

Chemical Safety Data Sheet MSDS / SDS

Calpain Inhibitor I

Revision Date:2026-08-01 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name : Calpain Inhibitor I
CBnumber : CB6108214
CAS : 110044-82-1
EINECS Number : 999-999-2
Synonyms : Calpain Inhibitor I,LLnL

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Hazard statements

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

SECTION 3: Composition/information on ingredients

Substance

Product name	: Calpain Inhibitor I
Synonyms	: Calpain Inhibitor I,LLnL
CAS	: 110044-82-1
EC number	: 999-999-2
MF	: C20H37N3O4
MW	: 383.53

SECTION 4: First aid measures

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell. Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

Laxative: Sodium sulfate (1 tablespoon/1/4 l water).

SECTION 5: Firefighting measures

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting

Mixture with combustible ingredients.

Hazardous combustion products

Carbon oxides Sulfur oxides

Specific extinguishing methods

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. Remove container from danger zone and cool with water.

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Advice for emergency responders: For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

Handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Advice on safe handling

Observe label precautions.

Avoidance of contact

various plastics Metals

Storage

Further information on storage conditions

Tightly closed.

Storage class

10, Combustible liquids

Recommended storage temperature

Recommended storage temperature see product label.

Further information on storage stability

Recommended storage temperature see product label.

SECTION 8: Exposure controls/personal protection

control parameter

Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

Engineering measures

No data available

Personal protective equipment

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter

Filter A (acc. to DIN 3181) for vapours of organic

type

compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye/face protection

Safety glasses

Skin and body protection

Flame retardant antistatic protective clothing.

Hand protection

Material

Chloroprene

Break through time

480 min

Glove thickness

0.65 mm

Protective index

Full contact

Manufacturer

KCL 720 Camapren®

Material

Latex gloves

Break through time

240 min

Glove thickness

0.6 mm

Protective index

Splash contact

Manufacturer

Lapren® (KCL 706 / Aldrich Z677558, Size M)

Remarks

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: www.kcl.de).

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid

Color

colorless

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/ range

No data available

Boiling point/boiling range

510.42°C (rough estimate)

Flash point

87 °C

Method: c.c., closed cup

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Flammability (liquids)

No data available

Burning rate

No data available

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

No data available

Relative vapor density

No data available

Relative density

1.1322 (rough estimate)

Density

1.1322 (rough estimate)

Water solubility

soluble

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

Not classified as explosive.

Oxidizing properties

none

Particle characteristics Particle size

No data available

Solubility

DMSO: soluble

Physical state

powder

SECTION 10: Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Chemical stability

hygroscopic

Possibility of hazardous reactions

Risk of explosion with: acetylidene organic halides perchlorates Acid chlorides nonmetallic halides iron(III) compounds nitrates fluorides chlorates hydrides perchloric acid Oxides of phosphorus Nitric acid silver compounds silicon compounds silanes acid halides Exothermic reaction with: boron compounds oxyhalogenic compounds Potassium sodium Strong oxidizing agents phosphorus halides strong reducing agents Acid chlorides Strong acids silver salt nitrogen dioxide Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate

Conditions to avoid

Strong heating.

Incompatible materials

various plastics Metals

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Remarks: Possible damages: slight irritation

Serious eye damage/eye irritation

Remarks: Possible damages: slight irritation

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

Germ cell mutagenicity

Classified based on available data. For more details, see section 2

Carcinogenicity

Classified based on available data. For more details, see section 2

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

Possible symptoms:

After uptake:

CNS disorders

Nausea

Tiredness

Headache

Possible damages:

Damage to:

Liver

Kidney

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

Components dimethyl sulphoxide**Acute toxicity**

LD50 Oral - Rat - male and female - 28,300 mg/kg (OECD Test Guideline 401)

LC0 Inhalation - Rat - male and female - 4 h - > 5.33 mg/l - dust/mist (OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - 40,000 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

Local lymph node assay (LLNA) - Mouse

Result: negative (OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: negative

Method: OECD Test Guideline 474

Species: Rat - male and female

Result: negative

Carcinogenicity

Classified based on available data. For more details, see section 2

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure Aspiration hazard

Classified based on available data. For more details, see section 2

SECTION 12: Ecological information

Ecotoxicity

Toxicity to fish

Remarks: No data available

Components:

dimethyl sulphoxide:

Toxicity to fish

LC50 (Danio rerio (zebra fish)): > 25,000 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: yes

Method: OECD Test Guideline 203 GLP: yes

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 24,600 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 17,000 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes

Method: OECD Test Guideline 201 GLP: yes

Toxicity to microorganisms

EC50 (activated sludge): 10 - 100 mg/l Exposure time: 30 min Method: ISO 8192

Persistence and degradability

Biodegradability

Remarks: No data available

Components:

dimethyl sulphoxide:

Biodegradability

aerobic Concentration: 2 mg/l Result: Not readily biodegradable. Biodegradation: 31 % Exposure time: 28 d Method: OECD Test Guideline 301D GLP: yes

Stability in water

Degradation half life: 0.12 - 1.2 h (30 °C) pH: 7 Remarks: Hydrolyzes readily.

Bioaccumulative potential

Bioaccumulation

Remarks: No data available

Components:

dimethyl sulphoxide:

Partition coefficient: noctanol/water

log Pow: -1.35 (20 °C) Remarks: Bioaccumulation is not expected.

Mobility in soil

Stability in soil

Remarks: No data available

Other adverse effects

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Waste chemicals: forward to recycling as far as possible. If it cannot be recycled, please use a reasonable method of disposal. Discharging into the sewer shall not be used for disposal of this product. Disposal should be in accordance with applicable national and local laws and regulations. Safety precautions of person who dispose is adopted with section 8. Contaminated package: Return the container to producer, or dispose according to the national and local laws and Regulations. See www.retrologistik.com for processes regarding the return of chemicals

and containers, or contact us there if you have further questions. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National regulation

JT/T 617

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Environmentally hazardous : no

Special precautions for user

Not applicable

SECTION 15: Regulatory information

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Hazardous Chemicals for Priority Management

Not applicable under SAWS

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

Not applicable

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals

Not listed

SECTION 16: Other information

Full text of other abbreviations

GBZ 2.1-2007

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

GBZ 2.1-2007 / PC-TWA AIC - Australian Invent Transport by Land of Bra bw - Body weight; **CMR** Standard of the German List (Canada); **ECx** - Conc associated with x%respo Chemical Substances (Jap response; **ERG** - Emerge GLP - Good Laboratory P cer; **IATA** - International Construction and Equipm Half maximal inhibitory c tion; **IECSC** - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; **KECI** - K tration to 50 % of a test (Median Lethal Dose); **MA** lution from Ships; **n.o.s.** No Observed (Adverse) E fect Level; **NOELR** - No Norm; **NTP** - National Toxi icals; **OECD** - Organizatio fice of Chemical Safety a and Toxic substance; **PIC** stances; **(Q)SAR** - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemicala States); **UN** - United Nat Transport of Dangerous **WHMIS** - Workplace Hazar Permissible concentration - time weighted average ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)
 ErCx - Concentration associated with x% growth rate cy Response Guide
 GHS - Globally Harmonized System
 actice
 IARC - International Agency for Research on Canir Transport Association
 IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk
 IC50 ncentration
 ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China
 IMDG - Interna- Goods
 IMO - International Maritime Organization
 ISHL alth Law (Japan)
 ISO - International Organisation for rea Existing Chemicals Inventory
 LC50 - Lethal Concenopulation
 LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- Not Otherwise Specified
 Nch - Chilean Norm
 NO(A)EC fect Concentration
 NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate
 NOM - Official Mexican ology Program
 NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development
 OPPTS - Ofd Pollution Prevention
 PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship
 REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals
 SADT - Selfn Temperature
 SDS - Safety Data Sheet
 TCSI - Taiwan tory
 TDG - Transportation of Dangerous Goods
 TECI s Inventory
 TSCA - Toxic Substances Control Act (United ons
 UNRTDG - United Nations Recommendations on the oods
 vPvB - Very Persistent and Very Bioaccumulative
 ous Materials Information System

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.