

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	First Aid Kits			
Trade Names				
	Model	Part No.	Model	Part No.
	FAK	RE1013-()	FAK	S3107-()
Company	Eastern Aero Marine 5502 NW 37 th Avenue Miami, Florida 33142			
Telephone	(800) 255-3924			
Fax	(305) 637-8632			
Emergency Phone Number	(813) 248-0585			

2. HAZARDS IDENTIFICATION

- Iodine Tincture USP
- Ammonia Inhalant

Symbol(s) or pictogram(s) Refer to supplier's Safety Data Sheets for specific information on components.

Hazard statement(s) Refer to supplier's Safety Data Sheets for specific information on components.

Precautionary statement(s) Refer to supplier's Safety Data Sheets for specific information on components.

Hazards not otherwise classified Refer to supplier's Safety Data Sheets for specific information on components.

3. COMPOSITION/INFORMATION ON INGREDIENTS

N/A. Refer to supplier's Safety Data Sheets for specific information on components.

4. FIRST AID MEASURES

Inhalation	Provide patient with fresh air and seek medical advice.
Skin Contact	Do not use solvents. Wash with soap and water.
Eye Contact	Irrigate thoroughly with water and seek medical advice.
Ingestion	Get medical aid immediately.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media	Large volumes of water. Sand.
Specific Hazards From Combustion	Refer to supplier's Safety Data Sheets for specific information on components.
Personal Protection	Use air-ventilated full mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Hazardous materials are contained in sealed units within packed kits. Spills should pose no threat if sealed units are not breached. Refer to supplier's Safety Data Sheets for specific information on components.

7. HANDLING AND STORAGE

These units should be stored in a cool dry area, away from danger of sparks, heat or flames. Refer to supplier's Safety Data Sheets for specific information on components.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to supplier's Safety Data Sheets for specific information on components.

9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to supplier's Safety Data Sheets for specific information on components.

10. STABILITY AND REACTIVITY

Kits are stable if stored in the original package in cool and dry conditions. Do not subject kits to high temperatures or excessively humid conditions. Refer to supplier's Safety Data Sheets for specific information on components.

11. TOXICOLOGICAL INFORMATION

N/A. Refer to supplier's Safety Data Sheets for specific information on components.

12. ECOLOGICAL INFORMATION

N/A. Refer to supplier's Safety Data Sheets for specific information on components.

13. DISPOSAL CONSIDERATIONS

Refer to supplier's Safety Data Sheets for specific disposal information of components. Other solid portions of the kits may be disposed of as domestic waste in accordance with local laws and regulations.

14. TRANSPORT INFORMATION

UN Number	UN3316
UN Proper Shipping Name	First Aid Kit
Transport Hazard Class(es)	Class 9
Packing Group	PG II – Ground: ORM-D

15. REGULATORY INFORMATION

N/A. Refer to supplier's Safety Data Sheets for specific information on components.

16. OTHER INFORMATION

Revision Level	Original
Other	Supplier's Safety Data Sheets can be found on our website at www.eamworldwide.com/technical-data/

B-77



SAFETY DATA SHEET

Issuing Date January 5, 2015

Revision Date New

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Apicare® Povidone-Iodine Solution (10%, For Individual Use)

Other means of identification

Product Code(s) L-1001

Recommended use of the chemical and restrictions on use

Recommended Use Broad spectrum topical antiseptic

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Apicare Inc.
Supplier Address 550 Research Parkway
Meriden, CT 06450

Supplier Phone Number Phone: 203-630-0500

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label elements, including precautionary statements

Emergency Overview

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Appearance Dark brown	Physical State Viscous liquid	Odor Faint, characteristic
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Precautionary Statements - Prevention

None

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

11% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Harmful to aquatic life with long lasting effects.

Interactions with Other Chemicals

Incompatible with strong alkalis.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Povidone-iodine	25655-41-8	8 - 12	*

4. FIRST AID MEASURES

First aid measures

General Advice

Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention.

Skin Contact

Wash skin with soap and water.

Inhalation

Remove to fresh air. If symptoms persist, call a doctor.

Ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects May cause slight eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Doctor Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Harsh iodine fumes may be emitted if product is heated to temperatures greater than 80°C.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Do not store at temperatures above 40°C. Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

Incompatible Products Strong alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Iodine 7553-56-2	TWA: 0.01 ppm (Inhalable fraction and vapor) STEL: 0.1ppm (Aerosol and vapor)	TWA-Ceiling: 0.1 ppm	IDLH: 2 ppm TWA-Ceiling: 0.1 ppm

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protection required.

Skin and Body Protection No special protection required.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Viscous liquid	Odor	Faint, characteristic
Appearance	Opaque	Odor Threshold	No information available
Color	Dark brown		

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
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		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~1.04	None known
Water Solubility	Soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	None known
Oxidizing Properties	No data available	None known

<u>Other Information</u>	
Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity

Incompatible with strong alkalis.

Chemical stability

Stable under recommended storage conditions. Harsh iodine fumes may be emitted if product is heated to temperatures greater than 80°C.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong alkalis.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Component Information No information available.

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredients listed as a carcinogen.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.

Chronic Toxicity Carcinogenic potential is unknown.

Target Organ Effects None known.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
 Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity
 Harmful to aquatic life with long lasting effects.

Persistence and Degradability
 No information available.

Bioaccumulation
 No information available.

Other adverse effects
 No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
 Dispose of in accordance with all applicable federal, state, and local regulations.

Contaminated Packaging
 Dispose of in accordance with all applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA Complies.
 DSL All components are listed either on the DSL or NDSL.

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals that are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances that are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances that are regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Disodium phosphate 7558-79-4		X	X	X	
Sodium hydroxide 1310-73-2	X	X	X	X	

International Regulations

Canada

WHMIS Hazard Class

Not controlled.

16. OTHER INFORMATION

NFPA	Health Hazards	1	Flammability	0	Instability	0	Physical and Chemical Hazards - Personal Protection
HMIS	Health Hazards	1	Flammability	0	Physical Hazard	0	

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date New

Revision Note New

Reference INT0027/D001

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Trade name : Ammonia Inhalant Solution

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : OTC drug used to treat or prevent fainting
 Use of the substance/mixture : For professional use only

1.3. Details of the supplier of the safety data sheet

James Alexander Corporation
 845 Route 94 Blairstown
 NJ 07825

Tel: (908) 362-9266

Note: The CHEMTREC emergency number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to JAC at (908) 362-9266.

1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 2 H225
 Skin Corr. 1B H314
 Eye Dam. 1 H318
 Carc. 1A H350

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapour
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H350 - May cause cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
 P233 - Keep container tightly closed
 P240 - Ground/bond container and receiving equipment
 P241 - Use explosion-proof electrical, lighting, ventilating equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P260 - Do not breathe dust, fume, gas, mist, spray, vapours
 P264 - Wash hands thoroughly after handling
 P280 - Wear eye protection, protective clothing, protective gloves
 P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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P308+P313 - IF exposed or concerned: Get medical advice/attention
P310 - Immediately call a POISON CENTER or doctor/physician
P321 - Specific treatment (see on this label)
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂), water spray, sand, earth for extinction
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Ethyl alcohol	(CAS No) 64-17-5	30 - 40	Flam. Liq. 2, H225 Carc. 1A, H350
Ammonia	(CAS No) 7664-41-7	15 - 20	Flam. Gas 2, H221 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, give artificial respiration. In case of breathing difficulties administer oxygen. by trained personnel. Seek medical attention immediately.
- First-aid measures after skin contact : Immediately flush skin with plenty of water for at least 15 minutes. Remove/Take off immediately all contaminated clothing. Do not rub the skin and eyes after direct contact with the product. Seek medical attention immediately. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.
- First-aid measures after ingestion : If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. If swallowed, rinse mouth with water (only if the person is conscious).

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes severe skin burns and eye damage. This material or its emissions may affect the central nervous system and/or aggravate pre-existing disorders.
- Symptoms/injuries after inhalation : May cause cancer by inhalation. Prolonged and repeated inhalation of decomposition products may cause a pulmonary oedema. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. Irritating to the respiratory system, may cause throat pain and cough. Difficulty in breathing.
- Symptoms/injuries after skin contact : May cause severe burns.
- Symptoms/injuries after eye contact : Causes serious eye damage. Can cause blindness.
- Symptoms/injuries after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Alcohol resistant foam. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
Explosion hazard : May form flammable/explosive vapour-air mixture.
Reactivity : Thermal decomposition generates : Corrosive vapours. Reacts violently with acids. An exothermic reaction may occur.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Containers may swell and Burst during a fire due to internal pressure caused by heat. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Alcohols burn with a pale blue flame which may be extremely hard to see under normal lighting conditions. Personnel may be able to feel the heat of the fire without seeing flames. Extreme caution must be exercised in fighting alcohol fires.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Eliminate all ignition sources if safe to do so. Use special care to avoid static electric charges. No naked lights. No smoking. Stop leak if safe to do so. No action shall be taken involving any personal risk or without suitable training. Wear protective clothing. For further information refer to section 8 : Exposure-controls/personal protection.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

- Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Consult the appropriate authorities about waste disposal. Ensure all national/local regulations are observed.

6.4. Reference to other sections

- See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Use personal protective equipment as required. Provide good ventilation in process area to prevent formation of vapour. Do not breathe gas, fumes, vapour or spray. No naked lights. No smoking. Use only non-sparking tools. Never use pressure to empty container. Ground/bond container and receiving equipment. Take care to allow internal pressure to escape from container before releasing closures. Remove closure carefully; internal pressure may be present. Keep closure up to prevent leakage. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

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7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Ensure the ventilation system is regularly maintained and tested. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. A washing facility/water for eye and skin cleaning purposes should be present. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool well ventilated place. Keep in fireproof place. Keep container tightly closed. Protect containers against physical damage. Detached outside storage is preferable. Inside storage should be in an NFPA approved flammable liquids storage room or cabinet. Store in corrosion-proof area at temperatures below 77 degrees F (25oC). Store away from direct sunlight or other heat sources.
- Incompatible materials : Avoid mixing with acids, most common metals, strong oxidizing agents, brass, zinc, chlorine, aluminum, copper, bronze, mercury, dimethyl sulfate and acetyl chloride.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ammonia (7664-41-7)		
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	35 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

Ethyl alcohol (64-17-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Use explosion-proof ventilating equipment.
- Personal protective equipment : Avoid all unnecessary exposure. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. For certain operations, additional Personal Protection Equipment (PPE) may be required. Protective goggles. Gloves. Protective clothing.



- Hand protection : Wear protective gloves. rubber gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- Eye protection : Chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing. Chemical resistant safety shoes.
- Respiratory protection : Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE). Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals. Care must be taken to assure that any respirator chosen is capable of protecting the user from both ammonia and ethyl alcohol vapors.
- Other information : Do not eat, drink or smoke during use.

Ammonia Inhalant Solution

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Colour	: Red.
Odour	: Pungent ammonia odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 35 °C (> 95 °F)
Flash point	: < 10 °C (< 50 °F - Pensky Martens Closed Cup)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.891 (Specific Gravity @ 25 °C)
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours. Reacts violently with acids. An exothermic reaction may occur.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Avoid mixing with acids, most common metals, strong oxidizing agents, brass, zinc, chlorine, aluminum, copper, bronze, mercury, dimethyl sulfate and acetyl chloride.

10.6. Hazardous decomposition products

Thermal decomposition generates : Fume. Carbon monoxide. Carbon dioxide. May release flammable gases. Corrosive vapours. Ammonia. Nitrogen oxides. release of highly flammable gases/vapours hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified (Based on available data, the classification criteria are not met)
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Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Ammonia (7664-41-7)	
LD50 oral rat	350 mg/kg
LC50 inhalation rat (ppm)	2000 ppm/4h

Ethyl alcohol (64-17-5)	
LC50 inhalation rat (mg/l)	124.7 mg/l (Exposure time: 4 h)

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: May cause cancer.

Ethyl alcohol (64-17-5)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause cancer by inhalation. Prolonged and repeated inhalation of decomposition products may cause a pulmonary oedema. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. Irritating to the respiratory system, may cause throat pain and cough. Difficulty in breathing.
Symptoms/injuries after skin contact	: May cause severe burns.
Symptoms/injuries after eye contact	: Causes serious eye damage. Can cause blindness.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Ingestion may cause nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity

Ammonia (7664-41-7)	
LC50 fishes 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	0.26 - 4.6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

Ethyl alcohol (64-17-5)	
LC50 fishes 1	12.0 - 16.0 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 2	10800 mg/l (Exposure time: 24 h - Species: Daphnia magna)

12.2. Persistence and degradability

Ammonia Inhalant Solution	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Ammonia Inhalant Solution	
Bioaccumulative potential	Not established.

Ammonia (7664-41-7)	
Log Pow	-1.14 (at 25 °C)

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Ethyl alcohol (64-17-5)

Log Pow : -0.32

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers. Ensure all national/local regulations are observed. Consult the appropriate authorities about waste disposal.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN2924 Flammable liquids, corrosive, n.o.s. (Ammonia, Ethanol), 3, II

UN-No.(DOT) : 2924

DOT NA no. : UN2924

DOT Proper Shipping Name : Flammable liquids, corrosive, n.o.s.
(Ammonia, Ethanol)

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid
8 - Corrosive



DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 243

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 5 L

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

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DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Additional information

Other information : No supplementary information available.

ADR

Transport document description : No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Ammonia Inhalant Solution

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	588 lb
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Ammonia (7664-41-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 302 (Specific toxic chemical listings)
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	100 lb
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SARA Section 302 Threshold Planning Quantity (TPQ)	500
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SARA Section 313 - Emission Reporting	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
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Ethyl alcohol (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Ammonia (7664-41-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
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Ethyl alcohol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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EU-Regulations

Ammonia (7664-41-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Ethyl alcohol (64-17-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

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Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Ammonia (7664-41-7)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Poisonous and Deleterious Substances Control Law
Listed on the Canadian Ingredient Disclosure List

Ethyl alcohol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

Ethyl alcohol (64-17-5)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	Yes			

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Carc. 1A	Carcinogenicity, Category 1A
Compressed gas	Gases under pressure : Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 2	Flammable gases, Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H221	Flammable gas
H225	Highly flammable liquid and vapour
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
H350	May cause cancer

NFPA health hazard

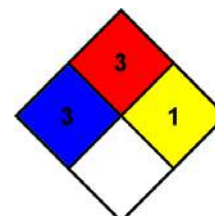
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



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SDS US (GHS HazCom 2012)

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