1. Identification of substance

Product Name	Hydrogen Peroxide
Other Name	Hydrogen Peroxide
Chemical Name	Hydrogen Peroxide
Recommended Use	Disinfection, bleach
Producer Name	Hangzhou Mingxin Hydrogen Peroxide Co.,LTD
Address	9936# Hongshiwu Rd., Linjiang Industrial Park, Hangzhou, Zhejiang, China /311228
Phone Number	0086-571-86631891
Fax Number	0086-571-82988050
WEB or E-mail	www.mxsys.cn mx@mxsys.cn
Emergency Phone Number	0086-571-86617799-6694 or Call your nearest poison control centre

2. Hazards identification

GHS classification	Oxidizing liquids 2 Acute toxicity-oral 4 Acute toxicity- inhalation 5 Skin corrosion/irritation 1B Serious eye damage/eye irritation 1 Specific target organ toxicity, single exposure 3
GHS Pictograms	
Signal words	Danger
Hazard statements	H272:May intensify fire;oxidizer H302:Harmful if swallowed H314:Causes severe skin burns and eye damage H318:Causes serious eye damage H333:May be harmful if inhaled H335:May cause respiratory irritation
Precautionary Statement Prevention	P210:Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220:Keep/Store away from clothing/…/combustible materials. P260:Do not breathe dust/fume/gas/mist/vapours/spray. P261:Avoid breathing dust/fume/gas/mist/vapours/spray. P264:Wash hands thoroughly after handling. P270:Do not eat, drink or smoke when using this product. P271:Use only outdoors or in a well-ventilated area.

	P280:Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Precautionary Statement Response	P301+P317:IF SWALLOWED: Get medical help. P301+P330+P331:IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P361+P354:IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. P304+P317:IF INHALED: Get medical help. P304+P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P354+P338:IF IN EYES:Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P316:Get emergency medical help immediately. P317:Get medical help. P319:Get medical help if you feel unwell. P321:Specific treatment (see the supplemental first aid instruction). P330:Rinse mouth. P363:Wash contaminated clothing before reuse P370+P378:In case of fire: Use extinguisher to extinguish
Precautionary Statement Storage	P403+P233:Store in a well-ventilated place. Keep container tightly closed. P405:Store locked up.
Precautionary Statement Disposal	P501:Dispose of contents/container in according with local regulation.
Other hazards which do not result in classification	Not available.

3. Composition/information on ingredients

☐**Substances**
√**Mixtures**
Component Information

Component	**CAS number**	**EINECS number**	**Mass(%)**
Hydrogen Peroxide	7722-84-1	231-765-0	50%wt
Water	7732-18-5	215-185-5	50%wt

Note:1. Unless a component presents a severe hazard, it does not need to be considered in the SDS if the concentration is less than 1%.

4.First-aid measures

NOTE TO PHYSICIAN	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.
After inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Get immediate medical attention.

After skin contact	Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. If irritation persists, get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
After eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention immediately.
After ingestion	Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Loosen tight clothing such as a collar, tie, belt or waistband. Do not use mouth-to-mouth method if victim ingested the substance. Seek immediate medical attention.
Most important symptoms/effects，acute and delayed	Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May be harmful if inhaled. May cause respiratory irritation.
5. Fire-fighting measures	
Suitable extinguishing agents	Water, dry chemical.
Special hazards caused by the material, its products of combustion or flue gases	In closed unventilated containers, risk of explosion due to the increased pressure from decomposition. Can be released in case of fire: water, oxygen.
Protective equipment	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
6. Accidental release measures	
Person-related safety precautions	Quickly evacuate the contaminated area personnel to a safe area, and isolate, restricted access strictly. Recommended emergency personnel wear self-contained breathing apparatus, wear protective overalls. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering.
Measures for environmental protection	Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting	Cut off the source of leakage as far as possible. Prevent inflow into confined space such as sewers, drainage ditch. For small amounts: adsorb with sand, vermiculite or other inert materials. For large amounts: build a causeway or trenching asylum. Keep steam cool and diluted by spraying with water,

	protect field personnel. Transfer to tanker or special collector with pump, recycle or transport to waste disposal.
Additional information	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

7. Handling and storage

Handling

Information for safe handling	Avoid contact with skin, eyes, mucous membranes and clothing. Wear neoprene gloves. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid decomposition and generation of oxygen gas which could result in high pressures and possible container rupture. Handle with care to prevent packaging and containers damage. Equip corresponding varieties and quantities of fire equipment and leakage emergency equipment. Empty containers may contain harmful substances.
Information about protection against explosions and fires	Keep away from heat, sources of ignition, flammable, combustible materials. Avoid contact with reducing agent and metal powder.

STORAGE

Requirements to be met by storerooms and containers	Keep in a cool, well-ventilated place. Keep away from fire and heat source. Keep tightly closed until used. Store separately from combustible, reductant, active metal powder, etc.
Information about storage in one common storage facility	Store away from incompatible substances such as reducing agents, combustible material, active metal powder, etc. Plastic buckets and other containers should be vented or pressure relief valve.
Further information about storage conditions	No data.

8. Exposure controls/personal protection

Limit Values for Exposure

Component	**CAS number**	**ACGIH TLV-TWA**	**ACGIH TLV-STEL**	**NIOSH PEL-TWA**	**NIOSH PEL-STEL**
Hydrogen Peroxide	7722-84-1	1ppm	N.E.	1ppm	N.E.

Appropriate engineering controls	Airtight operation, overall ventilation. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower facility.
General protective and hygienic measures	Do not get this material in contact with skin. Do not get this material on clothing. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice.

	Wash hands before breaks and at the end of workday.
Personal protective equipment	Splash goggles, neoprene gloves, apron and a respirator.
Breathing equipment	When workers are facing high concentrations they must use appropriate certified respirators, such as full-face airline respirator.
Protection of hands	Wear neoprene glove.
Eye/Face protection	Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure, made of polycarbonate, acetate, polycarbonate/acetate, PETG or thermoplastic.
Body protection	Use clean protective body-covering as needed to minimize contact with clothing and skin, such as an approved splash protective suit made of SBR rubber, PVC, Gore-Tex.

Note: 1. N.E. means not established.

9.Physical and chemical properties

Physical state	Clear liquid
Colour	Colorless
Odour	A weak special odour
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	No data available
Flammability	Nonflammable May intensify fire;oxidizer
Lower and upper explosion limit/ flammability limit	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	1-2 (concentration: 50%)
Kinematic viscosity	No data available
Solubility	Soluble in water, alcohol, ether, insoluble in benzene
Partition coefficient: n-octanol/water(log value)	No data available
Vapour pressure	No data available
Density and/or relative density	1.196 g/ml (20 ℃)
Relative vapour density	No data available

(air=1)	
Particle characteristics	Not applicable

10. Stability and reactivity

Reactivity	Decomposes slowly to release oxygen. Light sensitive.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No polymerization.
Conditions to avoid (e.g. static discharge, shock or vibration)	Incompatible materials. Strong light. Heat. Impact.
Incompatible materials	Avoid contact with sugar, starch, alkali, metal (such as iron, copper, silver, etc.).
Hazardous decomposition products	Oxygen, liable to produce overpressure in container.

11.Toxicological information

Routes of Entry: Dermal contact, eye contact, inhalation, ingestion.

Acute Toxicity	
	LD50 (Oral, rat): N/A
	LD50 (Dermal, rat): N/A
	LC50 (Inhalation, rat): 200 mg/m^3(4 h)
Skin corrosion/Irritation	Causes severe skin burns.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Chronic Effects	Not classified
Further Information	No data

12. Ecological information

Ecotoxicity	
Aquatic Toxicity	Test & Species
	96 Hr LC50 fish: N/A
	48 Hr EC50 Daphnia: N/A
	72 Hr EC50 Algae: N/A
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Additional Information	No data available

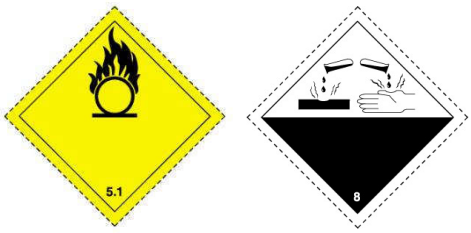
13. Disposal considerations

WASTE DISPOSAL INSTRUCTIONS

Contact a qualified professional waste disposal service to dispose of this material.
Dispose of in accordance with local environmental regulations or local authority requirements.

14. Transport information

The Recommendation of Transport of Dangerous Goods(TDG)

UN Number	UN 2014
Proper Shipping Name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide
Class/Division	Division 5.1 Oxidizing Substances
Package Group	PG II
Subsidiary risk	Class 8 Corrosive Substances
labelling pictogram	
Maritime transport IMDG/ Marine pollutant (Yes/No)	Being same with TDG/No
Air transport ICAO-TI and IATA-DGR	Being same with TDG

15. Regulatory information

European/International Regulations

OSHA:	Hazardous by definition of Hazard Communication Standard(29CFR 1910.1200).
EINECS Status:	The main components of this chemical are included in EINECS inventory.
EPA TSCA Status:	The main components of this chemical are included in TSCA inventory.
Canadian DSL(Domestic Substances List):	The main components of this chemical are included in DSL.
HMIS(Hazardous Material Identification System Ratings):	Health: 3 Flammability: 0 Physical hazard: 1 Personal protection: J (4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard; 1. Slight Hazard; 0. Minimal Hazard
WHMIS(Canadian Workplace Hazardous	C、D1B、E、F.

Material Identification System Ratings):	
GB 12268-2012 List of dangerous goods	This chemical is a dangerous goods on the GB 12268-2012 list of dangerous goods.

16. other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

This Material Safety Data Sheet was based on the "Globally Harmonized System of Classification and Labelling of Chemicals", "Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations", "INTERNATIONAL MARITIME DANGEROUS GOODS CODE"," International Air Transport Association Dangerous Goods Regulations", the National Standards and other related dangerous chemicals management laws, regulations and standards, which are periodically updated and changed. To make dangerous goods / hazardous chemicals comply with the relevant requirements of the latest management, regularly update is recommended.

This Material Safety Data Sheet has been compiled in both English and Chinese. For any discrepancies, the Chinese version shall prevail.

Abbreviations and acronyms	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road RID: Regulations Concerning the International Transport of Dangerous Goods by Rail IMDG: International Maritime Code for Dangerous Goods IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent EC50: Effective concentration, 50 percent
Edit Date	13.05.2021
Update and Revise	Second edition
Edit Standard	*Globally Harmonized System of Classification and Labelling for Chemicals* Part 1.5
Revised Institution	Technology Center of Hangzhou Customs District