

BEBBINGTON INDUSTRIES SAFETY DATA SHEET

AMMONIUM HYDROXIDE 26 BE

SUPPLIER:

BEBBINGTON INDUSTRIES
44 WRIGHT AVENUE
DARTMOUTH, NOVA SCOTIA,
CANADA
B3B 1G6

1. IDENTIFICATION

Product Identifier

Product Name: AMMONIUM HYDROXIDE 26 BE

Recommended Use: fertilizer neutralizing agent. House hold cleaner

EMERGENCY NUMBER: CANUTEC 1 613 996 6666

Hazardous Classification of the substance or mixture

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1
Sub-category B	
Serious eye damage/eye irritation	Category 1

Label elements

Hazard pictograms**Signal Word: Danger****Hazard statements**

Harmful if swallowed

Harmful if inhaled

Causes severe skin burns and eye damage

Precautionary Statements**Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

Harmful to aquatic life with long lasting effects

Unknown acute toxicity

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable.

Mixture

Chemical Name	CAS No.	Weight-%	Synonyms
Water	7732-18-5	70 - 80%	Water
Ammonia	7664-41-7	30 - 40%	Ammonia

4. FIRST AID

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

Ingestion

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed:

Corrosive to eye tissue and may cause severe damage and blindness. Corrosive! Inhalation of ammonia gas can cause irritation and inflammation of the respiratory system resulting in hoarseness and tightness of the throat, laryngitis, tracheitis, bronchopneumonia and pulmonary edema. Productive cough with blood stained sputum may develop. Airway obstruction and diminished diffusion capacity and impaired ciliary function may result from exposure. Chronic lung disease or residual dysfunction is possible if overexposure has caused lower airway injury. Liquid, vapor, or mist causes irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva. Corrosive! May cause severe pain in the mouth, chest and abdomen, leading to cough, vomiting and collapse. Direct contact may cause severe irritation and / or burns with symptoms of redness, itching, swelling and possible destruction of tissue. Gastric or esophageal perforation may occur and lung irritation or edema may occur as a delayed effect.

Indication of any immediate medical attention and special treatment needed:

Note to physicians

Treatment based on sound judgment of physician and individual reactions of patient. Pulmonary edema may be delayed. Injury may be more severe than would be indicated on early presentation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing media appropriate for surrounding fire. Use water spray to cool fire exposed surfaces.

Specific hazards arising from the substance or mixture

Emits toxic fumes under fire conditions. The vapors may explode at high temperatures if brought in contact with an ignition source. During a fire, oxides of nitrogen may be produced.

Ammonia gas is generally not considered a serious fire or explosion hazard because ammonia-air mixtures are difficult to ignite. Also, a relatively high concentration of the gas is required. However, a large and intense energy source may cause ignition and/or an explosion, particularly in a confined space.

Hazardous combustion products

Oxides of nitrogen. Ammonia.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Handle and open containers with care. Protect material from direct sunlight. Protect against physical damage. Corrosive! The material will attack copper, tin, zinc, and their alloys; some forms of rubber, plastics and coatings. Do not store in basement locations.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store at ambient temperature. Store in accordance with good industrial practices. Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Exposure Limits

Chemical Name	Alberta OEL	British Columbia OEL	Ontario	Quebec OEL	Exposure Limit - ACGIH	Immediately Dangerous to Life or Health - IDLH
Water 7732-18-5	Not available	Not available	Not available	Not available	Not available	Not available
Ammonia 7664-41-7	TWA: 25 ppm TWA: 17 mg/m ³ STEL: 35 ppm STEL: 24 mg/m ³	TWA: 25 ppm STEL: 35 ppm	TWA: 25 ppm STEL: 35 ppm	TWA: 25 ppm TWA: 17 mg/m ³ STEL: 35 ppm STEL: 24 mg/m ³	35 ppm STEL 25 ppm TLV-TWA	300 ppm

Consult local authorities for recommended exposure limits

Appropriate engineering controls**Engineering controls**

Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Chemical goggles; also wear a face shield if splashing hazard exists.

Hand protection

Rubber gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection

If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. NIOSH / MSHA approved full face air purifying respirator equipped with ammonia cartridges for concentrations up to 250 ppm NH₃. An air-supplied respirator if concentrations are higher or unknown.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Appearance**

Physical state	Liquid
Color	Colorless
Odor	Pungent, irritating.
Odor threshold	No information available

PROPERTIES

	Values	Remarks • Method
pH	12 (neat)	
Melting point / freezing point	-38 °C / -36 °F	(@ 20%)
Initial boiling point/boiling range	48 °C / 118 °F	(@ 20%)
Flash point	No data available	none known
Evaporation rate	No data available	none known

Flammability (solid, gas)	No data available	none known
Flammability Limit in Air		none known
Upper flammability limit:	25	
Lower flammability limit:	16	
Vapor pressure	3.75 psi @ 20°C	
Relative vapor density	0.6 (Ammonia)	
Relative density	0.895	
Water solubility	Soluble in methanol. Water: 100%	
	Soluble in ethanol.	
Solubility in other solvents	No data available	
Partition coefficient	No data available	none known
Autoignition temperature	651 °C / 1204 °F	
Decomposition temperature	No data available	none known
Kinematic viscosity	No data available	none known
Dynamic viscosity	No data available	none known
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Molecular weight	No information available	
VOC Percentage Volatility	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity/Chemical Stability

Stable

Possibility of hazardous reactions

No additional remark.

Hazardous polymerization

Will not occur.

Conditions to avoid

Adding Sodium Hydroxide to this material and or heating will volatilize Ammonia gas. Contact with iodine, bromine, calcium, hypo-chlorite mixtures, contact with halogens may cause violent spattering.

Incompatible materials

Strong oxidizers. Strong acids. Halogens. Mineral acids. Ammonia has potentially explosive or violent reactions with interhalogens, strong oxidizers, Nitric Acid, Fluorine, Nitrogen oxide. Ammonia forms sensitive explosive mixtures with air and hydrocarbons, Ethanol, and Silver Nitrate, Chlorine. Explosive products are formed by the reaction of ammonia with Silver Chloride, Silver Oxide, Bromine, Iodine, Gold, Mercury, Tellurium Halides. Ammonia is incompatible or has potentially hazardous reactions with Silver, Acetaldehyde, Acrolein, Boron, Halogens, Perchlorate, Chloric Acid, Chlorine Monoxide, Chlorides, Nitrogen Tetroxide, Tin, Sulphur. Zinc. Aluminum and alloys. Contact with copper. Iodine. Acrolein. Tin. Bromine.

Hazardous decomposition products

Oxides of nitrogen. Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation

Corrosive! Inhalation of ammonia gas can cause irritation and inflammation of the respiratory system resulting in hoarseness and tightness of the throat, laryngitis, tracheitis, bronchopneumonia and pulmonary edema. Productive cough with blood stained sputum may develop. Airway obstruction and diminished diffusion capacity and impaired ciliary function may result from exposure. Chronic lung disease or residual dysfunction is possible if overexposure has caused lower airway injury.

Eye contact

Corrosive to eye tissue and may cause severe damage and blindness. Liquid, vapor, or mist causes irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva.

Skin contact

Corrosive. Direct contact may cause severe irritation and / or burns with symptoms of redness, itching, swelling and possible destruction of tissue.

Ingestion

Corrosive! May cause severe pain in the mouth, chest and abdomen, leading to cough, vomiting and collapse. Gastric or esophageal perforation may occur and lung irritation or edema may occur as a delayed effect.

Information on toxicological effects**Symptoms**

Medical conditions that may be aggravated by exposure include asthma, bronchitis, emphysema and other lung diseases and chronic nose, sinus or throat conditions. Corrosive effects on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain.

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	1,167.00 mg/kg
ATEmix (inhalation-dust/mist)	1.67 mg/l

Unknown acute toxicity No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	Not available	Not available
Ammonia 7664-41-7	= 350 mg/kg (Rat)	Not available	= 2000 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Corrosive. Direct contact may cause severe irritation and / or burns with symptoms of redness, itching, swelling and possible destruction of tissue.

Serious eye damage/eye irritation

Corrosive to eye tissue and may cause severe damage and blindness. Liquid, vapor, or mist causes irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Not listed with IARC, NTP, ACGIH or OSHA as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Water 7732-18-5	Not available	Not available	Not available	Not available
Ammonia 7664-41-7	Not available	Not available	Not available	Not available

Reproductive toxicity

No information available.

Specific target organ systemic toxicity - single exposure

No information available.

Specific target organ systemic toxicity - repeated exposure

No information available.

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacean
Water 7732-18-5	Not available	Not available	Not available	Not available
Ammonia 7664-41-7	Not available	0.26 - 4.6 mg/L LC50 (Lepomis macrochirus) 96 h 0.73 - 2.35 mg/L LC50 (Pimephales promelas) 96 h 0.44 mg/L LC50 (Cyprinus carpio) 96 h 1.17 mg/L LC50 (Lepomis macrochirus) 96 h flow-through 1.19 mg/L LC50 (Poecilia reticulata) 96 h static 5.9 mg/L LC50 (Pimephales promelas) 96 h static 1.5 mg/L LC50 (Poecilia reticulata) 96 h	Not available	LC50: =25.4mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation No information available.

Component Information

Chemical Name	Partition coefficient
Water 7732-18-5	Not available
Ammonia 7664-41-7	-1.14

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Do not reuse empty containers.

14. TRANSPORT INFORMATION

TDG (Canada):

UN Number UN2672
Shipping name AMMONIA SOLUTION
Class 8
Packing Group III
Marine pollutant Not available.

DOT (U.S.):

UN Number UN2672
Shipping name AMMONIA SOLUTION
Class 8
Packing Group III
Marine pollutant Not available

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Regulatory Rules

Chemical Name	CERCLA/SARA - Section 302	SARA (311/312) Hazard Class	CERCLA/SARA - Section 313
Water - 7732-18-5	Not Listed	Not Listed	Not Listed
Ammonia - 7664-41-7	Listed	Listed	Listed

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA: Health hazards 3 Flammability 1 Instability 0 Physical and chemical properties -
HMIS Health Rating: Health hazards 3 Flammability 1 Physical hazards 0 Personal protection X

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value * Skin designation

Prepared By: The Environment, Health and Safety Department of Univar Canada Ltd.

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