

SAFETY DATA SHEET

ISSUANCE DATE: January 30, 2017

SDS # 21-93-019-0

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, H4T 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'Oréal Professionnel Série Expert Inforcer Brush Proof
NFPA Level 3 Aerosol**




Recommendations on use: Personal care aerosol-packaged product used on hair for cosmetic effect.

Restrictions on use: Avoid fire, flame, heat and other sources of ignition. For external use only. Avoid spraying into eyes. Use only as directed. Liquid dispensed from the container is considered flammable until dry.

This document is written for the packaged product (aerosol can containing propellants) with references to the dispensed or unpackaged product (liquid) to identify hazards as necessary.

SECTION 2: HAZARDS IDENTIFICATION

Signal Word: DANGER

Symbol	Classification	Hazard Statement	Prevention Statements
	Flammable Aerosols Category 1	Extremely flammable aerosol	<ul style="list-style-type: none"> Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.
	Gases Under Pressure Liquefied Gas	Contains gas under pressure; may explode if heated	<ul style="list-style-type: none"> No Prevention Statements
	Eye Irritation Category 2B	Causes eye irritation	<ul style="list-style-type: none"> Wash hands thoroughly after handling.

This material is considered hazardous by the U.S. 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. Over-exposure may cause skin dryness or slight irritation.

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>
Butane	106-97-8	≤ 51.8%
Ethyl Alcohol	64-17-5	≤ 25.5%
Propane	74-98-6	≤ 18.2%

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: If skin irritation occurs: Wash with plenty of water. **If skin irritation persists:** Get medical attention. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove victim to fresh air and keep 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 eye irritation. Over-exposure may cause skin dryness or slight 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 and/or foam to extinguish. 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: Treat as an NFPA Level 3 Aerosol. Contents are under pressure. Follow National Fire Protection Association Guidelines or local guidelines appropriate for emergency response.

UNUSUAL FIRE AND EXPLOSION HAZARDS: The final product is offered under pressure. Observe all appropriate precautions for handling aerosol containers. The propellants are flammable liquefied gases. The dispensed liquid product is a flammable liquid.

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 risks associated with handling aerosols and flammable liquids.

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: Since this product is a sealed aerosol, accidental discharge of contents is unlikely unless the can is punctured. Should can puncture occur, eliminate all sources of ignition, then dike and contain the free liquid and absorb on vermiculite or spill pillows/pads. Place spent absorbents in UN specification containers for disposal. All precautions associated with controlling a flammable liquid should be employed during clean-up. Prohibit discharge to drains, soil, surface and ground waters.

Recommendations for personal protective equipment selection are noted above. Non-sparking tools should be utilized in all clean-up associated with flammable liquids. Dispose in accordance with section 13 of this document.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:

Aerosols should be handled in a manner that minimizes the risk of puncture – caps should be replaced after use. Containers should be held in an upright position during use. 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. Do not expose to heat or flame. All manufacturing should be performed indoors, in an enclosed environment free from uncontrolled ignition sources. Employees should be advised not to handle flammable products in close proximity to incompatible materials. Use only non-sparking tools when handling non-packaged product. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge.

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. Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. 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 aerosol packaged product: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Use of a contained storage area with easy access is recommended for aerosol containers. Fire suppression and detection equipment compliant with NFPA 30B should be utilized. All aerosols should be stored in an upright position. Refer to consumer packaging for additional storage conditions.

Keep away from open drains and access to the environment.

Incompatible materials: Oxidizers, 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 ³	ppm	mg/m ³
Butane (106-97-8)	OSHA PEL	--	--	--	--
	ACGIH TLV	--	--	1,000	2,370
	NIOSH REL	800	1,900	--	--
Ethyl Alcohol (64-17-5)	OSHA PEL	1,000	1,900	--	--
	ACGIH TLV	--	--	1,000	1,880
	NIOSH REL	1,000	1,900	--	--
Propane (74-98-6)	OSHA PEL	1,000	1,800	--	--
	ACGIH TLV	--	--	--	--
	NIOSH REL	1,000	1,800	--	--

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 flammable materials. Exhaust ventilation should be utilized to maintain air concentrations of material below the occupational exposure guidelines noted above. Testing of aerosol cans should only be performed when appropriate equipment is available.

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 or 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. For testing of pressurized cans, face shields or other equipment that protects the eyes/face should be considered for use.

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Aerosol can dispensing clear spray
ODOR:	Characteristic
ODOR THRESHOLD:	Not Available
pH:	Not Available
MELTING/FREEZING POINT:	F: Not Available C: Not Available
BOILING POINT:	F: Not Available C: Not Available
FLASH POINT:	F: < 0 (Propellant); ~55 (Contained Bulk) METHOD USED: Closed cup
EVAPORATION RATE:	Not Available (Butyl acetate = 1)
FLAMMABILITY:	Propellant: Flammable
FLAMMABLE LIMITS IN AIR:	Butane: Upper: 8.4%; Lower: 1.6% Ethyl Alcohol: Upper: 19.0%; Lower: 3.3% Propane: Upper: 9.5%; Lower: 2.1%
VAPOR PRESSURE (mmHg):	@ 70F: 2500 – 5500 @ 21 C: 2500 – 5500
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: Direct sunlight, temperatures exceeding 50°C/122°F, fire, flame and other sources of heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Oxidizers, acids, bases.

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: Over-exposure may cause skin dryness or slight irritation

SERIOUS EYE DAMAGE/IRRITATION: Causes eye irritation.

RESPIRATORY/SKIN SENSITIZATION: None expected

INGESTION: Harmful if swallowed

INHALATION: Deliberately concentrating and inhaling the contents can be harmful or fatal.

ROUTES OF EXPOSURE: Inhalation, eyes, skin

SYMPTOMS: Causes eye irritation. Over-exposure may cause skin dryness or slight irritation.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

ACUTE TOXICOLOGY DATA FOR COMPONENTS

Material	Route	Species	Test Results
Butane	LC ₅₀ (4 hr)	Rat	658 mg/L air
Ethyl Alcohol	Oral LD ₅₀	Rat	> 6,200 mg/kg bw
Ethyl Alcohol	Dermal LD _{Lo}	Rabbit	> 20,000 mg/kg bw
Ethyl Alcohol	LC ₅₀ (4 hr)	Rat	> 8,000 mg/L air
Propane	LC ₅₀ (15 min)	Rat	> 1,443 mg/L air

Skin Corrosion/Irritation:

Butane: Liquefied Gas can Cause Frostbite

Ethyl Alcohol: Not Irritating (Rabbit, OECD 404)

Propane: Liquefied Gas can Cause Frostbite

Serious Eye Damage/Irritation:

Butane: Liquefied Gas can Cause Frostbite

Ethyl Alcohol: 25% - Not Irritating / 50% - Mildly Irritating / 100% - Irritating (Rabbit, OECD 405)

Propane: Liquefied Gas can Cause Frostbite

Respiratory Irritation:

No Data

Skin Sensitization:

Ethyl Alcohol: Not sensitizing

CHRONIC HEALTH HAZARDS:

REPEAT DOSE TOXICITY:

NOAEC (Butane, inhalation): 21,394 mg/m³ air (Rat)

NOAEL (Ethyl Alcohol, oral): >2% (2400 mg/kg); Rat

LOAEL (Ethyl Alcohol, oral): 3% (3600 mg/kg); Rat

NOAEC (Propane, inhalation): 7,214 mg/m³ air; (Rat)

CARCINOGENICITY:

Component Name (CAS-No.)	OSHA	ACGIH	NTP	IARC
Ethyl Alcohol	--	TLV-A3	--	--

Notes: ACGIH TLV-A3 – Confirmed Animal Carcinogen with Unknown Relevance to Humans

MUTAGENICITY:

Butane A variety of *in vitro* and *in vivo* tests have produced negative results.
Ethyl Alcohol: A variety of *in vitro* and *in vivo* tests have produced negative results.
Propane: A variety of *in vitro* tests have produced negative results.

REPRODUCTIVE TOXICITY:

Butane NOAEC: 21,394 mg/m³ air (OECD 422) – No effects on fertility
Ethyl Alcohol: NOAEL: 20.7 g/kg/day (15%) (Mouse, OECD 416 eq.) – No effects on fertility
Propane NOAEC: 21,641 mg/m³ air (OECD 422) – No effects on fertility

DEVELOPMENTAL TOXICITY/TERATOGENICITY:

Butane NOAEC: 21,394 mg/m³ air (OECD 422) – No effects on development
Ethyl Alcohol: NOAEL: ≥ 20,000 ppm (Rat, OECD 414 eq.) – Incident of malformations
Propane NOAEC: 21,641 mg/m³ air (OECD 422) – No effects on development

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
Butane	LC ₅₀ (QSAR Calculation)	24.11 mg/L	Not Specified	96 h
Ethyl Alcohol	LC ₅₀	12.9 - 15.3g/L	Pimephales promelas	96 h
Propane	LC ₅₀ (QSAR Calculation)	49.9 mg/L	Fish	96 h

ACUTE TOXICITY TO AQUATIC INVERTEBRATES

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Butane	EC ₅₀ (QSAR Calculation)	14.22 mg/L	Daphnid	48 h
Ethyl Alcohol	EC ₅₀	5,012 mg/L	Ceriodaphnia Dubia	48 h
Propane	EC ₅₀ (QSAR Calculation)	27.14 mg/L	Daphnid	48 h

TOXICITY TO AQUATIC PLANTS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Butane	EC ₅₀ (QSAR Calculation)	7.71 mg/L	Green Algae	96 h
Ethyl Alcohol	EC ₅₀	675 mg/L	Chlorella Vulgaris	96 h
Propane	EC ₅₀ (QSAR Calculation)	11.89 mg/L	Green Algae	96 h

TOXICITY TO MICROORGANISMS

INGREDIENT NAME	TEST	RESULT	SPECIES	EXPOSURE
Ethyl Alcohol	EC ₅₀	32.1 g/L	Photobacterium Phosphoreum	15 min

PERSISTENCY AND DEGRADABILITY:

Butane: Readily Biodegradable – 65.7% (35d)
Ethyl Alcohol: Readily Biodegradable – 97% (28d) – OECD 301 B
Propane: Readily Biodegradable – 50.0% (3.0d) (Calculated)

BIOACCUMULATIVE POTENTIAL:

Butane: Log Kow: 2.89 – Not likely to bioaccumulate
Ethyl Alcohol: logBCF_(calculated) = 0.5 (BCFWIN v2.15) – Not likely 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: Cans should have caps in place during waste consolidation or dispenser buttons/actuators removed. Appropriate U.S. DOT containers should be utilized which may include fiberboard boxes for products and metal or plastic drums for liquids. These containers should meet the packaging specifications required for DOT compliance.

WASTE DISPOSAL METHOD: This product is ignitable (D001) RCRA hazardous wastes when intended for disposal. State specific guidance regarding aerosols should also be consulted. 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: D001

Follow all local governmental requirements intended for disposal.

SECTION 14: TRANSPORT INFORMATION

North American Ground Transportation

- **IN CONSUMER PACKAGING:** Limited Quantity/Consumer Commodity
 - UN ID Number:** UN 1950
 - Proper Shipping Name:** Aerosols
 - Hazard Class:** 2.1
 - Packing Group:** N/A
 - Label Statements:** Exempt – Limited Quantity Marking Only

- **LIQUID WITHOUT PROPELLANT:**
 - UN ID Number:** UN 1170
 - Proper Shipping Name:** Ethanol solutions
 - Hazard Class:** 3
 - Packing Group:** II
 - Label Statements:** Flammable Liquid (Class 3)

Transport Via Water

- **IN CONSUMER PACKAGING:** Limited Quantity
 - UN ID Number:** UN 1950
 - Proper Shipping Name:** Aerosols
 - Hazard Class:** 2.1
 - Packing Group:** N/A
 - Label Statements:** Exempt – Limited Quantity Marking Only

- **LIQUID WITHOUT PROPELLANT:**
 - UN ID Number:** UN 1170
 - Proper Shipping Name:** Ethanol solutions
 - Hazard Class:** 3
 - Packing Group:** II
 - Label Statements:** Flammable Liquid (Class 3)

Transport Via Air (Domestic/International)

- **IN CONSUMER PACKAGING:** Limited Quantity – ID 8000, Consumer Commodity
UN ID Number: ID 8000
Proper Shipping Name: Consumer Commodity
Hazard Class: 9
Packing Group: N/A
Label Statements: Miscellaneous – Dangerous Goods & Limited Quantity Marking
- **LIQUID WITHOUT PROPELLANT:**
UN ID Number: UN 1170
Proper Shipping Name: Ethanol solutions
Hazard Class: 3
Packing Group: II
Label Statements: Flammable Liquid (Class 3)

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

SECTION 15: REGULATORY INFORMATION

National Fire Protection Association Codes: Health: 2 Fire: 4 Reactivity: 0 Other: None

Workplace Hazardous Materials Identification System: Class B Division 5 Flammable Aerosol; Class D; Division 2, Subdivision B – Eye Irritation

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)