

1. Identification of the substance or mixture and of the supplier

GHS product identifier

Trade Name	α -Arbutin
INCI Name	ALPHA-ARBUTIN
Use of the substance/mixture	Antioxidant

2. Hazard statements

Classification of the substance or mixture

None

GHS label elements, including precautionary statements

Hazard Pictogram:

Signal Word: Warning



Hazard statements

H302 Harmful if swallowed

Precautionary Statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response

P301+P312 IF SWALLOWED: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

Storage: None.

Disposal

P501 Dispose of contents/container in accordance with local regulations.

3. Composition/Information on Ingredients

INCI Name	Chemical Name	CAS Number	EC Number	Purity
ALPHA-ARBUTIN	α -Arbutin	84380-01-8	617-561-8	$\geq 99\%$

4. First-Aid Measures

Description of Necessary First-Aid Measures

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| • Inhalation | If inhaled, remove victim to fresh air. |
| • Skin Contact | Take off contaminated clothing. Rinse skin thoroughly with soap and water. Seek medical advice if irritation occurs. |
| • Eye Contact | Hold eyelids apart and flush continuously with running water or physiological saline. Seek immediate medical attention. |
| • Ingestion | Rinse mouth. Do NOT induce vomiting. Obtain immediate medical help. |
| • Advice for First Aiders | Remove the casualty to a safe area. Consult a physician. Show this safety data sheet to the doctor on site. |
| • Special Instructions to Physicians | No data available. |

Acute and Chronic Health Effects

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| • Skin contact | May cause skin irritation, presenting erythema, itching and other symptoms. |
| • Eye Contact | May trigger eye irritation, redness, soreness and discomfort. |
| • Treatment Guidance | Administer symptomatic treatment based on exposure route and clinical manifestations, including skin cleansing, ocular irrigation and supportive care. |

5. Fire-Fighting Measures

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| Suitable Extinguishing Media | Water spray, alcohol-resistant foam, dry chemical powder, carbon dioxide (CO ₂). |
| Unsuitable Extinguishing Media | Do not use straight water jet; it may spread the fire. |
| Special Fire-Fighting Procedures | Firefighters must wear gas masks and full protective fire suits and operate from upwind. |
| Special Fire and Explosion Hazards | Combustible when exposed to open flames and high heat. |
| Hazardous Thermal Decomposition Products | Combustion may release carbon monoxide, carbon dioxide and other byproducts. |
| Protective Equipment for Firefighters | Self-contained breathing apparatus (SCBA), fire-resistant protective clothing, chemical-resistant gloves. |

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Protocols	Emergency responders shall wear supplied-air respirators, anti-static coveralls and oil-resistant rubber gloves. Avoid direct contact or stepping over spilled material. All handling equipment must be properly grounded. Cut off spill source if feasible. Eliminate all ignition sources. Establish restricted zones based on spread of liquid, vapor or dust; evacuate irrelevant personnel to safe zones crosswind and upwind.
Environmental Precautions	Contain spilled material to prevent environmental contamination. Avoid entry into sewers, surface water and groundwater.
Methods and Materials for Clean-Up	Small Spill: Collect spilled liquid into sealable containers as much as possible. Absorb residual material with sand, activated carbon or other inert absorbents and transfer to secure storage areas. Do not discharge into sewer systems. Large Spill: Build dikes or excavate containment pits to contain leakage. Block drainage pipelines. Cover spill with foam to suppress vaporization. Transfer material to tank trucks or dedicated recovery vessels via explosion-proof pumps for recycling or delivery to licensed waste disposal facilities.

7. Handling and Storage

Handling Precautions	Operate in well-ventilated areas. Avoid vapor generation and inhalation. Prevent contact with incompatible substances such as oxidizing agents.
Storage Requirements	Store in cool, well-ventilated warehouses. Keep away from ignition sources and heat. Separate from oxidizing agents, food-grade chemicals and other incompatible materials; mixed storage is prohibited.
Stacking of Fiber Drums	Do not stack drums excessively high to prevent collapse; maintain good air circulation around stacks.
Suitable Packaging Materials	Fiberboard/fiber drums lined with double-layer PE bags, galvanized steel drums.
Unsuitable Packaging Materials	Corrosion-prone metal vessels, clear glass containers, transparent plastic containers.

8. Exposure Controls / Personal Protection

Respiratory Protection	Wear air-purifying respirator when airborne concentration exceeds occupational exposure limits.
Skin & Body Protection	Wear impermeable chemical protective coveralls.
Hand Protection	Wear rubber protective gloves.
Eye Protection	Wear chemical safety goggles.
Environmental Exposure Controls	Maintain adequate mechanical ventilation; regularly monitor airborne α -arbutin concentration in the workplace.

9. Physical and Chemical Properties

Appearance	
Physical state	White crystalline powder
Color	White
Odor	Odorless
Odor Threshold	No data available
pH Value (1% aqueous dispersion)	No data available
Melting Point	201°C
Boiling Point	285 °C at 101.3 kPa
Flash Point	293.4°C
Evaporation Rate	No data available
Flammability (Solid/Gas)	No data available
Upper/Lower Explosion Limits	No data available
Vapor Pressure	0.0±1.6 mmHg at 25°C
Vapor Density	No data available
Bulk Density	No data available
Water Solubility	151 000 mg / L
Solubility Snapshot	Slightly soluble in DMSO and methanol
Partition Coefficient n-Octanol/Water	log Pow = -1.69 (21 °C)
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Surface Tension	No data available

10. Stability and Reactivity

Reactivity	Stable under recommended ambient storage and handling conditions.
Chemical Stability	Stable.
Hazardous Reactions	No data available.
Conditions to Avoid	Static discharge, excessive heat, high humidity.
Incompatible Materials	Strong oxidants, strong mineral acids.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.

11. Toxicological Information

Acute Oral Toxicity	LD50 - (male/female) - > 200 mg/kg bw
Acute Dermal Toxicity	No data available
Acute Inhalation Toxicity	No data available
Skin Corrosion / Irritation	No data available
Serious Eye Damage / Irritation	No data available
Respiratory or Skin Sensitization	No data available

Germ Cell Mutagenicity (In Vitro Assays)

• Bacterial Reverse Mutation Test	No data available
• Mammalian Cell Gene Mutation Assay	No data available
• Mammalian Chromosomal Aberration Test	No data available
• Carcinogenicity	No data available
• Reproductive Toxicity	No data available
• Specific Target Organ Toxicity – Single Exposure (STOT-SE)	No data available
• Specific Target Organ Toxicity – Repeated Exposure (STOT-RE)	No data available
• Aspiration Hazard	No data available
• Potential Exposure Routes	Inhalation, skin contact, oral ingestion
• Clinical Symptoms & Toxicological Characteristics	High-concentration exposure may cause eye, respiratory tract and skin irritation. Ingestion of large quantities may induce gastrointestinal discomfort.
• Short-Term and Long-Term Exposure Effects	Short-term high-concentration exposure: Irritation of mucous membranes and skin. Long-term repeated dust inhalation: Chronic respiratory discomfort and airway hypersensitivity.

Frequent skin contact: Dry, rough skin and occasional mild contact dermatitis.
No systemic accumulation toxicity or chronic organ damage occurs under standard occupational exposure doses.

12. Ecological Information

Short-Term Toxicity to Fish	No data available
Long-Term Toxicity to Fish	No data available
Short-Term Toxicity to Aquatic Invertebrates	No data available
Long-Term Toxicity to Aquatic Invertebrates	No data available
Toxicity to Aquatic Algae	No data available
Persistence and Biodegradability	No data available
Bioaccumulation Potential	No data available
Mobility in Soil Matrix	No data available
Other Adverse Ecological Impacts	No data available

13. Disposal Considerations

Disposal Method: Incinerate material in permitted incinerators; scrub flue gas to eliminate harmful combustion byproducts. Prior to disposal, review national and local waste regulations. Return empty packaging to the manufacturer or dispose of containers in compliance with national waste legislation.

14. Transport Information

UN Hazard Class Number: No data available

Packing Group: No data available

Transport Precautions: Transport vehicles shall be equipped with appropriate fire-fighting equipment and spill emergency response kits. Schedule delivery during morning and evening hours in summer; shield cargo from direct sunlight, rain and high ambient temperatures during transit. Park transport vehicles away from ignition sources, heat and high-temperature zones during stops.

15. Regulatory Information

Domestic Regulations: Compliant with the Safety Technical Specification for Cosmetics, National Food Safety Standard – Standards for Use of Food Additives and other relevant domestic regulatory requirements.

International Regulations: Compliant with EU REACH Regulation, US FDA requirements and other regional legislation (subject to adjustment based on export destination country/region).

16. Other Information

No further information

Disclaimer: All information contained herein is based on data deemed reliable and accurate. However, no warranty, express or implied, is made regarding data accuracy or outcomes arising from use of this substance. The manufacturer shall not be liable for injuries sustained by users or third parties directly resulting from the material if standard safety procedures specified in this SDS are not followed. Liability is also excluded for injuries caused by abnormal misuse of the product even where standard safety protocols are observed. The user assumes all risks associated with handling and application of this substance.