Version of Date

5-SEP-2018

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

PRODUCT NAME : THIOGLYCOLIC ACID

COMPANY NAME: QINGDAO LNT CHEMICAL CO., LTD

39 Huaihe Road East, QETDZ, QINGDAO 266500, PR China

CHEMICAL NAME THIOGLYCOLIC ACID

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

COMPONENTCAS. NO.
THIOGLYCOLIC ACID
80%-99%
68-11-1

3. HAZARDS IDENTIFICATION

GHS Classification

Warning signs:



Signal Word: DANGER

H290: May cause corrosion to metals

H301: May be toxic if swallowed

H311: May be toxic if contact skin

H314: Causes serious damage to skin and eyes

H331: May be toxic if inhaled

Precautionary Statements

P234 Keep container tightly closed

P260 Do not inhale dust or smoke

P264 Wash thoroughly after handling

P280 Wear protective gloves/eye protection/face protection

P270 Do not eat, drink and smoke when using this products

P271 Use only outdoors or in a well-ventilated area.

Reactivity Statements

P390 Absorb spill, prevent material damage

P301+P330+P331 If swallowed, please gargle, do not induce vomiting.

P304+P340 If inhaled:Remove victim to fresh air and keep at rest in a position 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

P31 Call a poison center or doctor

P361+P353 Remove immediately all contaminated clothing. Rinse skin with water or shower.

P363 Contaminated clothing can be reused after cleaning

P321 Specific Treatment

Storge statements:

P406 Stored in corrosion resistant containers

P405 Store locked up

P403+P233 Stored in a well-ventilated place. Keep container tightly closed.

Handling Statements:

P501 Disposal of built-in objects/container, with plenty of water flushing and import waste water system

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in ,move person into fresh air.If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately .Wash off with soap and plenty of water.Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person . Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: $130^{\circ}\mathbb{C}$ (266°F) close up

LAMMABLE LIMITS

(% BY VOL): Not available

AUTOIGNITION TEMP: Not available

DEOMPOSITION TEMP: Not available

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use water spray, carbon dioxide, foam or dry chemical to extinguish fires. Wear self-contained, positive-pressure breathing apparatus and full firefighting protective clothing. See Section 8 (Exposure Controls/Personal Protection) for special protective clothing. Sulfur dioxide or oxides of phosphorus may be formed under fire conditions. Do not flush to sewer which may contain acid. This could result in generation of toxic and explosive hydrogen sulfide gas.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. In addition to the protective clothing / equipment in Exposure Control (Exposure Controls/Personal Protection), wear rain suit. Cover spills with some inert absorbent material; sweep up and place in a waste disposal containter. Flush area with water.

7. HANDLING AND STORAGE

Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

Mixing with acids or aqueous solutions containing acids could result in release of toxic and explosive hydrogen sulfide gas. USE ONLY AS DIRECTED. See product bulletin for detailed use instructions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands with soap and water. Prevent eye and skin contact. Wear the special protective equipment specified below for operations where eye or skin contact can occur. Prevent contamination of skin or clothing when removing protective equipment. Provide eyewash fountain and safety shower in close proximity to points of potential exposure. Where exposures are below the PEL, no respiratory protection is required. Where exposures exceed the PEL, use respirator approved by NIOSH or full protective suit with air supply appropriate for the material and level of exposure. See "GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION"(NIOSH). Special protective equipment - To prevent skin contact wear skin protection, such as impervious gloves, apron, workpants, long sleeve workshirt, or disposable coveralls. To prevent eye contact wear eye protection such as chemical splash proof goggles or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: colorless to light yellow liquid , pungent smell..

BOILING POINT: $96^{\circ}\text{C}(205^{\circ}\text{F})$ at 7hPa(5 mmHg)

MELTING POINT: Not available

VAPOR PRESSURE: 0.5hPa(0.4 mmHg)at 25 °C (77°F)

SPECIFIC GRAVITY: 1.325

VAPOR DENSITY: Not available % VOLATILE (BY WT): Not available

PH: 1.5 at 10 g/l at 20℃(68℉)

SATURATION IN AIR (% BY VOL): Not available

EVAPORATION RATE: Not available

SOLUBILITY IN WATER: completely miscible

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: NOT AVAILABLE

POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: NOT AVAILABLE

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide, oxides of sulfur and phosphorus.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral-rat-114 mg/kg

LC50 Inhalation-rat-4h-21 mg/m3

LD50 Demal-rabbit-8843 mg/kg

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the OSHA regulated components of this product is as follows:

Acute overexposure to sodium hydroxide mists or dusts causes severe respiratory irritation. A solution of sodium hydroxide can produce irreversible damage to eyes and skin

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50-Pimephales promelas(fathead minnow)-30 mg/l-96h

General notes:

Do not allow undiluted product or large of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper government permits.

13. DISPOSAL CONSIDERATIONS

All local and national regulations should be followed.

14. TRANSPORT INFORMATION

IMDG CODE HAZARD CLASS No: 8 UN No.: 1940

PACKING GROUP: ||

TRANSPORT LABLE

Corrosive

REQUIRED

REMARKS Not applicable

15. REGULATORY INFORMATION

INVENTORY INFORMATION

OSHA HAZARD Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive

DSL Status All components of this product are on the Canadian DSL list.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title

III, Section 302

OTHER ENVIRONMENTAL The following components of this product may be subject to reporting requirements

INFORMATION pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may

be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association).

Fire FIRE: Materials that must be preheated before ignition can occur.

1 HEALTH: Materials which on short exposure could cause serious temporary or

Health4 0 Reactivity residual injury even though prompt medical treatment were given.

Special Hazard REACTIVITY: Stable under ordinary conditions of use and storage.

EMERGENCY CONTACT

During normal business hours (for routine enquiries) 86 (0532) 8098 3673

For emergencies occurring outside China 86 (0532) 8098 3673

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