Material Safety Data Sheet

Material Name: Ethylene MSDS ID: Hynote-0017

Section 1 - Product and Company Identification

Synonyms: Ethylene, Ethene
Chemical Name: Ethylene
Chemical Family: Petrochemical
Material Use: Feedstock for chemical and polymer synthesis
Chemical Formula: C_2H_4

ShangHai Hynote

906#,Tower A, Tomson Center,
228 ZhangYang Road, PuDong,
ShangHai, PRC.

EMERGENCY Telephone Numbers:

+86-21-58790001 (In South China):
+86-379-65867058 (In North China)
+86-10-110/119/120 (24 Hours)

Product Information: +86-379-65867058
MSDS Information Email:
hynote@shtel.net.cn

Section 2 - Hazards Identification

HMIS Ratings: Health: 1 Fire: 4 Physical Hazard: 2 Personal Protection: chemical goggles, gloves, respirator

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings: Health: 1 Fire: 4 Reactivity: 2

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Emergency Overview

DANGER! EXTREMELY FLAMMABLE LIQUEFIED GAS This product is a colorless liquefied gas while under high pressure with a sweet hydrocarbon odor. Ethylene is highly volatile, when released it will disperse as a highly flammable vapor cloud. Consider need for immediate emergency isolation and evacuation. Vapors may travel to some distant source of ignition and flash back. DO NOT ATTEMPT TO EXTINGUISH A GAS FIRE UNLESS LEAK SOURCE CAN BE ISOLATED AND SHUT OFF. Contact with liquefied gas may cause frostbite.

Excessive inhalation of this material causes headache, dizziness, nausea and loss of coordination and in extreme conditions coma and possibly death.

Potential Health Effects: Eye

Contact of the eye with the liquefied gas may cause severe injury or frostbite.

Potential Health Effects: Skin

Contact of the skin with the liquefied gas may result in severe blistering, injury or frostbite. Product does not penetrate through the skin.

Potential Health Effects: Ingestion

Ingestion of this product is extremely unlikely. However, contact of the mouth or throat with the liquefied gas may result in serious injury or frostbite.

Potential Health Effects: Inhalation

This product is a mildly narcotic asphyxiant gas that can cause unconsciousness/death if OXYGEN levels are sufficiently reduced. Excessive inhalation of this material causes headache, dizziness, nausea and loss of coordination, and in extreme conditions coma and possibly death. High concentrations may trigger heartbeat irregularities, and possible cardiac sensitization.

Section 3 - Composition/Information on Ingredients

CAS#	Component	Percent by Wt.
74-85-1	Ethylene	>99.9

Additional Information

This product is considered to be hazardous under 29 CFR 1910.1200 (Hazard Communication).

This material is a controlled product under Canadian WHMIS regulations.

This material is regulated as a hazardous material / dangerous goods for transportation.

See Section 8 for applicable exposure limits. See Section 11 for applicable toxicity data.

Section 4 - First Aid Measures

First Aid: Eyes

Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

First Aid: Skin

For skin contact, wash immediately with soap and water. Seek medical attention if symptoms develop or persist. Thaw frostbite slowly with lukewarm water. DO NOT RUB affected area. Do not pull off adherent clothing or objects. Seek medical attention at once.

First Aid: Inhalation

Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. WARNING: Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to

perform artificial respiration.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention. Examine the lips and mouth to ascertain whether the tissues are damaged. Thaw frostbite in mouth slowly with luke warm water, ensuring that the conscious affected individual does not gag or choke. If the individual is not breathing, qualified personnel should perform mouth-to-mouth resuscitation. WARNING: Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

First Aid: Notes to Physician

For more detailed medical emergency support information call 1-800-561-6682 or 1-403-314-8767 (24 hours, SHANGHAI HYNOTE Emergency Response). Treat unconsciousness, frostbite nausea, hypotension, seizures and cardiac arrhythmias in the conventional manner. Sympathomimetics or catecholamines should be avoided or used with caution (lowest effective dose) because of possible cardiac sensitization. Administer oxygen by mask if there is respiratory distress.

Section 5 - Fire Fighting Measures

See Section 9: Physical Properties for flammability limits, flash point and auto-ignition information.

General Fire Hazards

Pipeline and container explosion hazards are extremely high when this product is exposed to heat or flame. May BLEVE explosively when heated or involved in a fire. Use massive quantities of water to cool fire-exposed pipelines or containers. Immediately withdraw in case of fire and tank venting or heat discoloration of a tank. Vapors may travel to some distant source of ignition and flash back. DO NOT ATTEMPT TO EXTINGUISH A GAS FIRE UNLESS LEAK SOURCE CAN BE ISOLATED AND SHUT OFF. Be aware of possibility of re-ignition. When pressure in a container needs to be controlled consider setting up emergency flaring. Consider need for immediate emergency isolation and evacuation for at least 800 meters (1/2 mile). If tank is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions.

Explosion Hazards

Vapors may form an explosive mixture with air. Keep containers away from source of heat or fire. Highly explosive in the presence of sparks, fire, heat and oxidizing agents. Containers may explode when heated and rocket away.

Hazardous Combustion Products

Upon combustion, this product emits carbon monoxide, carbon dioxide, and/or low molecular weight hydrocarbons.

Extinguishing Media

Dry chemical, foam, carbon dioxide, and water fog. Do not use water jets. Adding water

directly to pooled liquid will heat liquid and increase evolution of highly flammable gas. Foam cover may help suppress evolution of flammable gas. Use massive quantities of water to cool fire-exposed containers and to protect personnel.

DO NOT ATTEMPT TO EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK SOURCE CAN BE ISOLATED AND SHUT OFF. Let uncontrolled fires burn off. Monitor water run-off for flammability, and prevent from entering ditches, drains and sewers, or other confined or underground spaces.

Fire Fighting Equipment/Instructions

Reference 2004 Emergency Response Guidebook, Guide # 116P for additional details and instructions. Position upwind. Keep unnecessary personnel away. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned holders or monitor nozzles. Immediately withdraw in case of fire and container venting or heat discoloration of a container. Let uncontrolled fires burn off. Fire fighters should wear full-face, self-contained breathing apparatus and thermal protective clothing. Avoid inhaling any smoke and combustion materials. Remove and clean or destroy any contaminated clothing. Cool containers with flooding quantities of water until well after the fire is out. Control runoff waters to prevent entry into ditches, sewers, drains, underground or confined spaces and waterways.

Section 6 - Accidental Release Measures

Evacuation Procedures

Isolate area. Keep unnecessary personnel away. Alert stand-by emergency and fire fighting personnel. Monitor surrounding area for build-up of flammable air concentrations.

Small Spills

Isolate spill or leak area for 50-100 meters (164-328 feet). Eliminate all potential ignition sources. Stop leak remotely or when safe to do so. Ground all approved equipment used in area. Keep area isolated until any detectable flammable gas has been dispersed.

Large Spills

Consider initial downwind evacuation for at least 800 meters (1/2 mile). Eliminate all potential ignition sources. Stop leak remotely or when safe to do so. Alert stand-by emergency and fire fighting personnel. Monitor surrounding area for build-up of flammable gas concentrations. Ground all approved equipment used in area. Evacuate personnel to upwind of the spill area, and position at a safe distance. Consider use of water spray to reduce vapors or divert vapor cloud drift. High expansion foam cover may help suppress evolution of flammable gas. Prevent flammable vapors or liquids from entering ditches, drains and sewers, or other confined or underground structures. Accumulations of gas may persist in low areas. Keep area isolated until any detectable flammable gas has been dispersed.

Special Procedures

Contact local police/emergency services and appropriate emergency telephone numbers

provided in Section 1. Ensure that statutory and regulatory reporting requirements in the applicable jurisdiction are met. Wear appropriate protective equipment and clothing during cleanup. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed.

See Section 8 for recommended Personal Protective Equipment and see Section 13 for waste disposal considerations.

Section 7 - Handling and Storage

Handling Procedures

Keep locked up or secured. This material can be stored as a flammable gas or liquid depending on the temperature and pressure. Handle in fully enclosed, grounded, properly designed and approved transfer and storage systems. Use with adequate ventilation. Avoid inhalation. Keep away from uncontrolled heat and incompatible materials. Ground all material handling and transfer equipment to dissipate build-up of static electricity. Wear suitable protective equipment including thermally protective gloves. No smoking or open flames permitted in storage, use or handling areas. Where possible, collect and flare vents. If used in refrigeration, check drains are not plugged and valves are working and not plugged by ice formed from the vaporizing liquid.

Storage Procedures

Storage area should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorized personnel. Store in grounded, properly designed and approved pressure containers and away from incompatible materials. Store and use away from heat, sparks, open flame, or any other ignition source. Store according to applicable codes or regulations for liquefied pressurized gases as applicable to cylinders, vessels, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. Have appropriate extinguishing capability in storage area (e.g. sprinkler system, portable fire extinguishers) and flammable gas detectors. Storage pressure vessels should be above ground and diked. Keep cylinders secure while in storage or in transportation.

See Section 8: Exposure Controls/Personal Protection for appropriate Personal Protective Equipment. See Section 10 for information on Incompatibilities.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Refer to published exposure limits - use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Ensure that eyewash stations and safety showers are proximal to work locations.

B: Component Exposure Limits

ACGIH, OSHA, NIOSH, EPA, Alberta, and Ontario exposure limit lists have been checked for major components listed with CAS registry numbers. Other exposure limits may apply, check with proper authorities.

*Note: The Vacated OSHA Permissible Exposure Limits (PELs) are those provided in the 1989 update to OSHA's Air Contaminants Standard 29 CFR 1910.1000. These limits were

vacated by the U.S. Court of Appeals, Eleventh Circuit but may be enforceable in some states.

Ethylene (74-85-1)

ACGIH: 200 ppm TWA; 230 mg/m3 TWA

Ontario: 200 ppm TWAEV

ENGINEERING CONTROLS

Engineering methods to reduce hazardous exposure are preferred controls. Methods include mechanical ventilation (dilution and local exhaust) process or personal enclosure, remote and automated operation, control of process conditions, leak detection and repair systems, and other process modifications. Ensure all exhaust ventilation systems are discharged to outdoors, away from air intakes and ignition sources. Supply sufficient replacement air to make up for air removed by exhaust systems. Administrative (procedure) controls and use of personal protective equipment may also be required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses. Use of chemical goggles under a full-face shield is recommended if contact with liquefied vapor is possible.

Personal Protective Equipment: Skin/Hands/Feet

Use impervious gloves designed to prevent freezing of body tissues if contact with liquefied gas is possible. Wear chemical-resistant safety footwear with good traction to prevent slipping. Work clothing that sufficiently prevents skin contact and prevents freezing of body tissues if contact with liquefied gas is possible should be worn, such as coveralls and/or long sleeves and pants. Fire resistant (i.e., Nomex) or natural fiber clothing (i.e., cotton or wool) is recommended. Synthetic clothing can generate static electricity and is not recommended where flammable vapor releases may occur.

Personal Protective Equipment: Respiratory

If engineering controls and ventilation is not sufficient to prevent buildup of aerosols or vapors and/or oxygen concentrations are low, appropriate air supplied breathing apparatus should be used.

Personal Protective Equipment: General

Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain, and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.

Section 9 - Physical & Chemical Properties

Physical State and Appearance:	Gas at room temperature, liquid under pressure	Color:	Colorless
Odor:	Sweet, faint	Odor Threshold:	270-600 ppm
pH:	Not applicable	Vapor Pressure:	750 psia at 10℃ (50℉); 938 psia at 21℃ (69.8℉)
Vapor Specific Gravity @ 0℃ and 14 psia (Air=1)	0.975	Boiling Point:	103.8℃ (-154.8℉)
Melting Point:	-169℃ (272.2℉)	Solubility (H2O)	Negligible (131mg/l at 20 ℃(68℉))
Heat of Vaporization at Critical Temperature:	3.07 BTU/lb at 9.2℃ (48.6 ℉)	Critical Properties:	721 psia
Evaporation Rate (n-Butyl Acetate=1)	Immediate at 20℃ (68℉)	Dispersion Properties:	Partially dispersed in cold water, hot water, alcohols, ethers
Percent volatile:	100%	Specific Gravity (Water=1)	0.568 at its boiling point
Octanol/H2O Coeff.:	Log Kow=1.13	Auto Ignition:	Range: 450℃ to 490℃ (842℉ to 914℉)
Flash Point:	-136℃(-212.8℉)	Flash Point Method:	Not available
Upper Flammable Limit (UFL)	Range: 28.6%~36%	Lower Flammable Limit (LFL):	Range:2.3%~3.02%)
Flammability Classification:	Extremely Flammable		

Section 10 - Stability & Reactivity Information

Chemical Stability

This product is moderately reactive, and may polymerize, decompose, or become self-reactive under certain conditions of shock, high temperatures, high pressures, or contamination.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

Product can react with water to form hydrates. Avoid strong acids, strong oxidizing agents, chlorine, halogens, organic peroxides, ozone and nitrogen dioxide. Many materials become brittle after contact with liquefied gases, and may fail without warning.

Carefully select and test equipment, gaskets, and hoses periodically to ensure integrity and compatibility.

Hazardous Polymerization

Hazardous polymerization can occur at elevated temperature and pressure in the presence of a catalyst.

Corrosivity

Not considered to be corrosive.

Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Special Remarks

Vapors may form an explosive mixture with air. May polymerize explosively when heated or involved in a fire. May react vigorously with oxidizing agents. Liquefied gas may explode on contact with hot water (45°C - 75°C) (113°F - 167°F).

Section 11 - Toxicological Information

A: Acute Toxicity - General Product Information

This product is not considered acutely toxic. Ethylene gas is not irritating to the skin and eyes. The liquefied form will cause freezing burns (frostbite) to the eyes and skin. At very high exposures, ethylene gas produces an anesthetic effect. Excessive exposures may cause headache, muscular weakness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. High concentrations may trigger heartbeat irregularities. Excessive amounts in the air in an enclosed space will decrease the amount of oxygen and may cause asphyxiation.

B: Acute Toxicity - LD50/LC50

Ethylene (74-85-1) Inhalation LC50 Rat: >57,000 ppm/4H

C: Chronic Toxicity - General Product Information

Inhalation of ethylene by Sprague Dawley rats, in concentrations of 0, 300, 1000, 3000 and 10,000 ppm, 6 hours/day, 5 days/week for 14 weeks, were not found to cause any toxic effects.

D: Chronic Toxicity - Carcinogenic Effects

ACGIH, EPA, IARC, OSHA, and NTP carcinogen lists have been checked for selected similar materials or those components with CAS registry numbers.

Ethylene (74-85-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 60 [1994], Supplement 7 [1987] (Group 3 (not classifiable))

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

This product is not considered harmful to aquatic life, and has limited absorption into soil and sediment. Ethylene is a natural plant hormone produced by plants at all stages of growth in varying amounts. Terrestrial plants such as fruit, flowers and nursery stock show diverse effects from ethylene exposure. For example, grasses and grassy vegetables such as lettuce are resistant to ethylene. However, several species of flowers (orchids, carnations, etc.), and vegetables such as tomatoes, potatoes, peppers, beans and peas are sensitive to ethylene exposure. Under certain conditions, emissions may contribute to photochemical formation of ground level ozone and possible smog formation.

B: Component Analysis - Ecotoxicity - Aquatic/Terrestrial Toxicity

Ethylene (74-85-1)

120 Hr EC50 Daphnia magna: 53.402 mg/L

Environmental Fate/Mobility

Product is highly volatile and will partition rapidly to air on release to land or water. Product is largely insoluble in water, and evaporates rapidly from surface soils and water. Potential for mobility in soil is considered to be low.

Persistence/Degradability

The lifetime of ethylene in the atmosphere ranges from 0.4 to 4 days, with an average of 1.5 days, and is strongly dependent on the amount of sunlight.

Bioaccumulation/Accumulation

Bioconcentration potential is low. Log Kow is 1.13.

Section 13 - Disposal Considerations

U.S./Canadian Waste Number & Descriptions

A: General Product Information

This product is known to be a hazardous waste according to US and Canadian regulations. The use, mixing or processing of this product may alter this product. Contact federal, provincial/state and local authorities in order to generate or ship a waste material associated with this product to ensure materials are handled appropriately and meet all criteria for disposal of hazardous waste. DO NOT ATTEMPT TO DISPOSE OF BY UNCONTROLLED IGNITION.

See Section 7: Handling and Storage and Section 8: Exposure Controls/Personal Protection for additional handling information that may be applicable for safe handling and the protection of employees.

Waste generator is advised to carefully consider hazardous properties and control measures needed for other materials that may be found in the waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Section 14 - Transportation Information

US DOT Information

Shipping Name: Ethylene
UN/NA #: UN1962 Hazard Class: 2.1
Required Label(s): FLAMMABLE GAS
Additional Info.: 2004 Emergency Response Guidebook, Guide # 116P.

Canadian TDG Information

Shipping Name: Ethylene, compressed
UN/NA #: UN1962 Hazard Class: 2.1
Required Label(s): FLAMMABLE GAS
Additional Info.: 2004 Emergency Response Guidebook, Guide # 116P.

International Air Transport Association (IATA) and ICAO Information

Shipping Name: Ethylene
UN #: UN1962 Hazard Class: 2.1
Required Label(s): FLAMMABLE GAS

International Maritime Dangerous Goods (IMDG) Code

Shipping Name: Ethylene
UN #: UN1962 Hazard Class: 2.1
Required Label(s): FLAMMABLE GAS

Section 15 - Regulatory Information

International Regulations

Component Analysis - International Inventory Status

Component	CAS#	US-TSCA	CANADA-DSL	EU-EINECS
Ethylene	74-85-1	Yes	Yes	Yes

B: USA Federal & State Regulations

Ongoing occupational hygiene, medical surveillance programs, or site emission or spill reporting may be required by Federal or State regulations. Check for applicable regulations.

USA OSHA Hazard Communication Class

This product/material is considered hazardous under 29 CFR 1910.1200 (Hazard

Communication). HCS Classes: HCS CLASS: Flammable gas.

USA Right-to-Know - Federal

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Ethylene (74-85-1)

SARA 313: 1.0 % de minimis concentration

USA Right-to-Know - State

The following components appear on one or more of the following state hazardous substances lists. Some components (including those present only in trace quantities, and therefore not listed in this document) may be included on the Right-To-Know lists of other U.S. states. The reader is therefore cautioned to contact his or her SHANGHAI HYNOTE' representative or SHANGHAI HYNOTE' Product Integrity group for further U.S. State Right-To-Know information.

Component	CAS	NJ	PA
Ethylene	74-85-1	Yes	Yes

D: Canadian Regulations - Federal and Provincial

WHMIS Ingredient Disclosure List (IDL)

No components are listed in the WHMIS Ingredient Disclosure List (IDL).

WHMIS Classification

Workplace Hazardous Materials Information System (WHMIS): This product has been classified in accordance with Canadian Controlled Product Regulations (CPR) hazard criteria and this MSDS contains complete CPR- required information.

WHMIS CLASS A: Compressed gas

WHMIS CLASS B1: Flammable gas

Other Regulations

Ongoing occupational hygiene, medical surveillance programs, or site emission or spill reporting may be required by Federal or Provincial regulations. Check for applicable regulations.

Section 16 - Other Information

Label Information

DANGER! EXTREMELY FLAMMABLE LIQUEFIED GAS This product is a colorless liquefied gas while under high pressure with a sweet hydrocarbon odor. Ethylene is highly volatile, when released it will disperse as a highly flammable vapor cloud. Consider need for immediate emergency isolation and evacuation. Vapors may travel to some distant source of ignition and flash back. DO NOT ATTEMPT TO EXTINGUISH A GAS FIRE UNLESS LEAK SOURCE CAN BE ISOLATED AND SHUT OFF. Contact with liquefied gas may cause frostbite. Excessive inhalation of this material causes headache, dizziness, nausea and loss of coordination and in extreme conditions coma and possibly death.

FIRST AID:

SKIN: For skin contact, wash immediately with soap and water. Seek medical attention if symptoms develop or persist. Thaw frostbite slowly with lukewarm water. DO NOT RUB affected area. Do not pull off adherent clothing or objects. Seek medical attention at once.

EYES: Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

INHALATION: Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. WARNING: Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

IN CASE OF A LARGE SPILL: Consider initial downwind evacuation for at least 800 meters (1/2 mile). Eliminate all potential ignition sources. Stop leak remotely or when safe to do so. Alert stand-by emergency and fire fighting personnel. Monitor surrounding area for build-up of flammable gas concentrations. Ground all approved equipment used in area. Evacuate personnel to upwind of the spill area, and position at a safe distance. Consider use of water spray to reduce vapors or divert vapor cloud drift. High expansion foam cover may help suppress evolution of flammable gas. Prevent flammable vapors or liquids from entering ditches, drains and sewers, or other confined or underground structures. Accumulations of gas may persist in low areas. Keep area isolated until any detectable flammable gas has been dispersed.

References

Available on request.

Special Considerations

For additional information on properties, hazards, spill response, transportation equipment maintenance, inspection and repair procedures, please refer to, "Handling and Transportation Guide for Ethylene, Refrigerated Liquid (Cryogenic Ethylene)", published April 2004, by the Cryogenic Ethylene Transportation Safety Panel and the American Chemistry Council. This Guide is posted on the American Chemistry Council's website, www.americanchemistry.com, type in "cryogenic ethylene transportation safety guide" in the "Search" field. For additional information on equipment bonding and grounding, refer to the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity".

Key/Legend

ACGIH=American Conference of Governmental Industrial Hygienists; BLEVE=Boiling Liquid Expanding Vapor Explosion; BOD=Biochemical Oxygen Demand; CAS= Chemical Abstracts Service; CERCLA=Comprehensive Environmental Response,

Compensation, and Liability Act; CPR=Controlled Products Regulations; DOT= Department of Transportation; DSL=Domestic Substances List; EINECS=European Inventory of Existing Commercial Substances; EPA = Environmental Protection Agency; EU=European Union; FDA=Food and Drug Administration; IARC=International Agency for Research on Cancer; IDL=Ingredient Disclosure List; Kow = Octanol/water partition coefficient; LEL=Lower Explosive Limit; NIOSH=National Institute for Occupational Safety and Health; NJTSR=New Jersey Trade Secret Registry; NTP=National Toxicology Program; OSHA=Occupational Safety and Health Administration; RCRA=Resource Conservation and Recovery Act; SARA=Superfund Amendments and Reauthorization Act; TDG=Transportation of Dangerous Goods; TSCA=Toxic Substances Control Act.

MSDS Prepared by: ShangHai Hynote Import & Export Co., Ltd

MSDS Information Phone Number: +86-379-65867058

Other Information

Notice to Reader:

ALTHOUGH THE INFORMATION CONTAINED IN THIS DOCUMENT IS PRESENTED IN GOOD FAITH, BASED ON AVAILABLE INFORMATION BELIEVED TO BE RELIABLE AT THE TIME OF PREPARATION OF THIS DOCUMENT, SHANGHAI HYNOTE MAKES NO WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION OR THE PRODUCT/MATERIALS DESCRIBED HEREIN, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES AND CONDITIONS (INCLUDING ALL WARRANTIES AND CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). NO FREEDOM FROM INFRINGEMENT OF ANY PATENT OWNED BY SHANGHAI HYNOTE OR OTHERS IS TO BE INFERRED. THIS INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE. PLEASE CONTACT SHANGHAI HYNOTE FOR THE MOST CURRENT VERSION OF THIS MSDS. SHANGHAI HYNOTE DOES NOT ASSUME RESPONSIBILITY FOR MSDS OBTAINED FROM THIRD PARTY SOURCES.UNLESS SPECIFICALLY AGREED OTHERWISE, SHANGHAI HYNOTE DOES NOT TAKE RESPONSIBILITY FOR USE, TRANSPORTATION, STORAGE, HANDLING OR DISPOSAL, OF THE PRODUCTS DESCRIBED HEREIN.