

Material Safety Data Sheet

Caffeine

Section 1 - Chemical Product and Company Identification

1.1 Product Name: Caffeine

CAS#: 58-08-2

Synonym: 3,7-Dihydro-1,3,7-trimethyl-1H-purine-2,6-dione
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Chemical Formula: $C_8H_{10}N_4O_2$ HEBEI GUANGXIANG
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1.2 Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Hebei Guangxiang Pharmaceutical Co., Ltd.

Address: East of Jingliu Road, Lingang Chemical Industrial Park, Cangzhou City, Hebei Province.

Tel: 86- 317-6900517

Section 2 - Composition and Information on Ingredients

Name	CAS #	Concentration	EC No.	Chemical characterization
Caffeine	58-08-2	100%	200-362-1	Substance

Section 3 - Hazards Identification

2.1 Classification of the Substance or Mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

2.2 Label Elements:



GHS Signal Word: Warning

GHS Hazard Phrases:

H302 Harmful if swallowed.



Precautionary statement(s)

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 or doctor/ physician if you feel unwell.
P330	Rinse mouth.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none

Section 4 - First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

Section 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

no data available

5.3 Advice for firefighters



Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 - Exposure Controls and 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

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

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Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved

under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

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Section 9 - Physical and Chemical Properties



9.1 Information on Basic Physical and Chemical Properties

a) Appearance	Form: powder Colour: white
b) Odour	odourless
c) Odour Threshold	no data available
d) pH	5.5 - 6.5 at 10 g/l at 20 °C (68 °F)
e) Melting point/freezing point	Melting point/range: 234 - 236.5 °C (453 - 457.7 °F) - lit.
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	20 hPa (15 mmHg) at 89 °C (192 °F)
l) Vapour density	no data available
m) Relative density	1.230 g/cm ³ at 18 °C (64 °F)
n) Water solubility	18.7 g/l at 16 °C (61 °F)
o) Partition coefficient: n-octanol/water	log Pow: -0.091 at 23 °C (73 °F)
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

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9.2 Other safety information

Bulk density	220 kg/m ³
Dissociation constant	10.4 at 40 °C (104 °F)

Section 10 - Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available



10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity:

Harmful if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:

IARC-3: Not classifiable as to carcinogenicity to humans.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish

LC50 - *Leuciscus idus* (Golden orfe) - 87 mg/l - 96 h



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 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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Section 14 - Transport Information

14.1 LAND TRANSPORT (Australia):

ADG Code

Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)

Class: 6.1 Toxic and Infectious Substances-Toxic Substances

Subsidiary Risk(s): No data available

EPG: 34 Toxic Substances

UN/NA Number: UN1544

Hazchem: 2X

Pack Group: III

Special Provision: No Data Available



14.2 LAND TRANSPORT (Malaysia):

ADR Code

Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available
EPG: 34 Toxic Substances
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available

14.3 LAND TRANSPORT (New Zealand):

NZS5433

Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available
EPG: 34 Toxic Substances
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available

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14.4 LAND TRANSPORT (Singapore):

ADR Code

Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available
EPG: 34 Toxic Substances
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available

14.5 LAND TRANSPORT (United States of America):

US DOT

Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available



ERG: 151 Substances-Toxic Substances
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available

14.6 Sea Transport:

IMDG Code
Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available
EMS: F-A, S-A
Marine Pollutant: No

14.7 Air Transport

IATA DGR
IMDG Code
Proper Shipping Name: ALKALOIDS,SOLID, N.O.S.(Caffeine)
Class: 6.1 Toxic and Infectious Substances-Toxic Substances
Subsidiary Risk(s): No data available
UN/NA Number: UN1544
Hazchem: 2X
Pack Group: III
Special Provision: No Data Available

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14.8 National Transport Commission(Australia)

Australian Code for the Transport of Dangerous Goods by Road& Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)



Section 15 - Regulatory Information

General Information No data Available
Poisons(Aust) No Scheduled

Environmental Protection Authority (New Zealand)
Hazardous Substance and New Organisms Amendment Act 2015

National/Regional Inventories

Australia(AICS)	Listed
Canada(DSL)	Not Determined
Canada(NDSL)	Not Determined
China(IECSC)	Not determined
Europe(EINECS)	200-362-1
Europe(REACH)	Not determined
Japan(ENCS/METI)	Not determined
Korea(KECI)	Not determined
Malaysia(EHS Register)	Not determined
New Zealand(NZLoC)	Listed
Philippines(PICCS)	Not determined
Switzerland(Giftliste 1)	Not determined
Switzerland(Inventory of Notified substances)	Not determined
Taiwan(NCSR)	Not determined
USA(TSCA)	Not determined

Section 16 - Other Information

No data available.

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

Please read all labels carefully before using product.

