ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

Potassium clavulanate

Revision Date:2026-04-25 Revision Number:1

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

Product identifier

Product name	: Potassium clavulanate
CBnumber	: CB2722502
CAS	: 61177-45-5
EINECS Number	: 262-640-9
Synonyms	: Potassium clavulanate,Clavulanate Potassium

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 Danger

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P235 Keep cool.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P403+P235 Store in a well-ventilated place. Keep cool.

Hazard statements

H228 Flammable solid

H252 Self-heating in large quantities; may catch fire

H317 May cause an allergic skin reaction

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

SECTION 3: Composition/information on ingredients

Substance

Product name	: Potassium clavulanate
Synonyms	: Potassium clavulanate,Clavulanate Potassium
CAS	: 61177-45-5
EC number	: 262-640-9
MF	: C8H10KNO5
MW	: 239.27

SECTION 4: First aid measures

Description of first aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

After eye contact

Rinse opened eye for several minutes under running water.

After swallowing

Immediately call a doctor.

Information for doctor

Most important symptoms and effects, both acute and delayed

May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents

Use fire fighting measures that suit the environment.

A solid water stream may be inefficient.

Special hazards arising from the substance or mixture

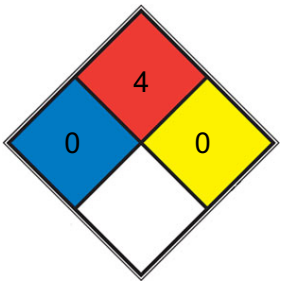
No further relevant information available.

Advice for firefighters

Protective equipment

No special measures required.

NFPA 704



■	HEALTH	0	Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials
■	FIRE	4	Will rapidly or completely vaporize at normal atmospheric pressure and temperature, or is readily dispersed in air and will burn readily. Includes pyrophoric substances. Flash point below room temperature at 22.8 °C (73 °F). (e.g. acetylene, propane, hydrogen gas)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1

Substance is not listed.

PAC-2

Substance is not listed.

PAC-3

Substance is not listed.

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires

Keep ignition sources away - Do not smoke.

Conditions for safe storage, including any incompatibilities

Storage

Store in accordance with information listed on the product insert.

Requirements to be met by storerooms and receptacles

No special requirements.

Information about storage in one common storage facility

Not required.

Further information about storage conditions

Keep receptacle tightly sealed.

Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems

No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace

Not required.

Additional information

The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Breathing equipment

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Not required.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Appearance

Physical State

Crystalline

Color

Light brown to brown

Odor

Characteristic

Structural Formula

C8H8NO5 K

Molecular Weight

237.3 g/mol

Odor Threshold

Not determined.

pH

Not applicable.

Change in condition

Melting point/Melting range

Undetermined.

Boiling point/Boiling range

Undetermined.

Flash point

Not applicable.

Flammability (solid,gas)

Product is not flammable.

Decomposition temperature

Not determined.

Auto igniting

Not determined.

Danger of explosion

Not determined.

Explosion limits

Lower: Not determined.

Upper: Not determined.

Vapor Pressure

Not applicable.

Density

Not determined.

Relative Density

Not determined.

Vapor Density

Not applicable.

Evaporation Rate

Not applicable.

Solubility in / Miscibility with

Freely soluble in water, slightly soluble in ethanol (96 per cent), very slightly soluble in acetone.

Water

Not determined.

Partition coefficient (n-octanol/water)

Not determined.

Viscosity

Dynamic

Not applicable.

Kinematic

Not applicable.

SOLUBILITY

miscible in: DMSO; PBS; DMF

Other information

No information available

SECTION 10: Stability and reactivity

Reactivity

No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

Possibility of hazardous reactions

No dangerous reactions known.

Conditions to avoid

No further relevant information available.

Incompatible materials

strong oxidizing agents, H2O

Hazardous decomposition products

carbon oxides, hydrogen cyanide, nitrogen oxides, potassium oxides

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SECTION 11: Toxicological information

RTECS Number

RN6802700

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification:

Route	Endpoint	Value
Oral	LD50	4,526 mg/kg (mouse) 7,936 mg/kg (rat)
Intraperitoneal	LD50	1,531 mg/kg (mouse) 1,399 mg/kg (rat)
Subcutaneous	LD50	2,185 mg/kg (mouse) 1,398 mg/kg (rat)

Primary irritant effect

on the skin

No irritant effect.

on the eye

No irritating effect.

Sensitization

Sensitization

possible through inhalation.

Sensitization

possible through skin contact.

Additional toxicological information

Carcinogenic categories

IARC (International Agency for Research on Cancer)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

SECTION 12: Ecological information

Toxicity

Aquatic toxicity

No further relevant information available.

Persistence and degradability

No further relevant information available.

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings

Recommendation

Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number

DOT, IMDG, IATA UN1325

UN proper shipping name

DOT Flammable solids, organic, n.o.s. (Clavulanate (potassium salt))

IMDG FLAMMABLE SOLID, ORGANIC, N.O.S. (Clavulanate (potassium salt))

IATA Flammable solid, organic, n.o.s. (Clavulanate (potassium salt))

Transport hazard class(es)

DOT

Class: 4.1 Flammable solids, self-reactive substances and

Label: 4.1

IMDG, IATA

Class: 4.1 Flammable solids, self-reactive substances and

Label: 4.1

Packing group

DOT, IMDG, IATA II

Environmental hazards

Not applicable.

Special precautions for user

Warning: Flammable solids, self-reactive substances and solid desensitised explosives

Hazard identification number (Kemler code)

40

EMS Number

F-A,S-G

Stowage Category

B

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information

DOT:

Quantity limitations

On passenger aircraft/rail: 15 kg

On cargo aircraft only: 50 kg

IMDG:

Limited quantities (LQ)

1 kg

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

IATA:

Remarks

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of

E1, E2, E4, or E5, this item meets the De Minimis

Quantities exemption, per IATA 2.6.10.

Therefore packaging does not have to be labeled as

Dangerous Goods/Excepted Quantity.

UN "Model Regulation"

UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S.

(CLAVULANATE (POTASSIUM SALT)), 4.1, II

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

No further relevant information available.

Sara

Section 355 (extremely hazardous substances):	Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is not listed.
TSCA (Toxic Substances Control Act):	Substance is not listed.
Hazardous Air Pollutants:	Substance is not listed.

Proposition 65

Chemicals known to cause cancer:	Substance is not listed.
Chemicals known to cause reproductive toxicity for females:	Substance is not listed.

Chemicals known to cause reproductive toxicity for males:	Substance is not listed.
Chemicals known to cause developmental toxicity:	Substance is not listed.

Chemicals known to cause cancer

Substance is not listed.

Chemicals known to cause reproductive toxicity for females

Substance is not listed.

Chemicals known to cause reproductive toxicity for males

Substance is not listed.

Chemicals known to cause developmental toxicity

Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency):	Substance is not listed.

TLV (Threshold Limit Value)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Solids 2: Flammable solids – Category 2

Self-heating substances and mixtures 2: Self-heating substances and mixtures – Category 2

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1