Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GLASS
Manufacturer : **STEK. CO., LTD**
Tel : **82-02 -6235-7835**

2. HAZARDS IDENTIFICATION

Globally Harmonized System of Classification and Label ling of Chemicals (GHS)

Skin corrosion/irritation : 2

Severe eye damage/eye irritation : 2

Label elements including precautionary statements

Symbol :

Signal word : Warning

Hazard statements :

-H315 : Causes skin irritation.

-H319 : Causes severe eye irritation.

-H335 : May cause respiratory irritation.

Precautionary statements :

Prevention

-P201 : Instruction book issused to secure.

-P202 : All safety precautions have been read and understand before you use

-P210 : Keep away from heat/sparks/open flames/hot surfaces. – No smoking

-P233 : Keep container tightly closed.

-P240 : Ground/bond container and receiving equipment.

-P241 : Use explosion-proof electrical/ventilating/lighting/equipment.

-P242 : Use only non-sparking tools.

-P243 : Take precautionary measures against static discharge.

-P260 : (Dust, gas, mist, steam, spray) do not inhale

-P264 : Wash your hand thoroughly after handling.

-P270 : When using this product, Don't eat , drink or smoke

-P280 : Wear protective gloves/protective clothing/eye protection/face protection.

Response

-P301+P310 : IF SWALLOWED : Immediately call a POISON CENTER or doctor/physician.

-P302+P352 : IF ON SKIN : Wash with plenty of soap and water.

-P303+P361+353 : IF ON SKIN(or hair):Remove/Take off immediately all contaminated clothing Rinse skin with water/shower.

-P331 : Do not induce vomiting

-P332+P313 : If skin irritation occurs : Get medical advice /attention.

-P362 : Take off contaminated clothing and wash before reuse.

-P370+P378 : In case of fire : Use Dry Chemicals,Co2,for extinction.

Storage

-P403+P235 : Store in a well-ventilated place. Keep cool.

-P405 : Store locked up.

Disposal

-P501 : Dispose of contents/container to(in accordance with local/regional/national/international Regulation).

3. COMPOSITION ON INGREDIENTS

INDREDIENT	C.A.S. No.	%by Wt
WATER	**7732-18-5**	**80-90%**
Ethyl alcohol	**647-17-5**	**5<15%**
Trade secret		**1%**
Poly(oxy-1,2-ethanediyl), alpha-hydro-omega-hydroxy-	**25322-68-3**	**1%**
Trade secret		**1%**
Green Color		**1%**
Orange perfume		**1%**

4. FIRST AID MEASURES

FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact : Flush eyes with large amount of water. If signs/symptoms persist, get medical attention.

Skin Contact : Wash affected area with soap and water. If signs/symptoms develop, get medical attention

Inhalation : Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention

5. FIRE FIGHTING MEASURES

Suitable extinguishing media :

SMALL FIRE : Use dry chemicals,CO_2,water spray or alcohol-resistant foam.

LARGE FIRE : Use water spray, water fog or alcohol-resistant foam

Specific hazards arising from the chemical :

Thermal decomposition may produce carbon monoxide and other toxic vapors.

Special protective equipment and precautions for firefighters :

Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear. Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, Vapors can burn in open or explode if confined. Vapors may be heavier than air, May travel long Distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be Combustible at temperatures below flash point. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of Burns/injuries. Use water sprat/fog for cooling. Avoid frothing/steam explosion. Burning liquid may floatwater. Although water soluble, may not be practical to extinguish fire by water dilution,.Notify Authorities immediately if liquid enters sewer/public waters.

6. ACCIDENTAL RELEASE MEASURES

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

7. HANDLING AND STORAGE

HANDLING

Avoid breathing gas. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Do not enter confined spaces unless adequately ventilated.

STORAGE

Do not apply direct flame to cylinder. Do not store cylinder in direct sun or expose it to heat above 120F. Do not drop or refill this cylinder. Keep away from heat. Sparks and flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

After Using, use with appropriate local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT(PPE)

Eye/Face Protection

Avoid eye contact with vapors, mist, or spray

The following eye protections are recommended : Safety Glasses with side shields

Skin Protection

Avoid skin contact.

Respiratory Protection

Avoiding breathing gas..

Prevention of Swallowing

Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade : Little odor, Green Color, Liquid

General Physical Form : Liquid

Auto ignition temperature : Not applicable

Flash Point : >=95°c

Flammable Limit – LEL : Not applicable

Flammable Limit – UEL : Not applicable

Vapor Pressure : Not applicable

Viscosity : Not applicable

Specific Gravity : 0.9-1.0 Water=1

pH : 12.0-13.0 ph

Melting Point : 0°c

Solubility in Water : Soluble

10. STABILITY AND REACTIVITY

Stability : Stable by Heat

Hazardous Polymerization : will not occur

Hazardous decomposition or by-products : Thermal decomposition products include hydrogen fluoride, hydrogen chloride, carbon monoxide, carbon dioxide and chloride.

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposures.

Inhalation exposure:

Irritation, headache, sleepiness, dizziness, orientation loss.

Ingestion exposure:

Irritation, vomiting, headache, dizziness, orientation loss, pulmonary congestion.

Skin exposure:

May cause slight skin irritation. The liquid defats the skin.

Eye exposure:

May cause slight eye irritation.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Acute toxicity:

Oral-LD50(rat)>5000mg/kg

Skin-LD50(rabbit):>2000mg/kg

Inhalation: no data available

Skin corrosion/irritation: May cause slight skin irritation.

serious eye damage/irritation: May cause slight eye irritation.

Respiratory sensitization: Not expected to e a sensitizer.

Skin sensitization: Not expected to be a sensitizer.

Carcinogenicity: No Data Available.

Reproductive toxicity: No data available

Specific target organ systemic toxicity-single exposure: It may effect on the central nerves.

High levels of steam inhalation may produce unconsciousness.

Specific target organ systemic toxicity-repeated exposure: No Data Available

Aspiration hazardz:

Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

Numerical measures of toxicity(Such as acute toxicity estimate): No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicological Information : Not determined.

Chemical fate Information : Not determined..

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method : Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

Not classified as supporting combustion according to the transport regulations.

Matters needing attention for transportation

Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules

15. REGULATORY INFORMATION

No data available

16. OTHER INFORMATION

a. Reference
HSDB,ChemIDplus,ECHA
HSDB,ECHA,NITE
ECHA,ACGIH, PATTY, CaPSAR, ATSDR, IARC,NITE,QSAR
ICSC, IUCLID, ECHA Registered substances, ECOTOX, SIDS,ECHA, ECHA,HSDB, IPCS,ICSC
ECHA, HSDB,ChemIDPLUS, ECHA, toxnet, EPISUITE, The Chemical Database, The Department of Chemistry at the University of Akron(http://ull.chemistry.uakron.edu/erd)
International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)
National Institute of Technology and Evaluation(NITE)(http://www.safe.nite.go.jp/ghs/h18_bunrui.html)
National Institute of Technology and Evaluation(NITE)(http://www.safe.nite.go.jp/ghs/h18_bunrui.html)

National Library of Medicine(NLM)(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM)
The ECOTOXicology database (ECOTOX)(http://cfpub.epa.gov/ECOTOX/quick_query.htm)
Hazardous Substances Data Bank(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB)
National Library of Medicine(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM)
Registry of Toxic Effects of Chemical Substances
Chemical Carcinogenesis Research Information System(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CCRIS), The ECOTOXicology database(http://cfpub.epa.gov/ECOTOX/quick_query.htm)
b. MSDS created
Revised 2020.08.04