

SAFETY DATA SHEET

Battery 81 Solvent



Section 1. Identification

GHS product identifier : Battery 81 Solvent
Other means of identification : Not available.
Product type : Liquid.

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

Not applicable.

Supplier's details : AIM
9100 Henri Bourassa East
Montreal, QC
H1E 2S4
(514) 494-2000

In the United States:
AIM
25 Kenney Drive
Cranston, RI 02920
(800) CALL-AIM

Emergency telephone number (with hours of operation) : INFOTRAC
North America: (800) 535-5053
International: (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 14.4%

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : Flammable liquid and vapor.
Harmful if inhaled.
Causes severe skin burns and eye damage.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness and dizziness.

Precautionary statements

Section 2. Hazards identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.
- Response** : IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

CAS number/other identifiers

- CAS number** : Not applicable.
- Product code** : Not available.

| Ingredient name | % | CAS number |
|----------------------------|----------|------------|
| 2-methylpropan-1-ol | 30 - 40 | 78-83-1 |
| tetrahydro-2-furylmethanol | 10 - 20 | 97-99-4 |
| Hydrobromic acid | 10 - 20 | 10035-10-6 |
| 2-aminoethanol | 0.1 - 10 | 141-43-5 |
| Phosphoric acid | 0.1 - 10 | 7664-38-2 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed

Section 4. First aid measures

person may need to be kept under medical surveillance for 48 hours.

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes severe burns.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.

- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides
halogenated compounds

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|----------------------------|--|
| 2-methylpropan-1-ol | <p>ACGIH TLV (United States, 3/2015). TWA: 50 ppm 8 hours. TWA: 152 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 150 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 50 ppm 10 hours. TWA: 150 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.</p> |
| tetrahydro-2-furylmethanol | <p>AIHA WEEL (United States, 10/2011). TWA: 0.5 ppm 8 hours.</p> |
| Hydrobromic acid | <p>ACGIH TLV (United States, 3/2015). C: 2 ppm</p> |

Section 8. Exposure controls/personal protection

2-aminoethanol

OSHA PEL 1989 (United States, 3/1989).

CEIL: 3 ppm

CEIL: 10 mg/m³**NIOSH REL (United States, 10/2013).**

CEIL: 3 ppm

CEIL: 10 mg/m³**OSHA PEL (United States, 2/2013).**

TWA: 3 ppm 8 hours.

TWA: 10 mg/m³ 8 hours.**ACGIH (United States, 0/1994).**

TWA: 3 ppm

STEL: 6 ppm

TWA: 7.5 mg/m³STEL: 15 mg/m³CEIL: 6 mg/m³**NIOSH (United States, 0/1994).**

TWA: 3 ppm

STEL: 6 ppm

CEIL: 15 ppm

TWA: 8 mg/m³STEL: 15 mg/m³**OSHA (United States, 0/1989).**

TWA: 3 ppm

STEL: 6 ppm

CEIL: 5.1 ppm

TWA: 8 mg/m³STEL: 15 mg/m³**ACGIH TLV (United States, 3/2015).**

TWA: 3 ppm 8 hours.

TWA: 7.5 mg/m³ 8 hours.

STEL: 6 ppm 15 minutes.

STEL: 15 mg/m³ 15 minutes.**OSHA PEL 1989 (United States, 3/1989).**

TWA: 3 ppm 8 hours.

TWA: 8 mg/m³ 8 hours.

STEL: 6 ppm 15 minutes.

STEL: 15 mg/m³ 15 minutes.**NIOSH REL (United States, 10/2013).**

TWA: 3 ppm 10 hours.

TWA: 8 mg/m³ 10 hours.

STEL: 6 ppm 15 minutes.

STEL: 15 mg/m³ 15 minutes.**OSHA PEL (United States, 2/2013).**

TWA: 3 ppm 8 hours.

TWA: 6 mg/m³ 8 hours.**Appropriate engineering controls**

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 23 to 37.8°C (73.4 to 100°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|----------------------------|-----------------------|------------|-------------------------|----------|
| 2-methylpropan-1-ol | LC50 Inhalation Vapor | Rat | 19200 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 3400 mg/kg | - |
| | LD50 Oral | Rat | 2460 mg/kg | - |
| tetrahydro-2-furylmethanol | LD50 Oral | Rat | 1600 mg/kg | - |
| Hydrobromic acid | LC50 Inhalation Gas. | Rat | 2858 ppm | 1 hours |
| 2-aminoethanol | LD50 Oral | Guinea pig | 620 mg/kg | - |
| | LD50 Oral | Mouse | 700 mg/kg | - |
| | LD50 Oral | Rat | 1720 mg/kg | - |
| | LD50 Oral | Rat | 1720 mg/kg | - |
| Phosphoric acid | LD50 Dermal | Rabbit | 2740 mg/kg | - |
| | LD50 Oral | Rat | 1530 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|----------------------------|--------------------------|---------|-------|------------------------|-------------|
| tetrahydro-2-furylmethanol | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| 2-aminoethanol | Eyes - Severe irritant | Rabbit | - | 250 Micrograms | - |
| | Skin - Moderate irritant | Rabbit | - | 505 milligrams | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

| Name | Category | Route of exposure | Target organs |
|---------------------|------------|-------------------|---|
| 2-methylpropan-1-ol | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes severe burns.
- Ingestion** : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|--------------------|--------------|
| Oral | 3662.6 mg/kg |
| Dermal | 6297.3 mg/kg |
| Inhalation (gases) | 9003.3 ppm |

Other information : To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. 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 herein, we cannot guarantee that these are the only hazards that exist.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--------------------------------------|--|----------|
| 2-methylpropan-1-ol | Acute LC50 600000 µg/l Marine water | Crustaceans - Artemia salina - Nauplii | 48 hours |
| | Acute LC50 1030000 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| 2-aminoethanol | Acute LC50 1330000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 4000 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| | Acute EC50 8.42 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Acute LC50 >100000 µg/l Marine water | Crustaceans - Crangon crangon - Adult | 48 hours |
| | Acute LC50 170000 µg/l Fresh water | Fish - Carassius auratus | 96 hours |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| 2-methylpropan-1-ol | 1 | - | low |
| 2-aminoethanol | -1.31 | - | low |

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.













Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

| Ingredient | CAS # | Status | Reference number |
|---------------------|---------|--------|------------------|
| 2-methylpropan-1-ol | 78-83-1 | Listed | U140 |

Section 14. Transport information

| | DOT Classification | TDG Classification | Mexico Classification | ADR/RID | IMDG | IATA |
|-----------------------------------|---|---|---|---|---|---|
| UN number | 2924 | 2924 | 2924 | 2924 | 2924 | 2924 |
| UN proper shipping name | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Hydrobromic acid, Isobutyl alcohol) |
| Transport hazard class(es) | 3 (8)   | 3 (8)   | 3 (8)   | 3 (8)   | 3 (8)   | 3 (8)   |
| Packing group | II | II | II | II | II | II |
| Environmental hazards | No. | No. | No. | No. | No. | No. |
| | | | | | | |

Section 14. Transport information

| | | | | | | |
|-------------------------------|--|--|---|--------------------------|---|---|
| Additional information | Reportable quantity 12500 lbs / 5675 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8). | - | Tunnel code (D/E) | - | - |
|-------------------------------|--|--|---|--------------------------|---|---|

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** TERGITOL NP-33 (NONIONIC)
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 8(d) H and S data reporting: TERGITOL NP-33 (NONIONIC): 1997
 All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Section 15. Regulatory information

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|----------------------------|----------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| 2-methylpropan-1-ol | 30 - 40 | Yes. | No. | No. | Yes. | No. |
| tetrahydro-2-furylmethanol | 10 - 20 | No. | No. | No. | Yes. | Yes. |
| Hydrobromic acid | 10 - 20 | No. | No. | No. | Yes. | No. |
| 2-aminoethanol | 0.1 - 10 | Yes. | No. | No. | Yes. | No. |
| Phosphoric acid | 0.1 - 10 | No. | No. | No. | Yes. | No. |

State regulations

- Massachusetts** : The following components are listed: ISOBUTYL ALCOHOL; Hydrobromic acid; TETRAHYDROFURFURYL ALCOHOL; 2-aminoethanol
- New York** : The following components are listed: Isobutanol; 1-Propanol, 2-methyl-
- New Jersey** : The following components are listed: ISOBUTYL ALCOHOL; 1-PROPANOL, 2-METHYL-; Hydrobromic acid; 2-aminoethanol
- Pennsylvania** : The following components are listed: 1-PROPANOL, 2-METHYL-; Hydrobromic acid; 2-FURANMETHANOL, TETRAHYDRO-; 2-aminoethanol

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Europe** : Not determined.
- Japan** : Not determined.
- Malaysia** : Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

| | |
|------------------|---|
| Health | 3 |
| Flammability | 3 |
| Physical hazards | 0 |
| | |

Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Version : 0.03

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

References : Not available.

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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 herein, we cannot guarantee that these are the only hazards that exist.