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ZAIQ-RF(HH)-01-19

Safety Data Sheet

Applicant name： **Lionser Medical Disinfectant (Hangzhou) Co., Ltd.**

Product Name: Lionser® Disinfectant Tablets

Edit date: 2020-04-03

Edit institution: Technology Center of Hangzhou Customs District

Approver:

Technology Center of Hangzhou Customs District 杭州海关技术中心 检验检测专用章

1. Unless other wise stated, this test report is only responsible for the sample(s).
2. This test report can not be reproduced,except in full,without prior written permission of the lab.

1. Identification of substance	
Product Name	Lionser®Disinfectant Tablets
Trade Name	Lionser®Disinfectant Tablets
Chemical Name	None
Recommended Use	It is suitable for disinfection of environment, object surface, fruits and vegetables.
Manufacturer	Lionser Medical Disinfectant (Hangzhou) Co., Ltd.
Address	No.1, Langsuo Road, Jiande, Zhejiang / 311607
Phone Number	+86-571-64793003
Fax Number	+86-571-64793014
WEB	None
Emergency Phone Number	+86-571-64793002 or call your nearest poison control centre
2. Hazards identification	
GHS classification	Acute toxicity-oral 4 Serious eye damage/eye irritation 2A Specific target organ toxicity, single exposure 3 Reproductive toxicity 1B Hazardous to the aquatic environment, acute hazard 1 Hazardous to the aquatic environment, long-term hazard 1
GHS Pictograms	
Signal words	Danger
Hazard statements	H302:Harmful if swallowed H319:Causes serious eye irritation H335:May cause respiratory irritation H360:May damage fertility or the unborn child H400:Very toxic to aquatic life H410:Very toxic to aquatic life with long lasting effects
Precautionary Statement Prevention	P203:Obtain, read and follow all safety instructions before use. 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. P273:Avoid release to the environment. P280:Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Precautionary Statement Response	P301+P317:IF SWALLOWED: Get medical help. P304+P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338:IF IN EYES: Rinse cautiously with water for

	several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P318:IF exposed or concerned: Get medical advice. P319:Get medical help if you feel unwell. P330:Rinse mouth. P337+P317:If eye irritation persists: Get medical help. P391:Collect spillage.
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(%)
Trichloroisocyanuric acid	87-90-1	201-782-8	50%±5%wt
Sodium bicarbonate	144-55-8	205-633-8	30.00%wt
Boric acid	10043-35-3	233-139-2	10.00%wt

4.First-aid measures

NOTE TO PHYSICIAN	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
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 serious eye irritation. May cause respiratory irritation. May damage fertility or the unborn child.

5. Fire-fighting measures	
Suitable extinguishing agents	Water spray, foam, dry chemical powder, sandy soil.
Special hazards caused by the material, its products of combustion or flue gases	The decomposition products depend on temperature, air supply and other substances. Decomposition products may include but are not limited to: carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas, borane/boron oxides, sodium oxides.
Protective equipment for fire-fighters	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	Ensure adequate ventilation. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.
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	Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation. Do not get water inside containers. Clean contaminated surface thoroughly.
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 breathing dust/fume/gas/mist/vapours/spray. In case of insufficient ventilation, wear suitable respiratory equipment.
Information about protection against explosions and fires	Keep away from heat, sources of ignition - No smoking.
STORAGE	
Requirements to be met by storerooms and containers	Keep away from light and airtight in a cool and dry place.
Information about storage in one common storage facility	Store away from imcompatible substances such as potassium, acid anhydrides, strong reducing agents, strong bases, hypochlorites, strong acids, strong oxidizing agents, etc.
Further information about storage conditions	Storage area should be equipped with appropriate variety and quantity of fire equipment, emergency treatment equipments

and suitable materials for leakage.

8. Exposure controls/personal protection

Limit Values for Exposure

Component	**CAS number**	**ACGIH TLV-TWA**	**ACGIH TLV-STEL**	**NIOSH REL-TWA**	**NIOSH REL-STEL**
Trichloroisocyanuric acid	87-90-1	N.E.	N.E.	N.E.	N.E.
Sodium bicarbonate	144-55-8	N.E.	N.E.	N.E.	N.E.
Boric acid	10043-35-3	2 mg/m^3	6 mg/m^3	N.E.	N.E.

Appropriate engineering controls	Use adequate ventilation to keep airborne concentrations low. Provide safety shower and eyewash facility.
General protective and hygienic measures	Do not get this material in 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	Safety glasses, gloves, protective clothing and a vapor respirator.
Breathing equipment	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protection of hands	Wear appropriate chemical resistant gloves.
Eye/Face protection	Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.
Body protection	Full set of anti chemical reagent overalls, flame retardant antistatic protective clothing, choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

9.Physical and chemical properties

Physical state	White tablets, smooth surface, no stain
Colour	White
Odour	Chlorine odour
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	No data available
Flammability	No data available
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	5.5~7.5 (Aqueous solution containing effective chlorine 4000mg / L) (Concentration: 34.5%~38%; Temperature: 25 ℃)

Kinematic viscosity	No data available
Solubility	No data available
Partition coefficient: n-octanol/water(log value)	No data available
Vapour pressure	No data available
Density and/or relative density	No data available
Relative vapour density (air=1)	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Trichloroisocyanuric acid: Decomposes on heating. This produces toxic fumes. May explode on heating. The substance is a strong oxidant. It reacts with combustible and reducing materials. Reacts violently with ammonia, ammonium salts and amines and sodium carbonate (soda ash). This generates fire and explosion hazard. Reacts with strong acids. This produces toxic gas (chlorine).
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid (e.g. static discharge, shock or vibration)	Heat and flame and spark. The extreme temperatures and direct sunlight. Damp.
Incompatible materials	Avoid contact with potassium, acid anhydrides, strong reducing agents, strong bases, hypochlorites, strong acids, strong oxidizing agents, etc.
Hazardous decomposition products	The decomposition products depend on temperature, air supply and other substances. Decomposition products may include but are not limited to: carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas, borane/boron oxides, sodium oxides.

11.Toxicological information

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

Acute Toxicity

Trichloroisocyanuric acid (CAS 87-90-1)	LD50 (Oral, rat): 406 mg/kg LC50 (Inhalation, rat): N/A LD50 (Dermal, rabbit): N/A
Sodium bicarbonate (CAS 144-55-8)	LD50 (Oral, rat): N/A LC50 (Inhalation, rat): N/A LD50 (Dermal, rabbit): N/A
Boric acid (CAS 10043-35-3)	LD50 (Oral, rat): 2,660 mg/kg LC50 (Inhalation, rat): N/A

	LD50 (Dermal, rabbit): N/A
Skin corrosion/Irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	May damage fertility or the unborn child.
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Chronic Effects	Not classified
Further Information	None.

12. Ecological information

Ecotoxicity

Aquatic Toxicity	Trichloroisocyanuric acid (CAS 87-90-1) Test & Species 96 Hr LC50 fish: 0.08 mg/l 48 Hr EC50 Daphnia: 0.17 mg/l 72 Hr EC50 Algae: N/A
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Not available
Additional Information	Very toxic to aquatic life with long lasting effects.

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 3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Trichloroisocyanuric acid)
Class/Division	Class 9 Miscellaneous Dangerous Substances and Articles
Package Group	PG III
Subsidiary risk	—

labelling pictogram



Maritime transport IMDG/ Marine pollutant (Yes/No)	Being same with TDG/Yes
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: 2 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 Material Identification System Ratings):	C, D1B, D2B (Trichloroisocyanuric acid).
GB 12268-2012 List of dangerous goods	This product 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
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Update and Revise	Original edition
Edit Standard	*Globally Harmonized System of Classification and Labelling for Chemicals* Part 1.5
Revised Institution	Technology Center of Hangzhou Customs District