



SAFETY DATA SHEET

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.1 Product name : ALPHA-ARBUTIN

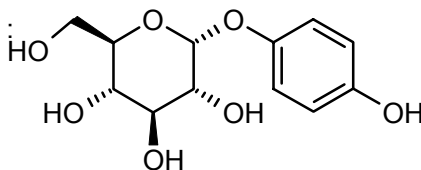
1.2 Product code : 336-01

1.3 Distributor / Notifier : PENTAPHARM LTD. CORADIN
 Engelgasse 109 Frank Moisio
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 4002 BASEL / SWITZERLAND 06150 Cannes-la-Bocca / France

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2. COMPOSITION AND INFORMATION ON INGREDIENTS

2.1 Chemical characterisation



C₁₂ H₁₆ O₇ (MW 272.25)

2.2 Hazardous ingredients : No additional ingredients

2.3 INCI Name (CTFA) : Alpha-Arbutin

<u>Ingredients</u>	<u>CAS No</u>	<u>ELINCS No</u>	<u>References</u>
Alpha-Arbutin (4-Hydroxyphenyl- α -D-glucopyranoside)	84380-01-8	440-470-8	

3. HAZARD IDENTIFICATION

Most Important Hazards: None identified. Potential dust explosion hazard.
 Most Important Adverse Human Health Effects: Harmful by acute oral exposure.



4. FIRST AID MEASURES

- 4.1 Exposure by Skin Contact : Immediately wash affected area with soap and water. Seek medical attention if irritation develops.
- 4.2 Exposure by Eye Contact : Immediately flush eyes with plenty of water and seek medical attention if irritation develops.
- 4.3 Exposure by Inhalation : Remove victim to fresh air. Seek medical attention if symptoms occur.
- 4.4 Exposure by Ingestion : Drink fluids to dilute. Seek medical attention.

5. FIRE FIGHTING MEASURES

- 5.1 Suitable Extinguishing Media : Water, carbon dioxide, foam, dry powder
- 5.2 Extinguishing Media not to be Used : None
- 5.3 Specific Exposure Hazards : The substance will burn if involved in a fire, evolving noxious fumes e.g. carbon oxides
- 5.4 Special Firefighting Procedure : None known
- 5.5 Protective Equipment for Firefighters : No special precautions and measures necessary.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions : Evacuate personnel from immediate vicinity. Wear eye protection (eg goggles), chemical resistant gloves, protective clothing (eg an impervious apron) and a dust mask conforming to standard EN149 FFP1. Refer to section 8.
- 6.2 Precautions to Protect the Environment : Avoid release to drains.
- 6.3 Cleanup Procedures : Absorb spillages with a suitable inert material (eg sand or soil). Transfer the spillage to waste containers labelled in the same way as the original containers. Clean the spillage area with water and detergent.

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7. HANDLING AND STORAGE

7.1 Handling

- Precautions : The substance should be handled under conditions of good industrial hygiene and in conformity with any local regulations in order to avoid unnecessary exposure.
- Technical Measures : Engineering controls such as LEV are necessary to reduce exposure to the substance.
- Specific Requirements : None.

7.2 Storage

- Specific Design for Storage rooms or Vessels : None
- Incompatible Materials : None
- Conditions of Storage : Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use.
- Quantity Limits : None.
- Packaging Materials : Aluminium bag contained within a fibre drum.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- 8.1 Engineering Measures : Engineering controls such as LEV are recommended to reduce exposure to the substance
- 8.2 Specific Control Parameters : None
- 8.3 Personal Protective Equipment: The provision of personal protective equipment and the need to provide engineering control measures should be decided upon by the user as part of a formal exposure risk assessment. Based upon the available toxicological information the protective measures described below should be regarded as a minimum.
- 8.4 Respiratory protection: Based upon current information and in the absence of occupational exposure limits the use of a dustmask to a minimum standard of EN149 FFP 1S is recommended.
- 8.5 Hand protection : Chemical protective gloves to a Standard EN374 should be provided. Usage periods should not exceed the breakthrough times for the chemical stated by the manufacturer of the glove.
- 8.6 Eye protection : Eye protection should be used when handling the substance. The protection should be capable of giving chemical protection as classified in EN166.
- 8.7 Skin protection : Handling of the material should be done wearing chemical protective clothing suitable for protection against the chemical as classified by Standard EN368.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance	:	White powder
9.2 Odour	:	Unknown
9.3 pH	:	5.8 for a 151 g/l aqueous solution
9.4 Boiling Point/Boiling Range	:	Test material and/or decomp. products 285°C.
9.5 Melting Point/Melting Range	:	201°C.
9.6 Flash point	:	Not applicable.
9.7 Flammability (Solid, Gas)	:	Non-flammable.
9.8 Autoflammability	:	Not determined.
9.9 Explosive Properties	:	Predicted negative based on chemical structure. Potential dust explosion.
9.10 Oxidising Properties	:	Predicted negative based on chemical structure.
9.11 Vapour Pressure	:	0.057 Pa at 25°C (Computer estimation).
9.12 Relative Density	:	Not determined.
9.13 Water solubility	:	151g/l at 20°C (pH of solution 5.8)
9.14 Fat solubility	:	Not determined.
9.15 Partition Coefficient	:	Log Pow = -1.69 at 21°C (n-octanol/water).
9.16 Other Data	:	None.

10. STABILITY AND REACTIVITY

10.1 Conditions to Avoid	:	Not known.
10.2 Materials to Avoid	:	Not known.
10.3 Hazardous Decomposition Products	:	Not known.

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11. TOXICOLOGICAL INFORMATION

The substance is harmful by acute oral exposure. Rat LD50 is between 300 and 500 mg/kg. The substance is not irritating to rabbit skin and eyes. The substance is not a skin sensitiser (1/10 sensitised) in a Magnusson and Kligman maximisation study in the guinea pig. An Ames test was negative.

The test material, at a maximum concentration of 10% w/w produced no evidence of phototoxicity or photoallergenicity. The test material, in a fourteen-day repeat application dermal irritation study in the guinea pig, produced a maximum Weekly Mean Irritation Index of 0.03 and was considered to be practically non-irritant to guinea pig skin under the conditions of the test.

12. ECOLOGICAL INFORMATION

12.1 Mobility : The substance is a non-volatile solid of high water solubility and low log Pow. It is therefore likely to distribute to the aquatic compartment. Surface tension was not measured.

12.2 Biodegradability : Not readily biodegradable (62% degradation after 28 days in a CO2 Evolution test. Failed 10-day window criterion). However, significant degradation of the substance in the environment is likely.

12.3 Accumulation : Substance has log Pow = -1.69, therefore it is unlikely to bioaccumulate. Biomagnification is not applicable.

12.4 Ecotoxicity : No data available.

No data on toxicity specifically to soil organisms, plants and terrestrial animals are available.

12.5 Other Adverse Effects : There is no ozone depletion, photochemical ozone creation or global warming potential. Adverse effects in the sewage treatment plant are not anticipated.

13. DISPOSAL CONSIDERATIONS

13.1 Waste from Residues : Dispose of by incineration or landfill in accordance with local regulations. Stack gases should be scrubbed.

13.2 Contaminated Packaging : Dispose of by incineration or landfill in accordance with local regulations.



14. TRANSPORT INFORMATION

14.1 International Regulations

land	:	Not applicable.
inland waterways	:	Not applicable.
Sea	:	Not applicable.
Air	:	Not applicable.

14.2 UN Classification Number: None.

14.3 Local Regulations : Any relevant local regulations concerning transport should be observed.

15. REGULATORY INFORMATION

15.1 EC Regulations: A reduced notification (>100kg/a) has been made under council Directive 92/32/EEC.

The substance is provisionally classified as "dangerous" and Labelled according to the requirements of Annex VI of Council Directive 67/548/EEC as follows:

Symbols: Xn

R-phrases: R22 "Harmful if swallowed"

S-phrases: S36/37 wear suitable protective clothing and gloves.

Other phrase: Caution – substance not yet fully tested.

15.2 Local Regulations: Any relevant local regulations should be observed.

16. OTHER INFORMATION

All information and instructions provided in this Safety Data Sheet are based on the current state of scientific and technical knowledge at the date of January 2002 indicated on this Safety Data Sheet.

PENTAPHARM Ltd. shall not be held responsible for any defect in the product covered by this Safety Data Sheet, should the existence of such a defect not be detectable considering the current state of scientific and technical knowledge.

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