILING POINT:	F: Not Available C: Not Available		
FLASH POINT:	F: >212	C: >100	METHOD USED: Closed cup
EVAPORATION RATE:	Not Available (Butyl acetate = 1)		
FLAMMABILITY:	Not Applicable to Liquids		
FLAMMABLE LIMITS IN AIR:	Ethanolamine: 23.5% UEL; 3.0% LEL		
VAPOR PRESSURE (mmHg):	@ 70F: Not Available @ 21 C: Not Available		

VAPOR DENSITY (AIR = 1):	@ 70F: Not Available @ 21 C: Not Available
RELATIVE DENSITY (H2O = 1):	Not Available
SOLUBILITY IN WATER:	Not Available
PARTITION COEFFICIENT:	Not Available
AUTOIGNITION TEMPERATURE:	Not Available
DECOMPOSITION TEMPERATURE:	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): Oxidizers, strong acids and organic compounds.

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: Causes skin irritation

SERIOUS EYE DAMAGE/IRRITATION: Causes serious eye damage

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

INGESTION: Harmful if swallowed.

INHALATION: None expected

ROUTES OF EXPOSURE: Eyes, skin

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

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

ACUTE TOXICOLOGY DATA FOR COMPONENTS

Material	Route	Species	Test Results
Maleic Acid	Oral LD ₅₀	Rat (OECD 401 eq.)	708 mg/kg bw
Maleic Acid	Dermal LD ₅₀	Rabbit	1,560 mg/kg bw
Maleic Acid - RA	Inh. LC ₅₀ (1hr)	Rat	> 0.72 mg/L air
Ethanolamine	Oral LD ₅₀	Rat (OECD 401 eq)	1,510 mg/kg bw
Ethanolamine	Dermal LD ₅₀	Rat (OECD 402 eq)	2,504 mg/kg bw
Ethanolamine	Inh. LC ₅₀ (6hr)	Rat	>1,300 mg/m ³ air

Note: RA – Read Across Maleic Anhydride

Skin Corrosion/Irritation:

Maleic Acid: Irritating (Human)
Ethanolamine: Corrosive (Rabbit, OECD 404)

Serious Eye Damage/Irritation:

Maleic Acid: Severely Irritating (Rabbit)
Ethanolamine: Corrosive (Rabbit, OECD 405)

Respiratory Irritation:

Maleic Acid: Irritating

Skin Sensitization:

Maleic Acid: Sensitizing (Mouse, OECD 429)
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
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.
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
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 ₅₀ (DIN 38412, Pt. 15)	1.73 mg/L	Leuciscus idus	48 h
Ethanolamine	LC ₅₀ (ASTM D1345-70)	170 mg/L	Carassius auratus	96 h

ACUTE TOXICITY TO AQUATIC INVERTEBRATES

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Maleic Acid	EC ₅₀ (DIN 38412, Pt. 11)	160 mg/L	Daphnia magna	48 h
Ethanolamine	EC ₅₀ (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 ₅₀ (OECD 201)	> 150 mg/L	Pseudokirchneriella subcapitata	72 h
Ethanolamine	EL ₅₀ (92/69/EEC C.3)	15 mg/L	Green Algae	72 h

TOXICITY TO MICROORGANISMS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Maleic Acid	EC ₁₀ (DIN 38412, Pt. 8)	44.6 mg/L	Pseudomonas putida	18 h
Ethanolamine	EC ₁₀ (OECD 209)	> 1,000 mg/L	Activated Sludge	30 min

PERSISTENCY AND DEGRADABILITY:

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

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 US DOT containers should be utilized which may include cardboard boxes for products or plastic drums for bulk liquids. These containers should meet the packaging specifications required for DOT compliance.

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.

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.

SECTION 15: REGULATORY INFORMATION

National Fire Protection Association Codes: Health: 2 Fire: 1 Reactivity: 0 Other: None

Workplace Hazardous Materials Identification System: Class E; Corrosive Material (Eye); Class D; Division 2, Subdivision B – Skin Irritation/Skin sensitization

This regulatory information represents the product, in its consumer packaging.

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION: This is the first issuance of this document.

Author: Ronald Weslosky (Corporate Regulatory Services)