



EPOCH MASTER GLOBAL BUSINESS (JIANGSU)

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Design Report of Safety Data Sheet

Report No.:	HGBZ2303LEO2
Inspection date:	2024/03/22
Issue date:	2024/03/22
Version:	V2.0.0.1
*Product Name:	Sodium Perchlorate
*Applicant:	EPOCH MASTER GLOBAL BUSINESS (JIANGSU)
Supplier:	EPOCH MASTER GLOBAL BUSINESS (JIANGSU)
*Composition of the product:	Sodium perchlorate(CAS: 7601-89-0): 98.8%; Water(CAS: 7732-18-5): 1.2%
Warranty of Design:	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Ninth revised edition
*Information materials:	HGBZ2303LEO 《Application》、P094575 《Declaration of consistency of components of the sample submitted for inspection》
Design Result of SDS please see next page.	
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Safety Data Sheet

Sodium Perchlorate

Version: V2.0.0.1

Report No.: HGBZ2303LEO2

Creation Date: 2024/03/22

Revision Date: 2024/03/22

*According to GHS (Ninth Revised Edition)

1 Identification

Product identifier

Product Name	Sodium Perchlorate
CAS No.	7601-89-0
EC No.	231-511-9
Molecular Formula	$NaClO_4$

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier

Applicant Name	EPOCH MASTER GLOBAL BUSINESS (JIANGSU)
Applicant Address	NO.8406-771, 4TH FLOOR, COMPLEX BUILDING, NO.85 WENTAI STREET,JIANGXINZHOU, JIANYE DISTRICT, NANJING, JIANGSU,CHINA
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Supplier Name	EPOCH MASTER GLOBAL BUSINESS (JIANGSU)
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Supplier Telephone	+86-13770711448
Supplier Fax	+86-13770711448
Supplier E-mail	sales01@epoch-master.com

Emergency phone number

Emergency phone number	+86-13770711448
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2 Hazard(s) identification

Hazard classification according to GHS

Oxidizing Solids	Category 1
Acute Toxicity – Oral	Category 4

GHS Label elements

Hazard pictograms	
Signal word	Danger

Hazard statements

H271	May cause fire or explosion; strong oxidizer
H302	Harmful if swallowed

Precautionary statements

◆ Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P283	Wear fire resistant or flame retardant clothing.

◆ Response

P330	Rinse mouth.
P301+P317	IF SWALLOWED: Get medical help.
P306+P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P370+P378	In case of fire: Use appropriate extinguishing media mentioned in Section 5 of the SDS to extinguish.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

◆ Storage

P420	Store separately.
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◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Hazard description

◆ Physical and chemical hazards

	Contact with combustible material easily cause fire.
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◆ Health hazards

Inhaled	Cough. Sore throat.
Ingestion	Accidental ingestion of the product may be harmful.
Skin Contact	Redness.
Eye	Redness. Pain.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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3 Composition/information on ingredients

Substance/mixture

Substance			
Component	CAS No.	EC No.	Concentration (wt, %)
Sodium perchlorate	7601-89-0	231-511-9	98.8
Water	7732-18-5	231-791-2	1.2

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.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Ingestion	Rinse mouth. Refer for medical attention.
Inhalation	Fresh air, rest. Refer for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Water.
Unsuitable extinguishing media	Dry chemical, carbon dioxide or foam.

Specific hazards arising from the substance or mixture

1	Will not burn but increases intensity of fire.
2	Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.
3	Has a fire-promoting effect due to release of oxygen.
4	The material may provide sufficient oxygen to make the fire fierce and self sustaining.
5	Smothering action may not be effective for established fire.
6	Development of hazardous combustion gases or vapor possible in the event of fire.
7	May expansion or decompose explosively when heated or involved in fire.

Special protective equipment and precautions for fire-fighters

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Keep combustibles (wood, paper, oil, etc.) away from spilled material.
2	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
3	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
4	Use personal protective equipment, do not breathe dust/fume.

Environmental precautions

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

Methods and materials for containment and cleaning up

1	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
2	Do not touch broken containers and spills before putting on appropriate protective clothing.
3	Use clean, non-sparking tools to collect absorbed material.
4	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
5	It is recommended that emergency personnel wear dust masks and wear anti-static clothing.
6	Small spills: Collect spillage with a clean shovel and place in a clean, dry, loosely closed container to remove the container from the leak.
7	A large number of leaks: wetting with water and building a dike.
8	Prevent spills from entering water bodies, sewers, basements, or confined spaces.
9	Cut off the source of the leak as much as possible.
10	Keep leaks in a ventilated place.
11	Isolation of contaminated areas and restrictions on access.
12	It is recommended that emergency personnel wear dust masks.
13	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
14	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.

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| 3 | Keep away from heat/sparks/open flames/hot surfaces. |
| 4 | Store away from incompatible materials and foodstuff containers. |

8 Exposure controls/personal protection

Control parameters

Occupational Exposure limit values	No relevant regulations
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◆ Biological limit values

Biological limit values	No relevant regulations
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◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 series standard Determination of toxic substances in workplace air.

Engineering controls

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

Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear appropriate chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 Physical and chemical properties and safety characteristics

Physical and chemical properties

Physical state	Solid(particles)
Colour	White
Odor	No information available
Odor threshold	No information available
pH	4.5~7 (25°C, 50g/L, Perchloric acid, sodiumsalt, monohydrate (8Cl,9Cl))
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	No information available
Flash point(Closed cup,°C)	Not applicable
Evaporation rate	Not applicable
Flammability	combustion-supporting
Upper/lower explosive limits[%(v/v)]	Upper limit: No information available; Lower limit: No information available

Vapor pressure	Not applicable
Relative vapour density(Air=1)	Not applicable
Relative density(Water=1)	Not applicable
Solubility	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity	Not applicable
Particle characteristics	Particles

1 Stability and reactivity

| Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	The substance contains a certain amount of water, and may release hydrogen gas in contact with active metals.
Conditions to avoid	Incompatible materials, heat, flame and spark.
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. Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

1 Toxicological information

| Acute toxicity

Acute toxicity	No information available
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| Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Sodium perchlorate	Not Listed	Not Listed
Water	Not Listed	Not Listed

| Others

Sodium Perchlorate	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met

STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

1 Ecological information

| Acute aquatic toxicity

Acute aquatic toxicity	No information available
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| Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
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| Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Water	Low	Low

| Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Water	Low	Log Kow=-1.38

| Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
Water	Low	14.3

| Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Sodium perchlorate	Not applicable
Water	Not available


1 Disposal considerations

| Disposal considerations

Waste chemicals	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 recommendations	Refer to section waste chemicals and contaminated packaging.

1 Transport information

| Label

Transporting Label	
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IMDG-CODE

UN number	1502
UN proper shipping name	SODIUM PERCHLORATE
Transport hazard class	5.1
Transport subsidiary hazard class	None
Packing group	II
Marine pollutant (Yes or no)	No

ICAO/IATA-DGR

UN number	1502
UN proper shipping name	SODIUM PERCHLORATE
Transport hazard class	5.1
Transport subsidiary hazard class	None
Packing group	II

UN-ADR

UN number	1502
UN proper shipping name	SODIUM PERCHLORATE
Transport hazard class	5.1
Transport subsidiary hazard class	None
Packing group	II

1 Regulatory information**International chemical inventory**

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS
Sodium perchlorate	√	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√	√

[EC inventory] European Inventory of Existing Commercial Chemical Substances

[TSCA] United States Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCS] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Korea Existing Chemicals Inventory

[AIICS] Australian. Inventory of Industrial Chemical (AIICS)

[ENCS] Japan Inventory of Existing & New Chemical Substances

Note:

“√” Indicates that the substance included in the regulations.

“x” No data or not included in the regulations.

1 Other information

Information on revision

Creation Date	2024/03/22
Revision Date	2024/03/22
Reason for revision	-

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: <https://www.echemportal.org/echemportal/substancesearch/index.action>.
- [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	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC ₅₀	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD ₅₀	Lethal Dose 50%	NTP	National Toxicology Program
EC ₅₀	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC _x	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P _{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 9th revised edition). 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.