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HUIDE LEVEL INSTRUMENT CO., LTD

Section 1-Product and Company Identification

Bubble level liquid

Chemical Name: Ethanol

Synonym: Ethyl Alcohol; Ethyl Alcohol Anhydrous; Ethyl Hydrate; Ethyl Hydroxide; Fermentation Alcohol; Grain Alcohol; Molasses Alcohol; Spirits of Wine

CAS: 64- 17-5

Manufacturers: Rionlon Bohua(Tianjin) Pharmaceutical & Chemical Co.,Ltd.

Contact Person: Mr.Dong

Tel: 86-22-23380198

Fax: 86-22-23382587

Section 2 – Composition, Information On Ingredients

Bubble level liquid

CAS No.	Chemical Name	Content	Einecs No.	Hazard Symbols	Risk Phrases
64- 17-5	Ethanol	ca. 100	200-578-6	F	11

Section 3 – Hazards Identification

Bubble level liquid

EMERGENCY OVERVIEW

Highly flammable.

Potential Health Effects

Eye: Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Skin: Causes moderate skin irritation. May cause cyanosis of the extremities.

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Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

Chronic: May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

Section 4 – First Aid Measures

Bubble level liquid

Eyes: Get medical aid. Gently lift eyelids and flush continuously with water.

Skin: Get medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.

Antidote: None reported.

Section 5 – Fire Fighting Measures

Bubble level liquid

General Information:

Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air.

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Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Section 6 – Accidental Release Measures

Bubble level liquid

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition.

Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 – Handling And Storage

Bubble level liquid

Handling: Wash thoroughly after handling. Use only in a well-ventilated area.

Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

Section 8 – Exposure Controls , Personal Protection

Bubble level liquid

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate

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general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 – Physical And Chemical Properties

Bubble level liquid

Physical State: Clear liquid

Color: colorless

Odor: Mild, rather pleasant, like wine or whis

pH: Not available.

Vapor Pressure: 59.3 mm Hg @ 20 deg C

Viscosity: 1.200 cP @ 20 deg C

Boiling Point: 78 deg C

Freezing/Melting Point: - 114.1 deg C

Autoignition Temperature: 363 deg C (685.40 deg F)

Flash Point: 16.6 deg C (61.88 deg F)

Explosion Limits, lower: 3.3 vol %

Explosion Limits, upper: 19.0 vol %

Decomposition Temperature:

Solubility in water: Miscible.

Specific Gravity/Density: 0.790 @ 20 C

Molecular Formula: C₂H₅OH

Molecular Weight: 46.0414

Section 10 – Stability And Reactivity

Bubble level liquid

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat, oxidizers.

Incompatibilities with Other Materials:

Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

Bubble level liquid

RTECS No.:

CAS No.: 64-17-5: KQ6300000 LD50/LC50:

CAS No. 64-17-5: Draize test, rabbit, eye: 500 mg Severe; Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 20 mg/24H Moderate; Inhalation, mouse: LC50 = 39 gm/m³/4H; Inhalation, rat: LC50 = 20000 ppm/10H; Oral, mouse: LD50 = 3450 mg/kg; Oral, rabbit: LD50 = 6300 mg/kg; Oral, rat: LD50 = 7060 mg/kg; Oral, rat: LD50 = 9000 mg/kg.

Carcinogenicity:

Ethanol - Not listed by ACGIH, IARC, or NTP.

Section 12 – Ecological Information

Bubble level liquid

Ecotoxicity:

Fish: Rainbow trout: LC50 = 12900- 15300 mg/L; 96 Hr; Flow-through @ 24-24.3 CFish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified)Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox testWhen spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

Section 13 – Disposal Considerations

Bubble level liquid

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

Section 14 – Transport Information

Bubble level liquid

IATA

Shipping Name: ETHANOL

Hazard Class: 3.2

UN Number: 1170

Packing Group: II

IMO

Shipping Name: ETHANOL

Hazard Class: 3.2

UN Number: 1170

Packing Group: II

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RID/ADR

Shipping Name: ETHANOL

Hazard Class: 3

UN Number: 1170

Packing group: II

Section 15 – Regulatory Information

Bubble level liquid

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)

CAS# 64- 17-5: 0

United Kingdom Occupational Exposure Limits

CAS# 64- 17-5: OES-United Kingdom, TWA 1000 ppm TWA; 1920 mg/m³ TWA

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Section 16 –Other Information

Bubble level liquid

The data in the Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet has been reviewed to fully comply with the guidance contained in the ANSI MSDS (ANSI ,2400. 1.2004)

To the best of our knowledge , the information contained herin is accurate. However, neither the above named supplier nor of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herin, Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herin, we cannot guarantee that these are the only hazards that exist.