Safety Data Sheet (SDS) - Alpha Arbutin

According to Regulation (EC) No 1907/2006 (REACH), as amended by Regulation (EU) 2020/878
Version 1.1, 26-Oct-2026

Section 1. Identification of the substance/mixture and of the company

Product name:	Alpha Arbutin; purity >=98.0%
Recommended uses:	Ingredient for professional cosmetic formulation, analytical and R&D use
Uses advised against:	Uses not permitted by applicable legislation; household or non-professional use
Catalogue Number:	NST-12-61
Supplier:	NATURE SCIENCE TECHNOLOGIES Ltd Briezu 11, Lapsas, Latvia, LV-2107 Email: inquiries@nstchemicals.com Website: www.nstchemicals.com Emergency: Latvian Poison Information Centre +371 67042473 (24/7)

Section 2. Hazards identification

Classification:

Regulation (EC) No 1272/2008 (CLP): Acute Tox. 4 (oral), H302.
Hazard pictogram: GHS07. Signal word: Warning. Hazard statement: H302 Harmful if swallowed.
Precautionary statements: P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P330 Rinse mouth. P501 Dispose of contents/container in accordance with applicable regulations.
Other hazards: Fine airborne dust may form an explosive or combustible dust atmosphere. The substance is not identified as PBT or vPvB. Endocrine-disrupting properties have not been established.

Section 3. Composition/information on ingredients

Chemical name:	4-Hydroxyphenyl-alpha-D-glucopyranoside (Alpha Arbutin), >=98.0% (assay specification). Hydroquinone: not more than 10 ppm (quality specification).
Synonyms:	alpha-Arbutin; 4-Hydroxyphenyl alpha-D-glucopyranoside; Hydroquinone-O-alpha-D-glucopyranoside
Chemical formula:	C12H16O7
Molecular weight:	272.25 g/mol
CAS No:	84380-01-8
EC No.	440-470-8

Section 4. First aid measures

Inhalation:	Move to fresh air and keep at rest. Obtain medical advice if coughing, breathing difficulty or other symptoms develop or persist.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water. Obtain medical advice if irritation develops or persists.
Eyes:	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical advice if irritation persists.
Ingestion:	Rinse mouth. Do not induce vomiting. Call a POISON CENTRE or doctor if unwell. Never give anything by mouth to an unconscious person.

Section 5. Firefighting measures

Extinguishing media suitable:	Water spray, foam, dry extinguishing powder or carbon dioxide. Use measures appropriate to the surrounding fire.
Special protection of fire-fighters:	Wear self-contained breathing apparatus and full protective equipment. Combustion may produce carbon monoxide, carbon dioxide and irritating fumes. Consider the dust-explosion hazard and avoid dispersing accumulated powder.

Section 6. Accidental release measures

Personal precautions:	Avoid dust formation, inhalation and ingestion. Ensure adequate ventilation. Wear suitable gloves and eye protection. Keep unprotected persons away.
Environmental precautions:	Prevent entry into drains, surface water and soil. Notify authorities if a significant release reaches water or drains.
Methods for cleaning up:	Collect mechanically or with a HEPA-filtered vacuum without generating dust. Place in a closed, labelled container for disposal and clean the area.

Section 7. Handling and storage

Handling:	Handle in a well-ventilated area. Minimise dust. Avoid inhalation, ingestion and contact with eyes, skin and clothing. Keep away from ignition sources and take precautions against static discharge where dust may form. Wash thoroughly after handling.
Storage:	Store tightly closed in a cool, dry, well-ventilated place. Protect from strong light and heat. Keep away from strong acids, strong bases and strong oxidising agents. Supplier specification shelf life: 24 months under recommended conditions.

Section 8. Exposure controls/personal protection

Engineering measures:	No substance-specific occupational exposure limit has been established. Apply applicable nuisance-dust limits. Use local exhaust ventilation and provide eyewash facilities.
Hygiene measures:	Wash hands and exposed skin after handling and before breaks. Do not eat, drink or smoke in work areas. Remove contaminated clothing before reuse.
Personal protective equipment:	Respiratory: suitable particulate-filter respirator where dust forms or ventilation is insufficient. Hands: protective gloves appropriate to the task, e.g. nitrile.
Skin and body:	Protective work clothing appropriate to the scale and duration of exposure. Wash contaminated clothing before reuse.
Eyes:	Safety glasses with side shields or tightly fitting safety goggles. Add face protection where high dust exposure is possible.

Section 9. Physical and chemical properties

Physical state:	Solid, fine powder
Colour:	White
Odour:	No data available
Molecular Weight:	272.25 g/mol
Melting point:	202-210 deg C (quality specification)
pH:	5.0-7.0 (quality specification; test solution)
Boiling point:	Approximately 284 deg C at 1,021.7 hPa (literature/supplier data); decomposition may occur on heating
Solubility:	Soluble in water; approximately 151 g/L at 20 deg C (supplier data)
Explosive properties:	Not classified as explosive and not highly flammable. Fine airborne dust may form an explosive atmosphere. Dust explosion class St(H)2 and minimum ignition energy 3-10 mJ have been reported for milled material; values depend on particle size and moisture.

Section 10. Stability and reactivity

Stability:	Stable under recommended storage and normal handling conditions. Protect from strong light, heat and moisture.
Materials to avoid:	Strong acids, strong bases, strong oxidising agents, excessive heat, ignition sources and strong light. Avoid dust accumulation.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide and irritating fumes may form during combustion or thermal decomposition.

Section 11. Toxicological information

Acute toxicity:	Harmful if swallowed (Acute Tox. 4, H302). Oral LD50, rat: greater than 300 and less than 500 mg/kg (OECD Test Guideline 423; supplier/registrant data).
Skin corrosion/irritation:	Not classified for skin corrosion or irritation. Slight eye irritation has been reported, but available data do not meet the CLP classification criteria.
Respiratory or skin sensitisation:	Not classified as a skin sensitiser on the basis of available test data. Respiratory-sensitisation data are not available.
CMR effects:	Available data indicate negative in-vitro and in-vivo genotoxicity results. No indication of carcinogenicity or adverse effects on fertility is known from available information.
Signs and symptoms of exposure:	Dust may cause mechanical irritation of the respiratory tract and eyes. Harmful effects may follow ingestion.
Potential health effects:	The substance is not classified for specific target-organ toxicity after single exposure.
Inhalation:	Dust may irritate the respiratory tract; no CLP respiratory-irritation classification is assigned.
Skin:	No adequate product-specific repeated-exposure data are available.
Eyes:	Dust may cause mechanical eye irritation; slight irritation has been observed in testing.
Ingestion:	Harmful if swallowed; gastrointestinal discomfort may occur.
Other information:	Avoid ingestion and unnecessary dust exposure; follow the protective measures in Section 8.

Section 12. Ecological information

Ecotoxicity:	Not classified as hazardous to the aquatic environment based on available information. Avoid uncontrolled release.

Persistence and degradability:	Readily biodegradable (81.15% in 28 days, OECD 301F). Low bioaccumulation potential is expected (log Pow approximately -1.69).
Other adverse effects:	The substance does not meet the PBT or vPvB criteria on the basis of available information. Endocrine-disrupting properties have not been established.

Section 13. Disposal considerations

Product:	Dispose of contents through a licensed waste contractor in accordance with local, regional and national requirements. Do not discharge to drains.
Contaminated packaging:	Empty completely. Treat contaminated packaging as the product. Recycle only thoroughly cleaned packaging where permitted.

Section 14. Transport information

ADR/RID:	Not regulated as dangerous goods under ADR/RID. No UN number, transport hazard class or packing group assigned.
IMDG:	Not regulated as dangerous goods under IMDG. Not classified as a marine pollutant.
IATA:	Not regulated as dangerous goods under IATA. No UN number, transport hazard class or packing group assigned.

Section 15. Regulatory information

EU regulatory information:	Prepared in accordance with Regulation (EC) No 1907/2006 (REACH), Annex II, as amended by Regulation (EU) 2020/878. Classification and labelling assessed under Regulation (EC) No 1272/2008 (CLP), as amended. For cosmetic products, Alpha-Arbutin is listed in Annex III, entry 377, to Regulation (EC) No 1223/2009: maximum 2% in face cream and 0.5% in body lotion; hydroquinone in the formulation must remain as low as possible and not exceed unavoidable trace levels.

Section 16. Other information

Notice to reader:	Version 1.1; revision date 26-Oct-2026. Approved GHS pictogram artwork was applied with corrected aspect ratio and spacing. Chemical classification and transport wording were not changed. A conservative Acute Tox. 4 (oral), H302 classification was selected because supplier classifications differ; the classification is supported by an oral acute-toxicity study reported in a registrant SDS for Alpha Arbutin, CAS 84380-01-8. Product identity and quality properties derive from the applicable specification; certificate-specific batch information, lot numbers and dates are excluded. This information is provided in good faith as guidance for safe handling, storage, transport and disposal and is not a warranty of product properties. Users remain responsible for suitability and legal compliance.