

Safety Data Sheet

FOR REGULATORY AND SDS QUESTIONS (U.S. AND CANADA):
CALL THE PRODUCT STEWARDSHIP LINE
1- 908-791-2336 9 AM TO 6 PM ET (Mon-Fri)


Section 1. Identification

Product name : 951 Soldering Flux and Flux Pen
Product code : 4060043
Product type : Liquid.
Date of issue/Date of revision : March 10 2023.

| Manufacturer - Supplier | Telephone no.: | Emergency phone: |
|--|--|---|
| Alpha Assembly Solutions Inc. 800 West Thorndale Avenue Itasca, IL 60143 USA |  800-253-7837 1-630-616-4000 | DOMESTIC NORTH AMERICA 202-464-2554 |
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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 2
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 TOXIC TO REPRODUCTION - Category 1B
 SPECIFIC TARGET ORGAN TOXICITY - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (Narcotic effects) - Category 3
 AQUATIC HAZARD (ACUTE) - Category 2
 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms



Signal word :  **Danger**

Hazard statements :  Highly flammable liquid and vapor.
 Causes skin irritation.
 Causes serious eye irritation.
 Harmful if inhaled.
 May cause drowsiness or dizziness.
 May damage fertility or the unborn child.
 Causes damage to organs. (central nervous system (CNS), optic nerve)
 Toxic to aquatic life with long lasting effects.

Precautionary statements

Continued on next page

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, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. |
| Response | : Collect spillage. IF exposed: Call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. |
| Storage | : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | : Avoid contact with skin and clothing. Wash thoroughly after handling. |
| Hazards not otherwise classified | : Prolonged or repeated contact may dry skin and cause irritation. |

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % | CAS number |
|------------------------|----------|-------------------|
| ethanol | 70-80 | 64-17-5 |
| Isopropyl alcohol | 10-20 | 67-63-0 |
| Thinning Solvent | 1-10 | - |
| methanol | 1-10 | 67-56-1 |
| Organic acid | 1-10 | - |

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 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 | : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention. If necessary, call a poison center or physician. |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists 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. Get medical attention. If necessary, call a poison center or physician. 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. |

Continued on next page

Section 4. First aid measures

- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. Get medical attention. If necessary, call a poison center or 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 irritation.
- Inhalation** : Harmful if inhaled. Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin.
- Ingestion** : Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
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:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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 mists 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** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

- 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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.

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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. Avoid release to the environment. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

ethanol

ACGIH TLV (United States, 3/2017). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.

STEL: 1000 ppm 15 minutes.

NIOSH REL (United States, 10/2016).

TWA: 1900 mg/m³ 10 hours.

TWA: 1000 ppm 10 hours.

OSHA PEL (United States, 6/2016).

TWA: 1900 mg/m³ 8 hours.

TWA: 1000 ppm 8 hours.

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

TWA: 1900 mg/m³ 8 hours.

TWA: 1000 ppm 8 hours.

ACGIH TLV (United States, 3/2017). Notes: Refers to Appendix A - Carcinogens. ACGIH 2003 Adoption

Isopropyl alcohol

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Section 8. Exposure controls/personal protection

STEL: 400 ppm 15 minutes.
TWA: 200 ppm 8 hours.

NIOSH REL (United States, 10/2016).

STEL: 1225 mg/m³ 15 minutes.
STEL: 500 ppm 15 minutes.
TWA: 980 mg/m³ 10 hours.
TWA: 400 ppm 10 hours.

OSHA PEL (United States, 6/2016).

TWA: 980 mg/m³ 8 hours.
TWA: 400 ppm 8 hours.

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

STEL: 1225 mg/m³ 15 minutes.
STEL: 500 ppm 15 minutes.
TWA: 980 mg/m³ 8 hours.
TWA: 400 ppm 8 hours.

Thinning Solvent

NIOSH REL (United States, 10/2016).

STEL: 950 mg/m³ 15 minutes.
STEL: 200 ppm 15 minutes.
TWA: 710 mg/m³ 10 hours.
TWA: 150 ppm 10 hours.

OSHA PEL (United States, 6/2016).

TWA: 710 mg/m³ 8 hours.
TWA: 150 ppm 8 hours.

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

STEL: 950 mg/m³ 15 minutes.
STEL: 200 ppm 15 minutes.
TWA: 710 mg/m³ 8 hours.
TWA: 150 ppm 8 hours.

ACGIH TLV (United States, 3/2017).

STEL: 150 ppm 15 minutes.
TWA: 50 ppm 8 hours.

methanol

ACGIH TLV (United States, 3/2017). Absorbed through skin.

Notes: Substances for which there is a Biological Exposure Index or Indices

STEL: 328 mg/m³ 15 minutes.
STEL: 250 ppm 15 minutes.
TWA: 262 mg/m³ 8 hours.
TWA: 200 ppm 8 hours.

NIOSH REL (United States, 10/2016). Absorbed through skin.

STEL: 325 mg/m³ 15 minutes.
STEL: 250 ppm 15 minutes.
TWA: 260 mg/m³ 10 hours.
TWA: 200 ppm 10 hours.

OSHA PEL (United States, 6/2016).

TWA: 260 mg/m³ 8 hours.
TWA: 200 ppm 8 hours.

OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.

STEL: 325 mg/m³ 15 minutes.
STEL: 250 ppm 15 minutes.
TWA: 260 mg/m³ 8 hours.
TWA: 200 ppm 8 hours.

Organic acid

ACGIH TLV (United States, 3/2017).

TWA: 5 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.

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Section 8. Exposure controls/personal protection

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

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.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Colorless.

Odor : Alcohol-like.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : 64.7°C (148.5°F)

Flash point : Closed cup: 12°C (53.6°F)

Evaporation rate : Not available.

Flammability : Not available.

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Section 9. Physical and chemical properties and safety characteristics

| | |
|--|----------------------------|
| Lower and upper explosion limit/flammability limit | : Not available. |
| Vapor pressure | : 5.9 kPa (44.25354 mm Hg) |
| Relative vapor density | : Not available. |
| Relative density | : 0.814 |
| Solubility | : Not available. |
| Miscible with water | : Yes. |
| VOC | : 788.6 g/l |
| Partition coefficient: n-octanol/water | : Not applicable. |
| Auto-ignition temperature | : 370°C (698°F) |
| Decomposition temperature | : Not available. |
| Viscosity | : Not available. |
| Flow time (ISO 2431) | : Not available. |
| <u>Particle characteristics</u> | |
| Median particle size | : Not applicable. |

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. |
| Incompatibility with various substances | : Reactive or incompatible with the following materials: oxidizing materials, reducing materials, metals, acids, alkalis and moisture. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Hazardous polymerization | : Under normal conditions of storage and use, hazardous polymerization will not occur. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------------------|------------|--------------------------|----------|
| ethanol | LC50 Inhalation Vapor | Rat | 124700 mg/m ³ | 4 hours |
| | LD50 Oral | Rat | 10600 mg/kg | - |
| | TDLo Oral | Man - Male | 0.8 g/kg | - |
| | TDLo Oral | Mouse | 4 g/kg | - |
| Isopropyl alcohol | LD50 Dermal | Rabbit | 6290 mg/kg | - |
| | LD50 Oral | Rat | 4.7 g/kg | - |
| Thinning Solvent | LC50 Inhalation Gas. | Rat | 390 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 1087 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >17600 mg/kg | - |
| | LD50 Oral | Mammal | 4300 mg/kg | - |
| | LD50 Oral | Rat | 10768 mg/kg | - |
| | LC50 Inhalation Gas. | Rat | 145000 ppm | 1 hours |
| methanol | LC50 Inhalation Gas. | Rat | 64000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 64000 ppm | 4 hours |
| | LD50 Oral | Rat | 5600 mg/kg | - |
| | | | | |

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Section 11. Toxicological information

| | | | | |
|--------------|-------------|------------|--------------|---|
| Organic acid | LDLo Oral | Man - Male | 6422 mg/kg | - |
| | TDLo Oral | Man - Male | 9450 uL/kg | - |
| | TDLo Oral | Man - Male | 3571 uL/kg | - |
| | LD50 Dermal | Rabbit | >7940 mg/kg | - |
| | LD50 Oral | Rabbit | >11000 mg/kg | - |
| | LD50 Oral | Rat | 5050 mg/kg | - |
| | LD50 Oral | Rat | >11000 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|------------------------------------|-------------|
| ethanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 0.066666667 minutes 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 100 microliters | - |
| | Eyes - Severe irritant | Rabbit | - | 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 400 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| Isopropyl alcohol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| Thinning Solvent | Eyes - Moderate irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 milligrams | - |
| methanol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 40 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| Organic acid | Eyes - Mild irritant | Rabbit | - | 10 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 0.25 Grams | - |

Sensitization

Not available.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|-------------------------|------|--|-----------|
| ethanol | - | Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic | Equivocal |
| | - | Experiment: In vitro Subject: Mammalian-Human Cell: Somatic | Equivocal |

Carcinogenicity

Not available.

Classification

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Section 11. Toxicological information

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|------|------|-----|
| Isopropyl alcohol | - | 3 | - |

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|-------------------------|-------------------|-----------|-------------------|----------------|------------------|----------|
| ethanol | - | - | Equivocal | Woman | Oral: 41 g/kg | - |
| | - | - | Equivocal | Woman | Oral: 250 mg/kg | - |
| methanol | - | - | Positive | Mouse - Female | Oral: 4 g/kg | - |
| | Negative | - | Positive | Rat - Female | Oral: 5200 µg/kg | - |

Teratogenicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------------|---------|------------|----------|
| methanol | Positive - Oral | Rat | 1027 mg/kg | - |

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---|
| Isopropyl alcohol | Category 3 | - | Narcotic effects |
| Thinning Solvent | Category 3 | - | Narcotic effects |
| methanol | Category 1 | - | central nervous system (CNS), optic nerve |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : ☒ Harmful if inhaled. Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : ☒ Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin.
- Ingestion** : ☒ Causes damage to organs following a single exposure if swallowed. 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 or irritation
watering
redness

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Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:
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:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
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

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : ☒ May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|--|---------------|
| <input checked="" type="checkbox"/> Oral | 3209.44 mg/kg |
| Dermal | 2993 mg/kg |
| Inhalation (gases) | 4646.27 ppm |
| Inhalation (vapors) | 89.35 mg/l |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--------------------------------------|--|----------|
| ethanol | Acute EC50 17.921 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute EC50 2000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 25500 µg/l Marine water | Crustaceans - Artemia franciscana - Larvae | 48 hours |
| | Acute LC50 42000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 4 days |
| | Chronic NOEC 4.995 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Chronic NOEC 100 µl/L Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| Isopropyl alcohol | Chronic NOEC 0.375 µl/L Fresh water | Fish - Gambusia holbrooki - Larvae | 12 weeks |
| | Acute EC50 10100 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 1400000 µg/l Marine water | Crustaceans - Crangon crangon | 48 hours |
| Thinning Solvent | Acute LC50 4200 mg/l Fresh water | Fish - Rasbora heteromorpha | 96 hours |
| | Acute LC50 32 mg/l Marine water | Crustaceans - Artemia salina | 48 hours |
| methanol | Acute LC50 18000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute EC50 16.912 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute LC50 2500000 µg/l Marine water | Crustaceans - Crangon crangon - Adult | 48 hours |
| | Acute LC50 3289 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| Organic acid | Acute LC50 290 mg/l Fresh water | Fish - Danio rerio - Egg | 96 hours |
| | Chronic NOEC 9.96 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute LC50 97000 µg/l Fresh water | Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-------|-----------|
| ethanol | -0.35 | - | low |
| Isopropyl alcohol | 0.05 | - | low |
| Thinning Solvent | 2.3 | - | low |
| methanol | -0.77 | <10 | low |
| Organic acid | 0.093 | 3.162 | low |

Mobility in soil

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

Continued on next page

Section 13. Disposal considerations

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.

Section 14. Transport information

| | DOT Classification | TDG Classification | Mexico Classification | UN | IMDG | IATA |
|----------------------------|--|--|--|--|--|--|
| UN number | UN1992 | UN1992 | UN1992 | UN1992 | UN1992 | UN1992 |
| UN proper shipping name | Flammable liquid, toxic, n. o.s. (ethanol, methanol) | Flammable liquid, toxic, n. o.s. (ethanol, methanol) | Flammable liquid, toxic, n. o.s. (ethanol, methanol) | Flammable liquid, toxic, n. o.s. (ethanol, methanol) | Flammable liquid, toxic, n. o.s. (ethanol, methanol) | Flammable liquid, toxic, n. o.s. (ethanol, methanol) |
| Transport hazard class(es) | 3 (6.1)   | 3 (6.1)   | 3 (6.1)   | 3 (6.1)   | 3 (6.1)   | 3 (6.1)   |
| Packing group | II | II | II | II | II | II |
| Environmental hazards | No. | No. | No. | No. | No. | No. |

| | |
|---|----------|
| Additional information - DOT Classification | ERG# 131 |
| | |

Special provisions for transport : Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

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.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.
TSCA 5(a)2 final significant new use rule (SNUR): No products were found.
TSCA 12(b) one-time export notification: No products were found.
TSCA 12(b) annual export notification: No products were found.

United States inventory (TSCA 8b) : All components are listed or exempted.

Continued on next page


Section 15. Regulatory information

[SARA 302/304](#)

[Composition/information on ingredients](#)

No products were found.

[SARA 311/312](#)

Classification :  **FLAMMABLE LIQUIDS** - Category 2
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY - Category 1
SPECIFIC TARGET ORGAN TOXICITY (Narcotic effects) - Category 3
HNOC - Defatting irritant

[SARA 313](#)

| | Product name | CAS number | % |
|---------------------------------|--------------|------------|------|
| Form R - Reporting requirements | methanol | 67-56-1 | 1-10 |
| Supplier notification | methanol | 67-56-1 | 1-10 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

[California Prop. 65](#)

 **WARNING:** Reproductive Harm - www.P65Warnings.ca.gov.

[Canada](#)

Canada inventory : All components are listed or exempted.

[International regulations](#)

[Inventory list](#)

Australia : All components are listed or exempted.
China : Not determined.
Japan : All components are listed or exempted.
New Zealand : All components are listed or exempted.
Philippines : Not determined.
Republic of Korea : Not determined.
Taiwan : Not determined.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

| | |
|------------------|---|
| Health | 2 |
| Flammability | 3 |
| Physical hazards | 0 |
| | |

[Procedure used to derive the classification](#)

Section 16. Other information

| Classification | Justification |
|--|---|
| FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY - Category 1 SPECIFIC TARGET ORGAN TOXICITY (Narcotic effects) - Category 3 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2 | On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method |

History

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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 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 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.