# Safety Data Sheet

## ISOPROPYL ALCOHOL 70%

Brand: MAXTITE

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Trade name** Isopropyl Alcohol, 70%

**Product code** 54130

**Company** Pacific Innovations LLC

**Address** 129 Seegers Ave
Elk Grove Village, IL 60007

**Telephone** (503) 455-8581

**Emergency Contact** (Infotrac) 1-800-535-5053

## SECTION 2 HAZARDS IDENTIFICATION

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

| | | |
|---|---|---|
| **OSHA/GHS** | Flammable Liquids | Category 2 |
| **Hazards** | Eye irritation | Category 2A |
| | Specific target organ toxicity (single exposure)-(Respiratory tract irritation) | Category 3 |
| | Specific target organ toxicity - single exposure (Narcotic effects) | Category 3 |

### GHS LABEL ELEMENTS

**Hazard symbols**

**Signal word** Danger

**Hazard statements**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |

**Precautionary Statements**

| | | |
|---|---|---|
| **Prevention** | P210 | Keep away from heal/sparks/open flames/hot surfaces. No smoking. |
| | P233 | Keep container tightly closed. |
| | P240 | Ground/bond container and receiving equipment. |
| | P241 | Use explosion-proof electrical/ ventilating/ lighting equipment. |
| | P242 | Use only non-sparking tools. |
| | P243 | Take precautionary measures against static discharge. |
| | P280 | Wear protective gloves/ eye protection/ face protection. |
| | P264 | Wash skin thoroughly after handling. |
| | P261 | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. |
| | P271 | Use only outdoors or in a well-ventilated area. |
| **Response** | P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.<br>P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 If eye irritation persists: Get medical advice/ attention.<br>P304 + P340 IF IN HALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P312 Call a POISON CENTER/doctor if you feel unwell. | |
| **Storage** | P403 + P405 + P235 Store locked up in a well-ventilated place. Keep cool. | |

## SECTION 3 | COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Mixture** Mixture

| Component | CAS-No. | Weight percent |
|---|---|---|
| Isopropyl alcohol | 67-63-0 | 60-100 |

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

The Specific percentage of composition is being withheld as a trade secret. Further information is available as required by 29 CFR 1910.1200(i). 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

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

**Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.

**Ingestion** 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. 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** Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** No known significant effects or critical hazards.

**Ingestion** 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: respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

**Skin contact** No specific data.

**Ingestion** No specific data.

## SECTION 5 | FIREFIGHTING MEASURES

### FLAMMABLE PROPERTIES

| | |
|---|---|
| **Suitable extinguishing media** | Use water spray (fog), alcohol-resistant foam, dry chemical or carbon dioxide. |
| **Unsuitable extinguishing media** | Do not use water jet. |
| **Specific hazards arising from the chemical** | Highly 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:<br>carbon dioxide<br>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 firefighters** | 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

| | |
|---|---|
| **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. |
| **Methods and materials for containment and cleaning up** | Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/ national regulations (see section 13). Do not flush into surface water or sanitary sewer system. |
| **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”. |

## SECTION 6 | ACCIDENTAL RELEASE MEASURES (CONTINUED)

**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.

**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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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

| Ingredient name | Exposure limits |
|---|---|
| Isopropyl alcohol | **ACGIH TLV (United States, 3/2016).**<br>TWA: 200 ppm 8 hours.<br>STEL: 400 ppm 15 minutes.<br><br>**OSHA PEL 1989 {United States, 3/1989).**<br>TWA: 400 ppm 8 hours.<br>TWA: 980 mg/m3 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 1225 mg/m3 15 minutes.<br><br>**NIOSH REL {United States, 10/2013).**<br>TWA: 400 ppm 10 hours. TWA: 980 mg/m3 10 hours. STEL: 500 ppm 15 minutes.<br>STEL: 1225 mg/m3 15 minutes.<br><br>**OSHA PEL {United States, 2/2013).**<br>TWA: 400 ppm 8 hours.<br>TWA: 980 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**

| | |
|---|---|
| **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 antistatic 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 and training. |

## SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state** | Liquid |
| **Color** | Colorless. |
| **Odour** | alcohol-like |
| **Odour Threshold** | No data available |
| **pH** | Not applicable |
| **Boiling point/boiling range** | Lowest known value: 83°C (181.4° F) (Isopropyl alcohol). Weighted average: 88.1 °C (190.6°F) |
| **Melting point/range** | May start to solidify at the following temperature: 0°C (32° F) This is based on data for the following ingredient: water. Weighted average: -63°C (-81.4° F) |
| **Flash point** | Lowest known value: Closed cup: Not applicable .. (water) |
| **Evaporation rate** | 1.7 (Isopropyl alcohol) compared with butyl acetate |
| **Flammability (solid, gas)** | No data available |
| **Lower and upper explosive (flammable) limits** | Lower explosion limit: 2 %(V)<br>Upper explosion limit: 12 %(V) |
| **Vapour pressure** | Highest known value: 4.4 kPa (33 mm Hg) (at 20°C) (Isopropyl alcohol). Weighted average: 4.04 kPa (30.3 mm Hg) (at 20°C) |
| **Vapour density** | Highest known value: 2.1 (Air = 1) (Isopropyl alcohol). |
| **Relative Density** | 0.861 (Water= 1) |
| **Solubility** | Easily soluble in the following materials: cold water, hot water, methanol, acetone. |
| **Solubility in water** | Not available. |
| **Partition coefficient: n-octanol/water** | Not available. |
| **Auto-ignition temperature** | 398.9°C, 750°F; |
| **Decomposition temperature** | No data available |
| **Viscosity** | Kinematic: Highest known value: 2.66 cSt (Isopropyl alcohol) |
| **Flow time (ISO 2431)** | 2.4 mPa.s |
| **pH** | 7 |
| **Evaporation rate** | 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 |
|---|---|---|---|---|
| **Isopropyl alcohol** | LD50 Dermal | Rabbit | 12800 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| **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 | - |

**Sensitization** Not available.

**Mutagenicity** Not available.

**Carcinogenicity** Not available.

### Classification

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

**Reproductive toxicity** Not available.

**Teratogenicity** Not available.

**Specific target organ toxicity (single exposure)**

| Name | Category | Route of Exposure | Target Organs |
|---|---|---|---|
| **IPA 70% USP** | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |
| **Isopropyl alcohol** | Category 3 | Not applicable. | 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 irritation.

**Inhalation** Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** Adverse symptoms may include the following: pain or irritation
watering
redness

**Inhalation** Adverse symptoms may include the following: respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

**Skin contact** No specific data.

**Ingestion** No specific data.

**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** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Not available.

## SECTION 12 ECOLOGICAL INFORMATION

**Toxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Isopropyl alcohol | Acute ECS0 929 mg/l Fresh water | Daphnia - Daphnia magna | 48 Hours |
| | Acute LCS0 1400000 µg/l Marine water | Crustaceans - Crangon crangon | 48 Hours |
| | Acute LCS0 4200 mg/l Fresh water | Fish - Rasbora heteromorpha | 96 Hours |

**Persistence and degradability**

Not available.

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| Isopropyl alcohol | 0.05 | - | low |

**Mobility in soil**

Soil/water partition coefficient (Koc) 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.

## SECTION 14 | TRANSPORT INFORMATION

**DOT Classification**

**UN number** UN1987

**UN proper shipping name** ALCOHOLS, N.O.S.

**Transport hazard class** 3


**Packing group** III

**Environmental hazards** No

**Additional information** -

**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 and the IBC Code** Not available.

## SECTION 15 | REGULATORY INFORMATION

| | |
|---|---|
| **U.S. Federal regulations** | **TSCA S(a) CDR Exempt/Partial exemption:** Not determined<br>**United States inventory (TSCA Sb):** 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<br>Immediate (acute) health hazard<br>Delayed (chronic) health hazard |

**Composition/information on ingredients**

| Name | % | Fire Hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| **Isopropyl alcohol** | ≥50 - ≤ 75 | Yes | No | No | Yes | Yes |

**State regulations**

| | |
|---|---|
| **Massachusetts** | The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL |
| **New York** | None of the components are listed. |
| **New Jersey** | The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL |
| **Pennsylvania** | The following components are listed: ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS) |

**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 Informed Consent (PIC)** | Not Listed |
| **UNECE Aarhus Protocol on POPs and Heavy Metals** | Not Listed |

**International lists**

| | |
|---|---|
| **Australia** | All components are listed or exempted. |
| **Canada** | All components are listed or exempted. |
| **China** | All components are listed or exempted. |
| **Europe** | All components are listed or exempted. |
| **Japan** | All components are listed or exempted. |
| **Malaysia** | All components are listed or exempted. |
| **New Zealand** | All components are listed or exempted. |
| **Philippines** | All components are listed or exempted. |
| **Republic of Korea** | All components are listed or exempted. |
| **Taiwan** | All components are listed or exempted. |
| **Turkey** | All components are listed or exempted. |

## SECTION 16 | OTHER INFORMATION


| | Health | Flammability | Physical Hazard/Instability |
|---|---|---|---|
| **HMIS®** | **2** | **3** | **0** |
| **NFPA** | **2** | **3** | **0** |

Caution: HMIS® ratings are based on a 0-4 rating scale, with O 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.

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.
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.

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| FLAMMABLE LIQUIDS - Category 2 | Expert judgment |
| EYE IRRITATION - Category 2A | Expert judgment |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Expert judgment |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects)· Category 3 | Expert judgment |

**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)
UN = United Nations