Material safety data

Ethylene Glycol

1. Product Name: Ethylene Glycol

Molecular formula：$C_2H_6O_2$

Molecular weight：62.07

2. **Chemical composition**

Basis：Ethylene Glycol

CAS No. 107-21-1

3. The main danger:

No Danger

4. First aid measure:

In case of skin contact, get off the dirty clothes, flush with soap and water.

In case of eyes contact, flush with flowing water.

In case of inhalation, Get out of the scene quickly to breathe fresh air. Keep the respiratory tract unobstructed. If breathing is difficult, given oxygen. If breathing stops, do artificial respiration immediately. Get medical aid.

In case of swallow, drink plenty of warm water and emetic. Get medical aid.

5. Fire protection

5.1 Hazardous characteristics: in case of fire, high heat, it is combustible. It can react with the oxidant. In case of high heat, the container pressure increases, there is the risk of cracking and explosion.

5.2 Harmful combustion products: carbon monoxide, carbon dioxide

5.3 Fire extinguishing method: Remove the container from the fire to the open place as far as possible. Spray water to keep the fire container cool until the end of the fire. If the container in the fire has been discolored or has sound from the safety relief device, it must be evacuated immediately. Extinguishing agent: mist water, foam, dry powder, carbon dioxide, sand.

6. Leakage contingency

Emergency treatment: Withdraw personnel from the leakage of contaminated areas to the safe area quickly, and isolate, have strict restrictions on access. Cut off the fire source. It is advisable for emergency personnel to wear self-priming filter respirators (full cover) and wear general work clothes. Cut off the source as much as possible. To prevent the flow into the sewer, drainage ditch and other restricted space. Small amount of leakage: with sand, vermiculite or other inert material for absorption. It can also be scrubbed with an emulsion made of non-combustible dispersant, diluted with lotion and placed in a wastewater system. A large number of leaks: build dike or digging. Pumped to the tanker or special collector, recycling or

transport to the waste disposal sites.

7. Handling and storage

7.1 Handling Precautions: Close operation to provide good natural ventilation. Operators must be specially trained to strictly observe the operating procedures. It is recommended that the operator wear self-priming filter respirators (half face mask), wear chemical safety glasses and wear chemical gloves. Keep away from fire, heat, workplace smoking is strictly prohibited. Use explosion-proof ventilation systems and equipment. Prevents the vapor from leaking into the workplace air. Avoid contact with oxidants and acids. Handling light loading and unloading, keep the packaging intact, to prevent spill. Equipped with the corresponding variety and quantity of fire equipment and leakage emergency treatment equipment. Empty containers may be harmful residues.

7.2 Storage Precautions: Store in a cool, ventilated warehouse. Away from fire, heat. Should be stored separately with the oxidant, acid, should not be mixed storage. Equipped with the corresponding variety and quantity of fire equipment. Storage area should be equipped with leakage emergency treatment equipment and suitable storage materials.

8. Exposure controls / individual protection

8.1 Occupational exposure limits:

8.2 Monitoring methods: gas chromatography

8.3 Engineering Control: Provide good natural ventilation conditions

8.4 Respiratory protection: generally do not need special protection, during high concentrations of contact, wear self-absorption filter respirators (half mask).

8.5 Eye protection: When the air concentration is high, wear chemical safety glasses.

8.6 Physical protection: Wear general protective clothing.

8.7 Hand protection: Wear chemical gloves.

8.8 Other protection: work is completed, shower dressing. Avoid prolonged repeated contact. Regular physical examination.

9. Physical and chemical properties

9.1 Appearance and properties: colorless, odorless, sweet, viscous liquid.

9.2 Melting point (° C): -13.2

9.3 Boiling point (° C): 197.5

9.4 Liquid base relative density: 1.11

9.5 Vapor density (air = 1): 2.14

9.6 Saturated vapor pressure (kPa): 6.21 (20 ° C)

9.7 Heat of combustion (kJ / mol): 281.9

9.8 Critical temperature (° C): Not available

9.9 Critical pressure (MPa): Not available

9.10 Octanol / water Partition coefficient: Not available

9.11 Ignition temperature (° C): Not available

9.12 Flash point (° C): 110

9.13 Upper explosion limit% (V / V): 15.3

9.14 Lower explosion limit% (V / V): 3.2

9.15 Solubility: miscible with water, soluble in ethanol, ether and so on.

9.16 Main use: for the manufacture of resins, plasticizers, synthetic fibers, cosmetics and explosives, and used as a solvent, antifreeze for the preparation of the engine.

10. Stability and reactivity

10.1 Stability

10.2 contraindications: strong oxidants, strong acid.

10.3 Conditions to avoid

10.4 Polymer Hazards

10.5 Decomposition products

11. Toxicological information

Acute toxicity: LD50: 8000 ~ 15300 mg / kg (mouse oral); 5900 ~ 13400 mg / kg (rat oral); LC50: no information

12. Ecological information

12.1 Ecotoxicity Toxicity

12.2 Biodegradability

12.3 Non-biodegradability

12.4 Bioaccumulation or bioaccumulation

12.5 Other harmful effects

13. Disposal

13.1 Nature of waste

13.2 DISPOSAL CONSIDERATIONS: Dispose of by incineration.

13.3 Disposal Notes

14. Transport information

14.1 Dangerous Goods Code

14.2 UN number

14.3 Packing mark

14.4 Packing group: Z01

14.5 Packing: No information available

14.6 Transport Note: Before transportation, check whether the packaging container is complete, sealed, ensure that the container does not leak, collapse, fall, damage during transport process. It is strictly prohibited to mix with oxidants, acids during transport process. When shipping, should be isolated with the cabin, power, fire.

15: Regulatory information

Regulations: Regulations on Safety Management of Chemical Dangerous Goods (promulgated by the State Council on 17 February 1987), Regulations on the Administration of Safety Regulations for the Administration of Chemical Dangerous Goods (Labor and Welfare [1992] No. 677), Regulations on the Safe Use of Chemicals in Workplaces ([1996] (GB 16190-1996). All above regulations make corresponding provisions for the safe use of chemical dangerous goods, production, storage, transportation, handling. Workshop air glycol glycol hygiene standards (GB 16190-1996), provides the maximum allowable concentration of the substance in the air and the

method of detection in workshop.

16: Other