

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	Clavulanate Potassium
Product #:	C-2647
Synonyms:	(2R,3Z,5R)-3-(2-hydroxyethylidene)-7-oxo-4-oxa-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, monopotassium salt; BRL 14151K
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Clavulanate Potassium	61177-45-5	262-640-9	

Section 3: Hazards Identification

Symbols	
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HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
1	4	0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
0	4	0

Section 4: First Aid Measures

General Overview:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
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Inhalation:	Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation
Skin:	Immediately wash with water and soap and rinse thoroughly.
Eyes:	Rinse opened eye for several minutes under running water.
Ingestion:	Immediately call a doctor.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Combustible
Extinguishing Media:	Use firefighting measures that suit the environment. A solid water stream may be inefficient
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	No special measures required.
Flash Point:	No data available

Section 6: Accidental Release Measures





Personal Precautions:	Wear protective equipment. Keep unprotected persons away.
Environmental Precautions:	Do not allow to enter sewers/surface or ground water.
Methods for Clean-up:	Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

SECTION 7: Handling & Storage

Storage:	Recommended storage temperature: -20°C
Handling:	Ensure good ventilation/exhaustion at the workplace. Keep ignition sources away. Do not smoke.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	
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	 <p>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.</p>
Skin and Body:	  <p>Protective gloves. Protective lab coat.</p>
Eyes:	 <p>Not required.</p>
Ventilation/Engineering Measures:	<p>Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work</p>
Hygiene:	<p>The usual precautionary measures for handling chemicals should be followed.</p>
Other:	<p>N/A</p>

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	<p>Crystalline. Characteristic odor.</p>
Formula	<p>$C_8H_8NO_5 \cdot K$</p>
Molecular Wt.	<p>237.3</p>
Melting Pt.	<p>No data available</p>
Boiling Pt.	<p>No data available</p>
Density:	<p>No data available</p>

Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	DMSO, PBS, DMF
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	Carbon oxides, hydrogen cyanide, nitrogen oxides, potassium oxides
Materials to Avoid:	Strong oxidizing agents, water
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	RN6802700
ACUTE Toxicity:	<p>Oral LD50 = 4,526 mg/kg (mouse) Oral LD50 = 7,936 mg/kg (rat) Intraperitoneal LD50 = 1,531 mg/kg (mouse) Intraperitoneal LD50 = 1,399 mg/kg (rat) Subcutaneous LD50 = 2,185 mg/kg (mouse) Subcutaneous LD50 = 1,398 mg/kg (rat)</p>
CHRONIC Toxicity:	Sensitization possible through inhalation and skin contact.
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>IARC: 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.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 1 (Self-assessment): slightly hazardous for water
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	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	No data available

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	UN1325
ADR / RID (LAND):	N/A
DOT regulations:	<p>Flammable solids, organic, n.o.s. (Clavulanate (potassium salt)) Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives Label: 4.1</p> <p>Quantity Limitations:</p> <ul style="list-style-type: none"> • On passenger aircraft/rail: 15 kg • On cargo aircraft only: 50 kg
IMDG/IMO (SEA):	<p>FLAMMABLE SOLID, ORGANIC, N.O.S. (Clavulanate (potassium salt)) Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives Label: 4.1</p> <p>Limited Quantities (LQ): 1 kg Excepted Quantities (EQ): Code E2</p> <ul style="list-style-type: none"> • Maximum net quantity per inner packaging: 30 g • Maximum net quantity per outer packaging: 500 g
IATA/DGR (AIR):	<p>Flammable solid, organic, n.o.s. (Clavulanate (potassium salt)) Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives Label: 4.1</p>

	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.
Special Provisions:	Warning: Flammable solids, self-reactive substances and solid desensitized explosives. Hazard identification number (Kemler code): 40 EMS Number: F-A,S-G Stowage Category: B Segregation Code: SG72

SECTION 15: Regulatory Information

Health Phrases:	Danger! H228 Flammable solid. H252 Self-heating in large quantities; may catch fire. H302 Harmful if swallowed. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction.
Risk Phrases:	P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P235+P410 Keep cool. Protect from sunlight. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P261 Avoid breathing dust/fume/gas/mist/vapors/spray P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 [In case of inadequate ventilation] wear respiratory protection.
Safety Phrases:	P301+P312 If swallowed: Call a poison center/doctor if you feel unwell. P330 Rinse mouth. P302+P352 If on skin: Wash with plenty of water. P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P321 Specific treatment (see on this label). P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor. P363 Wash contaminated clothing before reuse. P370+P378 In case of fire: Use CO ₂ , powder or water spray to extinguish. P407 Maintain air gap between stacks/pallets. P413 Store bulk masses greater than 50 lbs at temperatures not exceeding 122°F.

	P420 Store away from other materials. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found
U.S. Federal Regulations:	SARA 302/304 emergency planning and notification: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found. SARA 313 toxic chemicals notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: Flammable solids (Cat. 2), Self-heating substances and mixtures (Cat. 2), Sensitization - respiratory (Cat. 1), Acute toxicity - oral (Cat. 4), Sensitization - skin (Cat. 1)
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*