


# MATERIAL SAFETY DATA SHEET

## High-Temperature Alpha Amylase

SECTION 1: Identification of the substance/preparation and of the company/undertaking	
<b>1.1 Product Identifier</b>	
Substance Name:	High-Temperature Alpha Amylase
Trade Name(s):	n/a
REACH Registration number:	n/a
CAS No:	9000-90-2
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	
Relevant Identified uses:	Laboratory chemicals, Manufacture of substances
Uses advised against:	No data available
<b>1.3 Details of the supplier of the safety data sheet</b>	
Supplier:	Philip Jones House Poole Hall Industrial Estate Ellesmere Port Cheshire CH66 1ST United Kingdom Tel: +44 (0) 151 356 5985 Fax: +44 (0) 151 355 0416 Enquiries@bevie.co
<b>1.4 Emergency telephone number</b>	
Please contact:	Tel: +44 (0) 151 356 5985 Fax: +44 (0) 151 355 0416 Enquiries@bevie.co
Opening Hours:	Mon-Thurs: 8:00 – 17:00 GMT Fri: 8:00 – 14:00 GMT
Other comments:	English

SECTION 2: Hazards Identification	
<b>2.1 Classification or the substance or mixture</b>	
Classification according to (EC 1272/2008) [CLP]:	Respiratory sensitisation (Category 1), H334
<b>2.2 Label elements</b>	
Label In Accordance With (EC) No. 1272/2008 [CLP]:	
Signal word:	Danger
Hazard Pictograms:	GHS08
Hazard Statements:	<b>H334</b> May cause allergy or asthma symptoms or breathing difficulties if inhaled
<b>Precautionary Statements:</b>	
Prevention:	<b>P261</b> Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

	<b>P285</b> In case of inadequate ventilation wear respiratory protection.
Response:	<b>P304 + P341</b> IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. <b>P342 + P311</b> If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Storage:	No data available
Disposal:	<b>P501</b> Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Information (EU):	No data available

### SECTION 3: Composition/Information on ingredients

#### 3.1 Substances

#### 3.2 Mixtures

Hazardous Component(s)

Chemical Name	CAS – No. EC-No. Registration Number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
High-Temperature Alpha-Amylase	CAS –No 9000-90-2 EC-No. : 232-565-6 Index-No. : 647-015-00-4	Resp. Sens. 1; H334	90-100%

### SECTION 4: First Aid Measures

#### 4.1 Description of first aid measures

4.1.1 General Information:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
4.1.2 Following Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
4.1.3 Following Skin contact:	Wash off with soap and plenty of water. Consult a physician.
4.1.4 Following eye contact:	Flush eyes with water as a precaution
4.1.5 Following Ingestion:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician
4.1.6 Self-protection of the first-aider:	no data available
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	
Symptoms and effects:	no data available
Risks:	no data available
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	
Special treatment:	no data available
Note to doctor:	no data available


### SECTION 5: Fire Fighting Measures

<b>5.1 Extinguishing media</b>	
Extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	no data available
<b>5.2 Special hazards arising from the substance or mixture</b>	
Specific hazards during fighting:	Nature of decomposition products not known.
Hazardous combustion products:	no data available
<b>5.3 Advice for firefighters</b>	
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus for fire fighting if necessary.
Other Information:	n/a

<b>SECTION 6: Accidental Release Measures</b>	
<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	
6.1.1 Non-emergency personnel/ For emergency responders::	Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
<b>6.2 Environmental Precautions</b>	
Environmental precautions:	Do not let product enter drains.
<b>6.3 Methods and material for containment and cleaning up</b>	
6.3.1 For contaminant/cleaning up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
<b>6.4 Reference to other sections:</b>	
	For disposal see section 13.

<b>SECTION 7: Handling and Storage</b>	
<b>7.1 Precautions for safe handling</b>	
7.1.1 Protective measures:	Avoid contact with skin and eyes. For precautions see section 2.2.
7.1.2 Measures to prevent fire:	The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.
7.1.3 Measures to prevent aerosol and dust generation:	Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts.
7.1.4 Measures to protect the environment:	No data available
7.1.5 Advice on general occupational hygiene:	No data available
<b>7.2 Conditions for safe storage, including any incompatibles</b>	
7.2.1 Technical measures and storage conditions/ Requirements for storage rooms and vessels:	Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20 °C Keep in a dry place. Keep in a dry place.
German storage class:	No data available
<b>7.3 Specific end use(s)</b>	
Recommendations:	Apart from the uses mentioned in section 1.2 no

	other specific uses are stipulated
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SECTION 8: Exposure Control/Personal Protection	
<b>8.1 Control Parameters</b>	
8.1.1 WEL (UK) – Long term exposure limit: – Short term exposure limit:	Contains no substances with occupational exposure limit values
<b>8.2 Exposure control</b>	
<b>8.2.1 Personal Protective Equipment (PPE).</b>	
<b>Appropriate Engineering Controls</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Skin Protection:	<p>Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.</p> <p><b>Full contact Material: Nitrile rubber</b> Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p> <p><b>Splash contact Material: Nitrile rubber</b> Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)</p>
Respiratory Protection:	<p>For nuisance exposures use type P95 (US) or type P1 (EUEN143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EUEN 143) respirator cartridges.</p> <p>Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN(EU).</p>
Eye Protection:	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US) or EN 166(EU).
Body Protection:	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene Measures:	No data available
<b>8.3 Environmental Exposure</b>	

General Advice:	Do not let product enter drains
Substance/mixture related measures to prevent exposure:	No data available
Instruction measures to prevent exposure	No data available
Technical measures to prevent exposure:	No data available

## SECTION 9: Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Physical State:	Solid
Form:	Powder
Colour:	Beige
Odour:	No data available
Odour Threshold:	No data available
Flash Point:	No data available
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Flammability (solid, gas):	No data available
Oxidising properties:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial Boiling Point and boiling point range:	No data available
Vapour Pressure:	No data available
Relative Density:	No data available
Bulk Density:	No data available
Water Solubility:	No data available
Solubility/qualitative:	No data available
Viscosity, kinematic:	No data available
Relative vapour density:	No data available
Evaporation rate:	No data available
Explosive properties:	No data available
Partition co-efficient n-octanol/water	Log Pow: -1.3 at 20°C (68°F)
<b>9.2 Other Safety Information:</b>	No data available

## SECTION 10: Stability & Reactivity

<b>10.1 Reactivity:</b>	No data available
<b>10.2 Chemical stability:</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions:</b>	
Hazardous Reactions:	No data available
<b>10.4: Conditions to avoid</b>	
Conditions to avoid:	No data available
<b>10.5 Incompatible Materials</b>	
Materials to avoid:	Strong oxidizing agents
<b>10.6 Hazardous decomposition products</b>	Other decomposition products - no data Available. In the event of fire: see section 5

## SECTION 11: Toxicology Information

11.1 Information on toxicological effects	
<b>Acute Oral Toxicity</b>	
Practical experiment/ Human evidence	
11.1.1 Animal Data	
<b>Acute Dermal Toxicity:</b>	No data available
<b>Acute toxicity:</b>	No data available
<b>Skin corrosion/Irritation:</b>	Skin - rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
<b>Serious eye damage/eye irritation:</b>	Eyes - rabbit Result: No eye irritation (OECD Test Guideline 405)
<b>Respiratory or skin sensitisation:</b>	No data available
<b>Germ cell mutation</b>	No data available Ames test S. typhimurium Result: negative
<b>Carcinogenicity:</b>	<b>IARC:</b> No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. <b>ACGIH:</b> No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. <b>NTP:</b> No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. <b>OSHA:</b> No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>Reproductive toxicity:</b>	No data available
<b>Specific target organ toxicity (single exposure):</b>	No data available
<b>Specific target organ toxicity (repeated exposure):</b>	No data available
<b>Aspiration hazard:</b>	No data available
<b>Additional Information:</b>	RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological Information				
12.1 Toxicity				
Product	Species	Test	Value	Exposure Time
	Oncorhynchus mykiss (rainbow trout)	LC50	> 114 mg/l	96 h

	Daphnia magna (Water flea)	EC50	> 120.2 mg/l	48 h
	Pseudokirchneriella subcapitata	EC50	> 101 mg/l	72 h
<b>Further Information:</b> Toxic to fish, daphnia, other aquatic invertebrates and algae.				
<b>12.2 Persistence and degradability:</b>		Biodegradability aerobic - Exposure time 29 d Result: 90%- Readily biodegradable. (OECD Test Guideline 301B)		
<b>12.3 Bio accumulative potential:</b>		No data available		
<b>12.4 Mobility in soil:</b>		No data available		
<b>12.5 Results of PBT and vPvB assessment:</b>		PBT/vPvB assessment not available as chemical safety assessment not required/not conducted		

### SECTION 13: Disposal Considerations

#### 13.1 Waste treatment methods

#### Waste disposal according to directive 2008/96/EC, covering waste and dangerous waste

13.1.1 Product/packaging disposal:	Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of as unused product.
13.1.2 Waste treatment- relevant information:	Contact a licensed professional waste disposal service to dispose of this material.
13.1.3 Sewage disposal – relevant information:	No data available
13.1.4 Other disposal recommendations:	No data available

### SECTION 14: Transport Information

14.1 UN number:	Not dangerous goods
14.2 UN proper shipping name;	
14.3 Transport hazard class(es):	
14.4 Packaging group:	
14.5 Environmental hazards:	
14.6 Special precautions for user:	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC code:	

### SECTION 15: Regulatory Information

#### 15.1 Safety, health and environment regulation/legislation specific for the substance or mixture

Authorities and/or restrictions on use:	No data available
Other EU legislation:	No data available
National Regulations (UK):	No data available
Water contamination Class (Germany):	No data available
<b>15.2 Chemical Safety Assessments:</b>	No data available

**SECTION 16: Other Information**

Full text of H-Phrases referred to under sections 2 &3:

**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Disclaimer**

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