

# Safety Data Sheet

Creation Date: 2021/11/04	SDS NO.: 1533-1E
Product Name: potassium chlorate	Version: V2.1.0.1

## SECTION 1 Identification of the chemical and supplier

**Chemical Name:** potassium chlorate

**Synonyms:**

**CAS No.:** 3811-04-9

**EC No.:** 223-289-7

**Molecular Formula:** KClO<sub>3</sub>

**Recommended Uses:** Please consult manufacturer.

**Restrictions on Use:** Please consult manufacturer.

**Name of the company:** CHENZHOU CHENXI METAL CO., LTD

**Address of the company:** SHUIXIEHUATING, QINGNIAN AVE, CHENZHOU, HUNAN, CHINA

**Post code:** 423000

**Fax number:** 86-735-2326503

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**Emergency phone number:** 86-735-5886796

## SECTION 2 Hazards identification

### | Emergency overview

Solid. Contact with combustible material easily cause fire. Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Use appropriate container to avoid environmental contamination.

### | Hazard classification according to GHS

According to series standards of GB 30000-2013: Rules for classification and labelling of chemicals. (Please refer to 16th chapter of SDS), hazard classification as following: Oxidizing Solids, Category 1; Hazardous To The Aquatic Environment – Short-Term (Acute) Hazard, Category 2; Hazardous To The Aquatic Environment – Long-Term (Chronic) Hazard, Category 2.

### | Label elements

#### Hazard pictograms



**Signal word:** **Danger**

**Hazard statements:** May cause fire or explosion; strong oxidizer, Toxic to aquatic life, Toxic to aquatic life with long lasting effects.

#### Precautionary statements

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Take preventive measures to avoid

mixing with fuel.Avoid release to the environment.Wear protective gloves/protective clothing/eye protection/face protection.Wear fire resistant or flame retardant clothing.

**Response:** Collect spillage.IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.In case of fire: Use suitable fire extinguishing medium to extinguish.In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Storage:** Not applicable.

**Disposal:** Dispose of contents/container in accordance with local/regional/national/ international regulations.

## Hazard description

### Physical and chemical hazards

Contact with combustible material easily cause fire.

### Health hazards

Cough.Sore throat.Abdominal pain.Blue lips or fingernails.Blue skin.Confusion.Convulsions.Diarrhoea.Dizziness.Headache.Nausea.Shortness of breath.Sore throat.Unconsciousness.Vomiting.Symptoms may be delayed:Redness.Redness.Pain.

### Environmental hazards

This product is toxic to aquatic life with long lasting effects. Please refer to 12th chapter of SDS.

## SECTION 3 Composition/information on ingredients

√Substance Mixture

Component	Concentration/Range	CAS No.
Potassium chlorate	>= 99	3811-04-9

## SECTION 4 First aid measures

### Description of first aid measures

**General advice:** Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.

**Skin contact:** First rinse with plenty of water, then remove contaminated clothes and rinse again.Refer for medical attention.

**Eye contact:** First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

**Inhalation:** Fresh air, rest.Refer for medical attention.

**Ingestion:** Rinse mouth.Induce vomiting (ONLY IN CONSCIOUS PERSONS!).Refer for medical attention.

**Advice for protecting the rescuer:** Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result. Remove all sources of ignition and increase ventilation. Avoid contact with skin and eyes. Avoid inhalation of dusts. Use personal protective equipment including respirator.

**Special note to the doctor:** Treat symptomatically. Symptoms may be delayed.

## SECTION 5 Firefighting measures

### | Hazard characteristics

Will not burn but increases intensity of fire. Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition. Has a fire-promoting effect due to release of oxygen. The material may provide sufficient oxygen to make the fire fierce and self sustaining. Smothering action may not be effective for established fire. Containers may explode when heated. May expand or decompose explosively when heated or involved in fire.

### | Extinguishing method and media

Suitable extinguishing media: water.

Unsuitable extinguishing media: Dry chemical, carbon dioxide or foam.

### | Fire precautions and measures

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear. Fight fire from a safe distance, with adequate cover. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6 Accidental release measures

### | Personal precautions, protective equipment and emergency procedures

Keep combustibles (wood, paper, oil, etc.) away from spilled material. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

### | Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.

### | Methods and materials for containment and cleaning up

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## SECTION 7 Handling and storage

### | Precautions for handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Avoid contact with skin and eyes. Keep away from heat/sparks/open flames/ hot surfaces.

### | Precautions for storage

Keep containers tightly closed. Keep containers in a dry, cool and well-ventilated place. Keep away from heat/sparks/open flames/hot surfaces. Store away from incompatible materials and foodstuff containers. Storage temperature generally should not be higher than 30 °C, relative humidity generally should not be higher than 80%.

## SECTION 8 Exposure controls/personal protection

### | Control parameters

#### Occupational Exposure limit values

No information available.

#### Biological limit values

No information available.

#### Monitoring methods

EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air ( Series standard ).

### | Engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Set up emergency exit and necessary risk-elimination area.

### | Respiratory protection

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

### | Eye protection

Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).

### | Skin and body protection

Wear fire/flame resistant/retardant clothing and antistatic boots.

### | Hand protection

Wear protective gloves ( such as butyl rubber ), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.

### | Other protection

Smoking, eating and drinking water is forbidden in the workplace. After work, shower and change clothes. To maintain good health habits.

## SECTION 9 Physical and chemical properties

<b>Appearance:</b> White crystals or powder	
<b>pH (Specified the concentration) :</b> 5.6( 20°C, 73g/L, Calculated )	<b>Odor:</b> No information available
<b>Initial boiling point and boiling range(°C):</b> 400 ( Decomposed )	<b>Melting point/freezing point(°C):</b> 368
<b>Vapor density(Air = 1):</b> Not applicable	<b>Density:</b> No information available

<b>Saturated vapor pressure (kPa):</b> Not applicable	<b>Relative density(Water=1):</b> 2.3
<b>Evaporation rate:</b> Not applicable	<b>Viscosity(mm<sup>2</sup>/s):</b> Not applicable
<b>Flash point(°C):</b> Not applicable	<b>N-octanol/water partition coefficient:</b> No information available
<b>Decomposition temperature(°C):</b> 400	<b>Auto-ignition temperature(°C):</b> No information available
<b>Upper/lower explosive limits[% (v/v)]:</b> Upper limit : No information available ; Lower limit : No information available	
<b>Solubility:</b> Miscible with water	<b>Flammability:</b> No information available

## SECTION 10 Stability and reactivity

### | Stability

Stable under proper operation and storage conditions.

### | Incompatible materials

Metal powder, metal amino compounds, ammonia, ammonium salts, amine, amide, carboxylic acids, phenols, alcohols, carboxylic acid esters, nitriles, sulfuric acid, concentrated nitric acid and phosphoric acid.

### | 应 Conditions to avoid

Incompatible materials, heat, flame and spark.

### | Hazardous reactions

Mixture with metal powders may explode if heated, impact or friction.

### | Decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11 Toxicological information

### | Acute toxicity

COMPONENT	CAS NO.	LD <sub>50</sub> (ORAL)	LD <sub>50</sub> (DERMAL)	LC <sub>50</sub> (INHALATION)-4H
Potassium chlorate	3811-04-9	1870mg/kg(Rat)	No information available	No information available

### | Carcinogenicity

ID	CAS NO.	COMPONENT	IARC	NTP
1	3811-04-9	Potassium chlorate	Not Listed	Not Listed

### | Skin irritation/corrosion

No information available

**| Eye irritation/corrosion**

No information available

**| Skin sensitization**

No information available

**| Respiratory sensitization**

No information available

**| Germ cell mutagenicity**

No information available

**| Reproductive toxicity**

No information available

**| STOT-single exposure**

No information available

**| STOT-repeated exposure**

No information available

**| Aspiration hazard**

No information available

**SECTION 12 Ecological information****| Acute aquatic toxicity**

No information available.

**| Chronic aquatic toxicity**

No information available.

**| Persistence and degradability**

No information available

**| Bioaccumulative potential**

No information available

**| Mobility in soil**

No information available

**| Other deleterious effect**

No information available.

**SECTION 13 Disposal considerations****| Disposal methods**

Product: Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

Contaminated packaging: Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

### | Disposal considerations

Refer to section 13.1 and 13.2.

## SECTION 14 Transport information

| UN number: 1485

| UN proper shipping name: POTASSIUM CHLORATE

| Transport hazard class: 5.1

| Packing group: II

| Label



| Marine pollutant (Yes/No): 是



### | Methods of packing

Threaded glass, metal cover pressure bottles, plastic bottles or metal (cans) outside the ordinary wooden box etc. Packaging as recommended by manufacturer.

### | Precautions for transport

Strictly prohibited shipping or transportation with acids, flammable goods, organic matter, reducing agents, spontaneous combustion, flammable goods which are wet. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

## SECTION 15 Regulatory information

### | Regulatory information

COMPONENT	A	B	C	D	E	F	G	H
Potassium chlorate	Listed	Not Listed	Not Listed	Not Listed	Listed	Not Listed	Listed	Not Listed

【A】 Catalog of Hazardous Chemicals(2015 Edition), Notice 5th 2015, China State Administration of Work Safety.

【B】 Catalog of Priority Hazardous Chemicals for Environment Management, Notice 33th 2014, Ministry of Environmental Protection of PRC.

【C】 List of Toxic Chemicals Restricted to be Imported/Exported in China, Notice 85th 2013, Ministry of Environmental Protection of PRC.

【D】 Catalog of Stupefacent and Psychotropic Substances(2013Edition), Notice 230th 2013, China Food and Drug Administration.

【E】 Catalog of Hazardous Chemicals for Priority Management( First and Second batches ), Notice 95th, 2011, Notice 12th 2013, China State Administration of Work Safety.

【F】 List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China ( First to Sixth batches ), Notice from 2000 to 2012 Ministry of Environmental Protection of PRC.

【G】 Dangerous Chemicals Directory Used to Manufacture Exploder(2011 Edition), Notice 25th Nov. 2011, Ministry of Public Security of PRC1.

【H】 Catalog of Highly Toxic Chemicals, Notice 142th 2003, China Ministry of Health.

## SECTION 16 Others

**Latest Revision Date:** 2021/11/04

### | Revision explanation

This Safety Data Sheet (SDS) was prepared according to standards of 《Safety data sheet for chemical products—Content and order of sections》 ( GB/T 16483-2008 ) and 《Guidance on the compilation of safety data sheet for chemical products》( GB/T 17519-2013 ). The result of GHS classification according to 《Guidance on the Catalog of Hazardous Chemicals(2015 Edition) (trial)》 and series standards of 《Rules for classification and labelling of chemicals》 (GB 30000.2-2013~GB 30000.29-2013).

### | Reference

【1】 IPCS: The International Chemical Safety Cards (ICSC) ,website: <http://www.ilo.org/dyn/icsc/showcard.home>.

【2】 IARC , website: <http://www.iarc.fr/>.

【3】 OECD: The Global Portal to Information on Chemical Substances, website:

[http://www.chemportal.org/chemportal/index?pageID=0&request\\_locale=en](http://www.chemportal.org/chemportal/index?pageID=0&request_locale=en).

【4】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.

【5】 NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

【6】 EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.

【7】 U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.

【8】 Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

### | Abbreviations and acronyms

**CAS** –Chemical Abstracts Service

**CMR** - Carcinogens, mutagens or substances toxic to reproduction

**PC-STEL**- Short term exposure limit

**PC-TWA** - Time Weighted Average

**DNEL** - Derived No Effect Level

**IARC** - International Agency for Research on Cancer

**RPE** - Respiratory Protective Equipment

**PNEC** –Predicted No Effect Concentration

**LC<sub>50</sub>** - Lethal Concentration 50%

**LD<sub>50</sub>** - Lethal Dose 50%

**NOEC** -No Observed Effect Concentration

**EC<sub>50</sub>** - Effective Concentration 50%

**PBT** - Persistent, Bioaccumulative, Toxic

**POW** - Partition coefficient Octanol:Water

**BCF** - Bioconcentration factor (BCF)

**vPvB** - very Persistent, very Bioaccumulative

**IMDG**-International Maritime Dangerous Goods

**ICAO/IATA**-International Civil Aviation Organization/International Air Transportation Association

**UN**-The United Nations

**ACGIH**-American Conference of Governmental Industrial

**NFPA**-National Fire Protection Association  
**Hygienists**  
**OECD**-Organization for Economic Co-operation and Development

## | Disclaimer

This Safety Data Sheet (SDS) was prepared according to GB/T16483 and GB/T17519. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user' s reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.