

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCES/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. Product Identifiers**
- | | |
|------------------------|----------|
| Product Code(s) | HB2846 |
| Product Name | Caffeine |
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
- | | |
|-----------------------------|---|
| Recommended use | For research use only – Not for human use |
| Uses advised against | No information available |
- 1.1. Details of the supplier of the safety data sheet**
- Supplier**
- HelloBio Ltd
Unit 3 IO Centre
Cabot Park
Moorend Farm Avenue
Avonmouth
Bristol
BS 11 0QL
UK
Tel: +44 (0)117 318 0505
Fax: +44 (0)1179 811 601
- For further information, please contact: technicalsupport@hellobio.com
- 1.2. Emergency Telephone number**
- | | |
|----------------------------|----------------------------|
| Emergency telephone | - Tel: +44 (0)117 318 0505 |
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2. HAZARDS IDENTIFICATION

- 2.1. Classification of the substance or mixture**
- GHS/CLP – REGULATION (EC) No 1272/2008**
- | | |
|------------------------------|-----------------------------|
| Acute toxicity, (Category 4) | H302: Harmful if swallowed. |
|------------------------------|-----------------------------|

2.2. Label Elements



Signal Word
Warning

Hazard Statements
H302 - Harmful if swallowed

Precautionary Statements

P264 Wash skin thoroughly after handling.

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

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Caution – substance not yet completely tested

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product Name:	Caffeine	
Synonyms:	1,3,7-Trimethylxanthine	
Formula:	C ₈ H ₁₀ N ₄ O ₂	Molecular Weight: 194.19
CAS Number	58-08-2	
EC-No.	200-362-1	
Index-No.	613-086-00-5	

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice	If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Ingestion	Rinse mouth. If symptoms persist, call a physician
Inhalation	Move to fresh air. If symptoms persist, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3. Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2. Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

5.3. Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures**
Do not take action without suitable protective clothing – see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapours, mist, dust or gas.
- 6.2. Environmental precautions**
Do not let product enter drains.
- 6.3. Methods and materials for containment and cleaning up**
Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.
- 6.4. Reference to other sections**
For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

- 7.1. Precautions for safe handling**
Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.
- 7.2. Conditions for safe storage, including any incompatibilities.**
Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store at -20°C
- 7.3. Specific end uses**
Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1. Control parameters**
- Components with workplace control parameters**
Contains no substances with occupational exposure limit values.
- 8.2. Exposure controls**
- Appropriate engineering controls**
Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.
- Personal protective equipment**
- Eye/face protection**
Use appropriate safety glasses.
- Skin protection**
Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.
- Body protection**
Wear appropriate protective clothing.
- Respiratory protection**
If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1. Information on basic physical and chemical properties**

Appearance	White solid	Vapour pressure	No data available
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Odour	No data available	Vapour density	No data available
Odour threshold	No data available	Relative density	No data available
pH	No data available	Solubility(ies)	No data available water (100 mM), and in DMSO (50 mM)
Melting/freezing point	No data available	Partition coefficient	No data available
Boiling point/range	No data available	Auto-ignition temperature	No data available
Flash Point	No data available	Decomposition temperature	No data available
Evaporation rate	No data available	Viscosity	No data available
Flammability (solid, gas)	No data available	Explosive properties	No data available
Upper/lower flammability or explosive limits	No data available	Oxidising properties	No data available

9.2. Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable under recommended transport or storage conditions.

10.2. Chemical Stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Heat, moisture

10.5. Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity

Inhalation LC50 Inhalation - Rat - male and female - 4 h - 4.94 mg/l – aerosol (OECD Test Guideline 403)

Eye contact No Information available

Skin contact LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Ingestion LD50 Oral - Rat - male and female - 367.7 mg/kg (OECD Test Guideline 401)

Chronic toxicity

Corrosivity No Information available

Sensitization No Information available

Neurological effects No Information available

Reproductive toxicity No Information available

Mutagenic effects No Information available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish

static test LC50 - *Leuciscus idus* (Golden orfe) - ca. 87 mg/l - 96 h (DIN 38412 part 15)

static test NOEC - *Leuciscus idus* (Golden orfe) - 46 mg/l - 96 h (DIN 38412 part 15)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - *Daphnia magna* (Water flea)

182 mg/l - 48 h (DIN 38412) Toxicity to algae static test ErC50 - *Desmodesmus subspicatus* (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209) cotoxicity effects

As supplied, the preparation is not expected to present significant adverse environmental effects

12.2. Persistence and degradability

Biodegradability aerobic - Exposure time 22 d Result: 90 - 100 % - Readily biodegradable. (OECD Test Guideline 301A)

12.3. Bioaccumulative potential

No Information available

12.4. Mobility in soil

No Information available

12.5. Results of PBT and vPvB assessment

No Information available

12.6. Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information

According to the European Waste Catalogue. Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION

ADR	Not dangerous goods
IATA	Not dangerous goods
DOT	Not dangerous goods

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available

15.2. Chemical Safety Assessment
No information available

16. OTHER INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless stated in the text.