SAFETY DATA SHEETS

This SDS packet was issued with item:

078392012

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078696434 078944650 078945861

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078013514 078391780

MATERIAL SAFETY DATA SHEET

Produced by: Ameri-Pac, Inc.
751 S. 4th Street
St. Joseph, MO 64506

Technical Contact: Robert Colescott

Emergency Number (800) 424-9300 Chemtrec
Telephone Number: (816) 233-4530
Chemtrec is available Days, Nights, Weekends, and Holidays

SECTION I PRODUCT IDENTIFICATION

TRADE NAME	**ISOPROPYL ALCOHOL 70%**
SYNONYMS	IPA, Isopropanol, 2-Propanol, Rubbing Alcohol
FAMILY/CLASSIFICATION	A solution of water in isopropanol.
PACKAGE SIZES	1 gallon, 1 quart, 1 pint

SECTION II INGREDIENTS

INGREDIENT	CAS #	OSHA PEL	ACGIH TLV/TWA	ACGIH TLV/STEL	WEIGHT%
Isopropyl Alcohol	67-63-0	400 PPM	400 PPM	500 PPM	>69%
Water					<31%

SECTION III PHYSICAL DATA

APPEARANCE AND ODOR:	Colorless liquid with characteristic isopropanol odor.
SPECIFIC GRAVITY:	0.88 at 15°C
BOILING POINT:	180°F
SOLUBILITY:	Soluble in Water
VAPOR PRESSURE:	32 @ 68°F (MM HG)
VAPOR DENSITY:	2.1 (Air = 1)
EVAPORATION RATE:	1.0 (N-Butyl Acetate = 1)

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TCC):	71°F
FLAMMABLE LIMITS /% VOLUME IN AIR	Lower: 2 Upper: 13
EXTINGUISHING MEDIUM:	Use water fog, foam, dry chemical, or carbon dioxide extinguishing media.

SPECIAL FIREFIGHTING PROCEDURES AND PRECAUTIONS
Warning. Flammable. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves, and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

SECTION V HEALTH DATA

EYE CONTACT	Moderately irritating to the eyes. Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.
SKIN CONTACT	Moderately irritating to the skin. Flush skin with water. If irritation occurs, get medical attention.

Obtained by Global Safety Management, Inc. (www.globalsafetynet.com)

ISOPROPYL ALCOHOL 70%

INHALATION	May cause mild irritation to the nose, throat, and respiratory tract and may result in central nervous system (CNS) depression. Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.
INGESTION	Irritating to the gastrointestinal tract, causing abdominal pain and vomiting, sometimes bloody. Ingestion may cause CNS depression, low blood pressure, rapid heart beat and liver damage. Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 tablespoons) syrup of ipecac.* If ipecac is not available, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get medical attention.
SIGNS AND SYMPTOMS	Irritation as noted above. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness, respiratory depression and death may occur. Liver damage may be evidenced by loss of appetite, jaundice (yellowish skin color), and sometimes pain in the upper abdomen on the right side.
*NOTE TO PHYSICIAN	If victim is a child, give no more than 1 glass of water and 15cc (1 tablespoon) syrup of ipecac. If symptoms such as a loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION VI REACTIVITY DATA

STABILITY:	Stable.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide and unidentified organic compounds may be formed during combustion.
HAZARDOUS POLYMERIZATION:	Does not occur.
CONDITIONS AND MATERIALS TO AVOID:	Avoid heat, sparks, flame, and contact with strong oxidizing agents. Do not store or handle in aluminum equipment at temperatures above 120°F.

SECTION VII SPECIAL PROTECTION

RESPIRATORY PROTECTION:	None required for normal use. Use adequate ventilation and vapor respirator when exposed to large volumes for a prolonged period of time.
EYE PROTECTION:	Chemical safety glasses or goggles.
PROTECTIVE CLOTHING:	None required for normal use. Cover any exposed skin. Chemical resistant gloves are recommended.
VENTILATION TYPE:	Local ventilation to control mist or vapors (if generated).

SECTION VIII ENVIRONMENTAL AND DISPOSAL INFORMATION

SPILL AND LEAK PROCEDURE:	Do not touch with bare hands. Shut of leak and dike up spills. Ventilate spill area. Absorb with an inert material such as earth, sand, or vermiculite. Sweep up and dispose of in accordance with Federal, State, and Local regulations.
WASTE DISPOSAL:	Dispose of in accordance with Federal, State, and Local regulations.
CONTAINER DISPOSAL:	Dispose of in licensed facility.

SECTION IX HANDLING AND STORAGE

Store at 2°C to 30°C (36°F to 86°F).

DOT Hazard Classification: Flammable Liquid UN 1219

NOTICE

THE DATA HEREIN IS BASED ON INFORMATION THAT AMERI-PAC BELIEVES TO BE RELIABLE, BUT NO EXPRESSED OR IMPLIED WARRANTY IS MADE WITH THE REGARD TO THE ACCURACY OF SUCH DATA OR ITS SUITABILITY FOR A GIVEN SITUATION. SUCH DATA RELATES ONLY TO THE SPECIFIC PRODUCT DESCRIBED AND NOT TO SUCH PRODUCT IN COMBINATION WITH ANY OTHER PRODUCT. AMERI-PAC, INC. DISCLAIMS ALL LIABILITY FOR ANY ACTIONS TAKEN OR FOREGONE ON RELIANCE OF SUCH DATA.

Obtained by Global Safety Management, Inc. (www.globalsafetynet.com)

Safety Data Sheet

1. Identification

1.1 Product identifier: Isopropyl Alcohol 70%

1.2 Other means of identification: Isopropanol 70%

1.3 Recommended use and restrictions on use:
For external use as topical antiseptic. This product is not for human consumption. Refer to safety data sheet regarding safety, usage, applications, hazards, procedures and disposal of this product before use.

1.4 Manufacturer: Ameri-Pac, Inc.
745 S. 4th St.
St. Joseph, MO 64501
Phone: 816-233-4530
800-373-6156

1.5 Emergency Number (800) 424-9300 Chemtrec
Chemtrec is available Days, Nights, Weekends, and Holidays

2. Hazard Identification

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids - category 1
Skin irritation - category 3
Eye irritation - category 2A
Specific target organ toxicity - single exposure - category 3 – Central Nervous System

2.2 GHS Label Elements
Signal Word: Danger

Hazard Statements:
H224 Extremely flammable liquid and vapor
H316 Causes mild skin irritation
H319 Causes serious eye irritation
H336 May cause drowsiness or dizziness.

Pictograms:

Precautionary Statements:
Store in secured/locked area in cool dry conditions in a well-ventilated area.
Keep container tightly closed.
Keep container away from heat and sources of ignition.
Use non-sparking tools and take precautionary measures against static discharge.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/eye protection/face protection/protective clothing.
Avoid breathing dust/fumes/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Avoid release into environment.
If on skin: remove contaminated clothing immediately and wash thoroughly with water.
If exposed seek medical advice/attention.
If swallowed call poison control center/doctor.
If in eyes: rinse cautiously with water for at least 15 minutes. Remove contact lenses.
Remove contaminated clothing and launder before reuse.
Dispose of contents/container in accordance with all state, local and federal regulations.

2.3 Hazards not otherwise classified: None

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3. Composition/Information on Ingredients

3.1 Name: Isopropyl alcohol 70%

3.2 Common name/synonyms: Isopropanol 70%
2-propanol 70%
70% isopropyl alcohol solution

3.3 Hazardous components and concentrations in the mixture:

Component	CAS Registry Number	Amount (%)
Isopropyl alcohol	67-63-0	> 69%

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4. First-Aid Measures

4.1 Necessary Measures

Skin: Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, seek medical attention.

Eyes: Immediately rinse eyes with running water for a minimum of 15 minutes. Seek medical attention.

Ingestion: Do not induce vomiting unless directed to do so by a medical professional.
Contact the poison control center.
Never give fluids or induce vomiting if the victim is unconscious or having convulsions.
Seek medical attention.

Inhalation: Move to fresh air. Aid in breathing if necessary. Seek medical attention.

4.2 Symptoms and Effects:
Isopropyl alcohol: Effects of exposure include dizziness, headache, confusion, stupor, and in cases of severe over exposure, coma. Ingestion may result in gastroenteritis with vomiting, hematemesis and diarrhea. Aspiration may result in pneumonia. Exposure may cause irritation of the eyes and respiratory tract.

4.3 Indication of immediate medical attention and special treatment needed: Refer to section 4.1

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5. Fire-fighting Measures

5.1 Suitable extinguishing media: Alcohol foam, carbon dioxide, dry chemical, or water spray

5.2 Specific hazards arising from the chemical: Carbon oxides

5.3 Special protective equipment and precautions for fire-fighters: Use approved self-contained breathing apparatus with full facemask and full protective equipment in confined areas. Use water to keep fire-exposed containers cool.

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6. Accidental Release Measures

6.1 Personnel precautions, protective equipment and emergency procedures:
Avoid sources of heat, sparks, and open flame.
Use local exhaust to control vapors and mists.
Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Methods and materials for containment and cleanup:
Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Keep in suitable, closed containers for disposal.
For disposal see section 13.

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7. Handling and Storage

7.1 Precautions for safe handling:
Practice good industrial hygiene when handling this product.
Avoid inhalation of dust, vapor and mist.
Use explosion-proof equipment.
Keep away from sources of ignition.
Do not smoke while handling or near the product.
Take measures to prevent the buildup of electrostatic charge.
For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities:
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from sources of ignition.

Incompatibilities:
Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

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8. Exposure controls/Personal Protection:

8.1 Components with workplace control parameters:

Component	CAS No.	Value	Control parameters	
Isopropyl alcohol	67-63-0	TWA	200 ppm	ACGIH Threshold Limit Values (TLV)
		TWA	400 ppm	OSHA Table Z-1
		ST	500 ppm	NIOSH Recommended Exposure Limits (REL)

8.2 Appropriate engineering controls:
Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday. When at all possible, institute controls to minimize the exposure and risk of exposure by all means of contact.

8.3 Individual protection measures
Eye/Face Protection:
Select tightly fitting safety goggles, safety glasses or faceshield (8-inch minimum) as appropriate. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin Protection:
Handle with gloves. Select gloves which are compatible with components listed in this mixture. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
Dispose of contaminated gloves after use in accordance with applicable laws and good industrial hygiene practices. Wash and dry hands.

Body Protection:
Flame retardant antistatic protective clothing and the type of protective equipment must be selected according to the concentration and the amount of the dangerous substance at the specific workplace.

Respiratory Protection:
Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator, dust mask or half-respirator with the appropriate respirator cartridges or filters as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH.
Respirators must be selected with consideration to assessment of risk and in accordance with 29 CFR 1910.134.

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9. Physical and Chemical Properties

9.1 Appearance:
Physical State: Liquid
Color: Clear and colorless

9.2 Odor: Characteristic of isopropyl alcohol

9.3 Odor threshold: No data available

9.4 pH: No data available

9.5 Melting point/freezing point: No data available

9.6 Initial boiling point and boiling point range: Initial boiling point -180^{o}F

9.7 Flash point: 71^{o}F

9.8 Evaporation rate: 1.0 (N-Butyl Acetate = 1)

9.9 Flammability: No data available

9.10 Flammable limits/% volume in air: Lower – 2 , Upper - 13

9.11 Vapor pressure: 32 mm Hg at 68^{o}F

9.12 Vapor density: 2.1 (Air = 1)

9.13 Relative density: No data available

9.14 Solubility: Soluble in water

9.15 Partition coefficient: No data available

9.16 Auto-ignition temperature: No data available

9.17 Decomposition temperature: No data available

9.18 Viscosity: No data available

9.19 Specific Gravity: 0.872-0.883 g/mL at 20^{o}C

9.20 Bulk Density: No data available

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10. Stability and Reactivity

10.1 Reactivity: No data available

10.2 Chemical stability: Stable at normal operating temperatures

10.3 Possibility of hazardous reactions: Vapors may form explosive mixtures with air

10.4 Conditions to avoid: Heat, flames, sparks, extremes of temperature and direct sunlight

10.5 Incompatible materials: Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

10.6 Hazardous decomposition products: In the event of a fire – see section 5.

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11. Toxilogical Information:

11.1 Likely routes of exposure:
Inhalation, skin contact and eye contact are likely. Ingestion is possible, but less likely.

11.2 Symptoms related to physical, chemical and toxilogical characteristics: Refer to section 4.2

11.3 Delayed and immediate effects and also chronic effects from short- and long-term exposure: Refer to section 4.2

11.4 Numerical measures of toxicity: This mixture has not been tested for health effects or toxicity as a whole. Information for each ingredient is provided below. The GHS classification for this product has been calculated from the values of components in this mixture.

Acute toxicity:
No data available

Skin corrosion/irritation:
Isopropyl alcohol: Skin - Rabbit Result: Mild skin irritation

Serious eye damage/irritation:
Isopropyl alcohol: Eyes - Rabbit Result: Eye irritation - 24 h

Respiratory or skin sensitization:
No data available

Germ cell mutagenicity:
No data available

Reproductive toxicity:
No data available

Specific target organ toxicity – single exposure:
Isopropyl alcohol - Inhalation, Oral - May cause drowsiness or dizziness

Specific target organ toxicity – repeated exposure:
No data available

Aspiration hazards:
No data available

Carcinogenicity:
This product does not contain any compounds that are classifiable to carcinogenicity based on NTP, ACGIH, IARC, or OSHA classification.

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12. Ecological Information:

This product has not been tested for the ecological considerations listed below. The information and data for components are listed individually for areas of ecological consideration below.

12.1 Ecotoxicity: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

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13. Disposal Consideration

13.1 Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Determine waste status prior to disposal in accordance with federal, state and local regulations.

13.2 Contaminated packaging
Dispose of as unused product

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14. Transport Information

Note: The shipping classification in this section is meant as a guide to overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under 49 CFR, IATA and IMDG to assure regulatory compliance.

DOT (US)
UN Number: 1219
UN proper shipping Name: Isopropanol
Transport hazard class: 3
Packaging group: II

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15. Regulatory Information

15.1 SARA 302 components:
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

15.2 SARA 313 components:
This material contains Isopropyl alcohol (CAS# 67-63-0, 70.0%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

15.3 SARA 311/312 hazards:
Acute health hazard, Chronic health hazard, Fire hazard

15.4 New Jersey Right to Know components:
2-Propanol (Isopropyl alcohol)

15.5 Pennsylvania Right to Know components:
2-Propanol (Isopropyl alcohol)

15.6 Massachusetts Right to Know components:
2-Propanol (Isopropyl alcohol)

15.7 California Prop. 65 components:
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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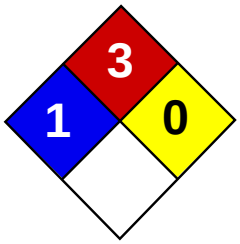
16. Other Information

16.1 Preparation information:
Revision: Original
Revision date: 3/10/2015
Approval date: 3/24/2015
Replaces revision: None
Replaces revision date: None
SDS code: CE027

16.2 Further information:
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of knowledge and is applicable to the product with regard to appropriate safety precautions. No expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product and not to such product in combination with any other product. Ameri-Pac, Inc. disclaims all liability for actions taken for forgone reliance of such data.



Health	2
Fire	3
Reactivity	0
Personal Protection	E

Isopropyl Alcohol, 70%
Safety Data Sheet

Section 1: Chemical Product and Company Identification

Product Name: Isopropyl Alcohol, 70%

Catalog Codes: 201

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Isopropyl alcohol; Water

CI#: Not available.

Synonym: 2-Propanol, 70%; Isoprpanol, 70%; Isopropyl Rubbing Alcohol

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Breen Laboratories
841 Sandhill Avenue
Carson, CA 90746
Ph: 310-366-7121
Fx: 310-366-7123

E-mail: Breenlabs@gmail.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Isopropyl alcohol	67-63-0	70
Water	7732-18-5	30

Toxicological Data on Ingredients: Isopropyl alcohol: ORAL (LD50): Acute: 5045 mg/kg [Rat]. 3600 mg/kg [Mouse]. 6410 mg/kg [Rabbit]. DERMAL (LD50): Acute: 12800 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Slightly hazardous in case of skin contact (sensitizer, permeator). Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [Isopropyl alcohol]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE] [Isopropyl alcohol]. The substance may be toxic to kidneys, liver, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Obtained by Global Safety Management, www.globalsafetynet.com, (877) 683-7460

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 399°C (750.2°F) (Isopropyl alcohol).

Flash Points: CLOSED CUP: 18.3°C (64.9°F) - 24 deg. C (75 deg. F)

Flammable Limits: The greatest known range is LOWER: 2% UPPER: 12.7% (Isopropyl alcohol)

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat. Flammable in presence of oxidizing materials. Non-flammable in presence of shocks

Explosion Hazards in Presence of Various Substances:
Slightly explosive in presence of open flames and sparks, of heat. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Vapor may travel considerable distance to source of ignition and flash back. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME. Hydrogen peroxide sharply reduces the autoignition temperature of Isopropyl alcohol. After a delay, Isopropyl alcohol ignites on contact with dioxgenyl tetrafluorborate, chromium trioxide, and potassium tert-butoxide. When heated to decomposition it emits acrid smoke and fumes. (Isopropyl alcohol)

Special Remarks on Explosion Hazards:
Secondary alcohols are readily autooxidized in contact with oxygen or air, forming ketones and hydrogen peroxide. It can become potentially explosive. It reacts with oxygen to form dangerously unstable peroxides which can concentrate and explode during distillation or evaporation. The presence of 2-butanone increases the reaction rate for peroxide formation. Explosive in the form of vapor when exposed to heat or flame. May form explosive mixtures with air. Isopropyl alcohol +

Obtained by Global Safety Management, www.globalsafetynet.com, (877) 683-7460

phosgene forms isopropyl chloroformate and hydrogen chloride. In the presence of iron salts, thermal decompositon can occur, whicn in some cases can become explosive. A homogeneous mixture of concentrated peroxides + isopropyl alcohol are capable of detonation by shock or heat. Barium perchlorate + isopropyl alcohol gives the highly explosive alkyl perchlorates. It forms explosive mixtures with trinitormethane and hydrogen peroxide. It produces a violent explosive reaction when heated with aluminum isopropoxide + crotonaldehyde. Mixtures of isopropyl alcohol + nitroform are explosive. (Isopropyl alcohol)

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Isopropyl alcohol TWA: 983 STEL: 1230 (mg/m3) [Australia] TWA: 200 STEL: 400 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 980 STEL: 1225 (mg/m3) from NIOSH TWA: 400 STEL: 500 (ppm) from NIOSH TWA: 400 STEL: 500 (ppm) [United Kingdom (UK)] TWA: 999 STEL: 1259 (mg/m3) [United Kingdom (UK)] TWA: 400 STEL: 500 (ppm) from OSHA (PEL) [United States] TWA: 980 STEL: 1225 (mg/m3) from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Alcohol like.

Obtained by Global Safety Management, www.globalsafetynet.com, (877) 683-7460

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Neutral.

Boiling Point: The lowest known value is 82.5°C (180.5°F) (Isopropyl alcohol). Weighted average: 87.75°C (189.9°F)

Melting Point: May start to solidify at -88.5°C (-127.3°F) based on data for: Isopropyl alcohol.

Critical Temperature: The lowest known value is 235°C (455°F) (Isopropyl alcohol).

Specific Gravity: Weighted average: 0.84 (Water = 1)

Vapor Pressure: The highest known value is 4.4 kPa (@ 20°C) (Isopropyl alcohol). Weighted average: 3.77 kPa (@ 20°C)

Vapor Density: The highest known value is 2.07 (Air = 1) (Isopropyl alcohol). Weighted average: 1.63 (Air = 1)

Volatility: Not available.

Odor Threshold: The highest known value is 22 ppm (Isopropyl alcohol)

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility: Easily soluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, flame, ignition sources, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Reacts violently with hydrogen + palladium combination, nitroform, oleum, $COCl_2$, aluminum triisopropoxide, oxidants Incompatible with acetaldehyde, chlorine, ethylene oxide, isocyanates, acids, alkaline earth, alkali metals, caustics, amines, crotonaldehyde, phosgene, ammonia. Isopropyl alcohol reacts with metallic aluminum at high temperatures. Isopropyl alcohol attacks some plastics, rubber, and coatings. Vigorous reaction with sodium dichromate + sulfuric acid. (Isopropyl alcohol)

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals:
Acute oral toxicity (LD50): 5143 mg/kg (Mouse) (Calculated value for the mixture). Acute dermal toxicity (LD50): 18286 mg/kg (Rabbit) (Calculated value for the mixture).

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC [Isopropyl alcohol]. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE] [Isopropyl alcohol]. Contains material which may cause damage to the following organs: kidneys, liver, skin, central nervous system (CNS).

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Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive/teratogenic effects (fertility, fetoxicity, developmental abnormalities(developmental toxin)) based on animal studies. Detected in maternal milk in human. (Isopropyl alcohol)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause mild skin irritation, and sensitization. Eyes: Can cause eye irritation. Inhalation: Breathing in small amounts of this material during normal handling is not likely to cause harmful effects. However, breathing large amounts may be harmful and may affect the respiratory system and mucous membranes (irritation), behavior and brain (Central nervous system depression - headache, dizziness, drowsiness, stupor, incoordination, unconciousness, coma and possible death), peripheral nerve and senstation, blood, urinary system, and liver. Ingestion: Swallowing small amouts during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Swallowing large amounts may cause gastrointestinal tract irritation with nausea, vomiting and diarrhea, abdominal pain. It also may affect the urinary system, cardiovascular system, sense

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Isopropanol, solution (Isopropyl alcohol) UNNA: 1219 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Isopropyl alcohol Illinois toxic substances disclosure to employee act: Isopropyl alcohol Rhode Island RTK hazardous substances: Isopropyl alcohol Pennsylvania RTK: Isopropyl alcohol Florida: Isopropyl alcohol Minnesota: Isopropyl alcohol Massachusetts RTK: Isopropyl alcohol New Jersey: Isopropyl alcohol New Jersey spill list: Isopropyl alcohol TSCA 8(b) inventory: Isopropyl alcohol; Water TSCA 4(a) final testing order: Isopropyl alcohol TSCA 8(a) IUR: Isopropyl alcohol TSCA 8(d) H and S data reporting: Isopropyl alcohol: Effective date: 12/15/86 Sunset Date: 12/15/96 TSCA 12(b) one time export: Isopropyl alcohol SARA 313 toxic chemical notification and release reporting: Isopropyl alcohol 70%

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Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable. R36- Irritating to eyes. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: E

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

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves (impervious). Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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