

Hangzhou Yanshan Chemical Co., Ltd.

Add: Room 1804, International building, 998 Binhe road, Binjiang District, Hangzhou, 310053, China
Tel: 86-571-86696867 Fax: 86-571-56534643 E-mail: lan@yanshan-chem.com

Material Safety Data Sheet

For TEAH

Section 1 - Product and Company Identification

Product name : Tetraethylammonium Hydroxide (35% in Water)	
Other names : ---	
Product use: widely used in Phase transfer catalyst and cleaner	
Supplier's name : Hangzhou Yanshan Chemical Co., Ltd.	
Supplier's address : Room 1804, International building, 998 Binhe road, Binjiang District, Hangzhou, 310053, China	
Supplier's phone : 86-571-86696867	Emergency phone : 86-571-86696867
FAX : 86-571-56534643	

Section 2 - Hazards Identification

Classification :

1. Cause severe skin burns and eye damage
2. Cause serious eye damage
3. Toxic to aquatic life with long lasting effects

The Most Important Hazards and effect

Label element :

■ Hazard symbol :



■ Signal word : Danger

Hazard statement :

Do not breathing dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.

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IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
IF NOT SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Collect spillage.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Others Hazard : Not available

Section 3 - Composition/Information On Ingredients

Chemical name : Tetraethylammonium Hydroxide	
Synonyms : ---	
CAS No. : 77-98-5	
Ingredient contributing to the hazard(%) :	
Tetraethylammonium Hydroxide	35%
Water	65%

Section 4 - First Aid Measures

General advice:	Do not get in eyes, on skin, or on clothing, Do not breathe vapor or mist, Immediately remove substance contaminated clothes and wash affected skin areas with soap and water
The First-aid Information :	
Inhalation :	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately
Skin Contact :	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Take off all contaminated clothing and wash it before reuse.
Eye Contact :	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Keep eye wide open while rinsing.
Ingestion :	Do not induce vomiting without medical advice. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.
Protection of First-aiders : Avoid contact with eyes, skin and clothing.	
Notes to a Physician : Treat symptomatically.	

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Section 5 - Fire Fighting Measures

Flammable Properties: Does not sustain combustion.
Extinguishing Media : Use, Water spray, Carbon dioxide (CO ₂), Foam, Dry chemical.
Hazardous Combustion Products: Carbon monoxide, Carbon dioxide (CO ₂), Nitrogen oxides (NO _x).
Specific hazards arising from the chemical: Causes severe burns. In the event of fire, cool tanks with water spray.
Protective equipment and precautions for firefighters: Avoid contact with eyes, skin and clothing. Corrosive hazard. Wear protective gloves/clothing and eye/face protection. In case of fire: Wear self-contained breathing apparatus.
Recommended NFPA Health 3 Flammability: 0 Instability: 1

Section 6 - Accidental Release Measures

Personal Precautions : Avoid contact with skin and eyes. Do not breathe vapor or mist. Keep people away from and upwind of spill/leak.
Environmental Precautions : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
Methods for containment: Contain all contaminated water for removal and treatment. Prevent spreading over a wide area (e.g. by containment or oil barriers). Keep in suitable, closed containers for disposal.
Methods for Cleaning up : Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water.

Section 7 - Handling and Storage

Handling : <ul style="list-style-type: none">Do not breathe vapor or mistDo not eat, drink or smoke when using this productDo not get in eyes, on skin, or on clothingDo not ingestWear personal protective clothing (see section 8)Handle in accordance with good industrial hygiene and safety practiceEnsure that eyewash stations and safety showers are close to the workstation locationEnsure adequate ventilation
Storage : <ul style="list-style-type: none">Keep tightly closed in a dry and cool placeKeep in properly labeled containersstainless steelPolyethylene containers

Section 8 - Exposure Controls & Personal Protection

Engineering Controls : Ensure adequate ventilation, especially in confined areas, To protect against splashes from pouring, Avoid formation of aerosol.			
Control parameters			
TWA	STEL	Ceiling	Biological standards
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Personal protective equipment :

Hand Protection : Rubber gloves. Nitrile rubber. Neoprene gloves

Eye/Face Protection : Goggles. If splashes are likely to occur, wear: Face protection shield.

Skin Protection : Chemical resistant apron. Impervious clothing. Long sleeved clothing. Rubber gloves. Nitrile rubber. Neoprene gloves.

Respiratory protection: In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Protective equipment: Ensure that eyewash stations and safety showers are close to the workstation location.

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands before breaks and immediately after handling the product.

Section 9 - Physical & Chemical Properties

Physical state : Liquid;	Appearance : Clear yellow - colorless liquid;
Colour : Clear yellow - colorless	Odor : Ammonia-like odor;
pH value : Not available;	Boiling point/boiling range : 102 °C; approx
Decomposition temp. : Not available	Flash point : >110 °C / >230 °F
Melting point : Not available	Test method : () open () close
Autoignition temp. : Not applicable;	Explosion properties : Not applicable;
Vapor pressure : Not available	Vapor density : Not available
Density : 1.020g/cm ³ ; @ 20 C	Solubility : soluble in water;

Section 10 - Stability & Reactivity Data

Stability : Stable under normal conditions.
Possible hazardous reactions under specific conditions :
Conditions to avoid : To avoid thermal decomposition, do not overheat.
Materials to avoid : Strong acids. Strong oxidizing agents.
Hazardous decomposition products : Thermal decomposition can lead to release of irritating and toxic gases and vapors. Amines. Alcohols.
Hazardous Reactions: Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Acute Toxicity

Product Information: Harmful by inhalation and in contact with skin

Do not breathe vapor or mist

Causes severe caustic burns to skin and eyes.

Component Information:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Water	-	-	-
Tetraethylammonium Hydroxide	No information available	> 1000 mg/kg bw (TEAH 100% tested in rat)	No information available

Chronic Toxicity:

Carcinogenicity: Carcinogenic potential is unknown. There are no known carcinogenic chemicals in this product.

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Other Toxicity Information: Additional information may be found in RTECS.

RTECS No: KH3150000

Corrosivity: This product is corrosive to living tissue. Causes severe burns.

Mutagenic Effects: No information available.

Target Organ Effects: Skin, Eyes, Respiratory system.

Section 12 - Ecological Information

Ecotoxicity: Acute aquatic toxicity testing has shown this compound to be toxic to the ceriodaphnia dubia (water flea).

Ecotoxicity Effects: Harmful to aquatic organisms

Persistence and degradability: Expected to be ultimately biodegradable.

Ecotoxicology :

- **L_C50(fish)** : No information available.
- **E_C50(Aquatic Invertebrates)** : No information available.
- **Bioconcentration factor (BCF)** : No information available.

Persistence and degradability :

- **Half-Life (Air)** : No information available.
- **Half-Life (Water surface)** : No information available.
- **Half-Life (Groundwater)** : No information available.
- **Half-Life (Soil)** : No information available.

Bioaccumulation : No information available.

Mobility: Soluble in water

Water: Partition coefficient no data available

Tetraethylammonium Hydroxide: Partition coefficient no data available

Section 13 - Disposal Considerations

Methods of disposal : Dispose of in a manner consistent with state, and local regulations.

Section 14 - MSDS Transport Information

IATA

A. UN number : UN3267

B. Proper shipping name: Corrosive liquid, basic, organic, n.o.s.

C. Hazard class: 8

D. Packing group (if applicable): II

E. Marine pollutant : Not relevant.

F. Special precautions, which a user needs to be aware of, or needs for transportation and transport methods: Read safety instructions, MSDS and emergency procedures before handling.

IMDG

A. UN number : UN3267

B. Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.

C. Hazard class : 8

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F. Special precautions, which a user needs to be aware of, or needs for transportation and transport methods: Read safety instructions, MSDS and emergency procedures before handling.

EmS: F-A, S-B

IATA; IMDG



Section 15 - Regulatory Information

Regulations : ---

Section 16 - Other Information

Literature references	1. CHS Inc., "MSDS-CHS" online (1994) 2. OSHA: "Federal Register" · 58(No.24)35338-35351(1993) 3. ACGIH: "Threshold Limit Values For Chemical Substances and Physical Agents and Biological Exposure Indices 1995-1996"(1995) 4. IARC : "IARC Monographs on the Evaluation of Carcinogenic Risks to Humans" suppl.7(1987) 5. NTP: "Seventh Annual Report on Carcinogens", JETOC JOHO.15 (12), 32-36(1993) 6. R.E.Lenga: "The Sigma-Aldrich Library of Chemical Safety Data (Edition 2)", Sigma-Aldrich Co., (1988) 7. Technical reports of Sumitomo Chemical Co., Ltd.		
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