

**JUNSEI****Material safety data sheet**-----
SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 13372

Catalog Name: (Japanese Standards of Quasi-drug Ingredients) Strong ammonia solution

Company Identification:

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Web: <http://www.junsei.co.jp/>CREATION DATE: January 21, 2013
-----SECTION 2 HAZARDS IDENTIFICATION

Physical and chemical hazard

Flammable liquids : Out of category

Pyrophoric liquids : Out of category

Self-heating substances and mixtures : Out of category

Corrosive to metals : Category 1

Human health hazard

Acute toxicity Oral : Category 4

Skin corrosion/Irritation : Category 1A- 1 C

Serious eye damage/eye irritation : Category 1

Specific target organ systemic toxicity(single exposure)

: Category 2 (respiratory system)

Specific target organ systemic toxicity(repeated exposure)

: Category 2 (respiratory system)

Environmental hazard

Hazardous to the aquatic environment-acute hazard : Category 1

Hazardous to the aquatic environment-chronic hazard : Category 1

Pictograms or symbol



Signal word : Danger

Hazard statement : May be corrosive to metals

Harmful if swallowed

Causes severe skin burns and eye damage

Causes serious eye damage

May cause damage to organs (respiratory system)
 May cause damage to organs (respiratory system) through prolonged or
 repeated exposure
 Very toxic to aquatic life
 Very toxic to aquatic life with long effects

Cautions**Safety measurements :**

- Keep only in original container.
- Do not breathe mist/vapours/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.

First-aid measures :

- IF SWALLOWED : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
- If on skin(or hair) : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- IF IN EYES: Immediately call a POISON CENTER or doctor/physician. Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing.
- IF exposed or if you feel unwell: . Call a POISON CENTER or doctor/physician
- Wash contaminated clothing before reuse.

Storage

- Store in corrosive resistant container with a resistant inner liner.
- Store locked up.

Disposal

- Dispose of contents and containers appropriately in accordance with related regulations.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Substance/Mixture : Substance

Component : Ammonia solution 28%

Chemical formula : NH₄OH

Cas number : 1336-21-6

US TSCA inventory :Registered

EC number (EINECS): 215-647-6

JAPAN number (ENCS) : 2-688

Percentage : Contains 28.0 ~ 30.0% Ammonia

SECTION 4 FIRST AID MEASURES

- If inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- If on skin : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.

If in eyes : Rinse cautiously with water for several minutes.
Remove contact lenses ,if present and easy to do. Continue rinsing.
Get medical advice/attention.

If swallowed : Rinse mouth. Do NOT induce vomiting.
Give one or two glasses of water to drink.
Immediately call a POISON CENTER or doctor/physician.

Potential acute health effects :

Inhalation ; Burning sensation. Cough. Labored breathing. Shortness of breath. Sore throat.

Skin ; Redness. Serious skin burns. Pain. Blisters.

Eyes ; Redness. Pain. Blurred vision. Severe deep burns.

Ingestion ; Abdominal cramps. Abdominal pain. Sore throat. Vomiting.

Important signs and symptoms : The substance is corrosive to the eyes, skin and respiratory tract. Corrosive on ingestion. Inhalation of high concentrations the vapour may cause laryngeal oedema, inflammation of the respiratory tract and pneumonia. The effects may be delayed.

SECTION 5 FIRE FIGHTING MEASURES

The substance is not combustible.

Extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon Dioxide.

Prohibited extinguishing media : Straight streams of water.

Particular fire fighting : Move containers form fire area if it can be done without risk, if not possible, apply water form a safe distance to cool and protect surrounding area.

Protection for firefighters : Firefighters should wear protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

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

Cautions for environment : Avoid release to the rivers, lakes, ocean, groundwater.

Spills/Leak : Absorb spills with absorbent (vermiculite, sand , fuller's earth) and place into a suitable disposal container for later disposal.

SECTION 7 HANDLING AND STORAGE

Handling: : Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Use only in a chemical fume hood.

Storage: : Store in a cool.
Store in a tightly closed container.
Store in well-ventilated place.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls : Use adequate ventilation to keep airborne concentrations low.

Administrative levels (Industrial Safety and Health Act) : Not-established

Occupational exposure limits:

ACGIH (2010) : 25ppm as ammonia (TLV-TWA)

OELs (2011) : 25ppm as ammonia

Personal protective equipment :

Eye Protection : Goggles

Hand Protection : Protective gloves

Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection : Wear respiratory protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid

Appearance : Colorless

Odor : Ammonia odor

pH : No data available

Freezing/Melting Point : -77.7. (as ammonia), - 58 (25% solution)

Boiling Point : -33.35 (as ammonia) 38 (25% solution)

Flash Point : No data available

Explosion Limits, lower : 15 %

Explosion Limits, upper : 28 %

Vapor Pressure : 48 kPa(20) (25% solution)

Vapor Density (Air=1) : 0.6 ~ 1.2 (10% ~ 35% solution)

Specific Gravity/Density : 0.90(25% solution)

Solubility : Miscible with water

Octanol/Water Partition Coefficient : No data available

Autoignition Temperature : No data available

Decomposition Temperature : No data available

Molecular Formula : NH_4OH

Molecular Weight : 35.1

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability : Stable in ordinary handling conditions.

Conditions to Avoid : Heat, sparks or flames.

Incompatibilities with Other Materials : Strong oxidizing agents.

Hazardous Decomposition Products: explosive peroxides.

Hazardous Polymerization : Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral : Classified into category 4 based on the rat LD_{50} value 350 mg/kg bw of Ammonium hydroxide(RTECS (1997)).

Dermal : Not possible to classify because of no data.

Gas : Not applicable (GHS definition).

Vapours : Not possible to classify because of no data.

Dusts and mists: Not possible to classify because of no data.

Skin corrosion/Irritation: Classified into category 1 based on the description that the causticity is indicated in the affect of the humans (SITTIG (4th, 2002), DHP (13th, 2002), ICSC (J) (1995).

Serious eye damage/eye irritation: Classified into category 1 based on the description that the causticity is indicated in the examination data of the rabbit (RTECS (1997) and HSDB (2003)), and in effect of the human (SITTIG (4th, 2002), DHP (13th, 2002), ICSC (J) (1995)).

Respiratory sensitization: Not possible to classify because of no data.

Skin sensitization: Not possible to classify because of no data.

Mutagenicity: Not possible to classify because of insufficient data.

Carcinogenic effects: Not possible to classify because of no data.

Effects on the reproductive system: Not possible to classify because of no data.

Specific target organ systemic toxicity single exposure: Classified into category 2 (respiratory system) based on a report in ICSC (J) (1995), a Priority 2 document, which describes the effects after a short-time exposure in humans as "airway corrosivity properties, and laryngeal edema, pneumonia, etc, when it is inhaled at a higher concentration vapor."

Specific target organ systemic toxicity repeated exposure: Classified into category 2 (respiratory system) based on the description that "lungs will be risked in repetitive exposure of steam or an aerosol" as effect to humans of repetitive exposure (ICSC (J)(1995) of Priority 2 document).

Aspiration hazard : Not possible to classify because of no data.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Hazardous to the aquatic environment (acute) : Since 48h-EC₅₀ values [Crustacea (Daphnia magna)] of ammonium hydroxide is 0.66 mg/L, it was classified into category 1(HSDB, 2004).

Hazardous to the aquatic environment (chronic) : Classified into category 1 since the acute toxicity was Category 1, and the behavior in the water and the bio-accumulation were unknown.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

IATA	Shipping Name: Ammonia solution Hazard Class: 8 (Corrosive substances) UN Number: 2672 Packing Group:
IMO	Shipping Name: AMMONIA SOLUTION Hazard Class: 8 (CORROSIVE SUBSTANCES) UN Number: 2672 Packing Group:
RID/ADR	Shipping Name: Ammonia solution Hazard Class: 8 (Corrosive substances) UN Number: 2672 Packing Group:

SECTION 15 REGULATORY INFORMATION

Fire Service Act

: Not regulated

Poisonous and Deleterious Substances Control Act

: Article 2 (2) Deleterious Substances, Attached Table 2-94 of Cabinet order

Industrial Safety and Health Act

: Article 18-2, Attached Table 9-39 of Cabinet order

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (MSDS required)
(Effective from October 1, 2009)

: Not regulated

Ordinance for Enforcement of the Civil Aeronautics Act

: Article 194 (viii) Corrosive substance

Regulations for the carriage and storage of dangerous goods in ship

: Article 2 Corrosive substances

Pharmaceutical Affairs Act

: Article 2-2 Quasi-drug

Substance Registration :

Australia (AICS) : Registration

Canada(DSL) : Registration

Korea number (ECL) : KE-01688

China(IECSC) : Registration

SECTION 16 OTHER INFORMATION-----
REFERENCES:

- The Merck Index 14 edition, Monographs No. 0492(NH₃)
- Chemical Risk Information Platform (CHRIP)
- GHS Classification Guidance for the Japanese Government 2nd revised (March, 2010).
- Information about the status of the implementation of GHS in Japan (ID= 1128)
- Registry of Toxic Effects of Chemical Substances, No. BQ9625000
- Hazardous Substances Data Bank (HSDB)
- International Chemical Safety Cards (ICSC) No. 0215

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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