

SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION**Company Address:**8125 Cobb Center Drive
Kennesaw, GA 30152Product Information: 800-TECH-401
Customer Service: 800-645-5244Emergency: (Chemtrec) 800-424-9300
Revision Date: November 11, 2010**Product Identification****IPA – Isopropyl Alcohol (Liquid)****Product Code:** ES820L, ES3205, ES105, ES505, ES5505**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	UN number	IDLH	Classification			CAS#	Wt. % Range
			H	F	R		
Isopropanol	UN1219	2,000 ppm (4,900 mg/m ³)	1	3	0	67-63-0	95.0-99.9

SECTION 3: HAZARD IDENTIFICATION**Emergency Overview:** WARNING! FLAMMABLE LIQUID AND VAPOR. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Flammable liquid. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with skin and clothing. Contains material that can cause target organ damage. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.

Potential Health Effects:**Eyes:** May cause eye irritation.**Skin:** May cause skin irritation.**Ingestion:** No known significant effects or critical hazards.**Inhalation:** No known significant effects or critical hazards.**Pre-Existing Medical Conditions Aggravated by Exposure:** Heart, lung, skin, eye.**Over-exposure signs/symptoms:****Inhalation:** No specific data.**Ingestion:** No specific data.**Skin:** No specific data**Eyes:** No specific data**SECTION 4: FIRST AID MEASURES****Eyes:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.**Ingestion:** Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.**Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.**Notes to physician:** No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.**SECTION 5: FIRE FIGHTING MEASURES****Flammability of the product:** Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. 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.**Flash Point:** 53°F (12C) (TCC)**LEL/UEL:** Not established (% by volume in air)**Extinguishing Media:** Use dry chemical, CO₂, water spray (fog) or foam. Do not use water jet.**Fire Fighting Instructions:** 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****Large Spills:** Stop leak if without risk. Move containers from spill area. 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). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.**Small Spills:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.**SECTION 7: HANDLING AND STORAGE****Handling:** Put on appropriate personal protective equipment (see section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.**Storage:** 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 and food and drink. 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.**KEEP OUT OF REACH OF CHILDREN.**

SECTION 8: EXPOSURE CONTROLS/PERSONNEL PROTECTIONExposure Guidelines:

propan-2-ol	ACGIH TLV (United States, 1/2007). STEL: 400 ppm 15 minute(s). TWA: 200 ppm 8 hour(s). NIOSH REL (United States, 12/2001). STEL: 1225 mg/m ³ 15 minute(s). STEL: 500 ppm 15 minute(s). TWA: 980 mg/m ³ 10 hour(s). TWA: 400 ppm 10 hour(s). OSHA PEL (United States, 11/2006). TWA: 980 mg/m ³ 8 hour(s). TWA: 400 ppm 8 hour(s). OSHA PEL 1989 (United States, 3/1989). STEL: 1225 mg/m ³ 15 minute(s). STEL: 500 ppm 15 minute(s). TWA: 980 mg/m ³ 8 hour(s). TWA: 400 ppm 8 hour(s).	CA Alberta Provincial (Canada, 10/2006). 15 min OEL: 1230 mg/m ³ 15 minute(s). 15 min OEL: 500 ppm 15 minute(s). 8 hrs OEL: 983 mg/m ³ 8 hour(s). 8 hrs OEL: 400 ppm 8 hour(s). CA British Columbia Provincial (Canada, 7/2007). STEL: 400 ppm 15 minute(s). TWA: 200 ppm 8 hour(s). CA Ontario Provincial (Canada, 3/2007). STEV: 400 ppm 15 minute(s). TWA EV: 200 ppm 8 hour(s). CA Quebec Provincial (Canada, 12/2006). STEV: 1230 mg/m ³ 15 minute(s). STEV: 500 ppm 15 minute(s). TWA EV: 983 mg/m ³ 8 hour(s). TWA EV: 400 ppm 8 hour(s).	NOM-010-STPS (Mexico, 9/2000). LMPE-CT: 1225 mg/m ³ 15 minute(s). LMPE-CT: 500 ppm 15 minute(s). LMPE-PPT: 980 mg/m ³ 8 hour(s). LMPE-PPT: 400 ppm 8 hour(s).
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Consult local authorities for acceptable exposure limits.

Work/Hygienic Practices: 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. 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.

Personal protection

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: 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

Eyes: 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.

Skin: 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.

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.

NFPA and HMIS Codes:

	NFPA	HMIS
Health	0	1
Flammability	3	3
Reactivity	0	1
Personal Protection	-	B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear, colorless liquid

Odor: alochol

pH: NA

Vapor Pressure: 33 mm Hg @ 68°F

Vapor Density: >1 @ 100°F

(Air=1)

Percent Volatile: 100%

Boiling Point: 180 F (82C)

Solubility in Water: Complete

Specific Gravity: (Water =1) 0.79

Evaporation Rate: <1

(Butyl acetate=1)

Viscosity: 1 (Approx.)

(Water = 1)

Melting Point: NA

SECTION 10: STABILITY AND REACTIVITY

Stability: This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.

Incompatibility: Do not mix with powdered alkali and alkaline earth metals or strong oxidizing agents.

Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide and incompletely burned hydrocarbons.

Hazardous Polymerization: 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. Do not allow vapor to accumulate in low or confined areas.

SECTION 11: TOXICOLOGICAL INFORMATIONAcute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Intraperitoneal	Rat	2735 mg/kg	-
	LD50 Intravenous	Rat	1088 mg/kg	-
	LD50 Oral	Rat	5045 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

	TDLo Intraperitoneal	Rat	800 mg/kg	-		
Classification						
Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
propan-2-ol	A4	3	-	None.	-	-

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

Mutagenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION

Environmental effects : No known significant effects or critical hazards.

Environmental Impact Information: Avoid runoff into storm sewers and ditches, which lead to waterways. Water runoff can cause environmental damage.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
propan-2-ol	-	Acute LC50 11130000 ug/L Fresh water	Fish – Fathead minnow – Pimephales promelas	96 hours
	-	Acute LC50 10400000 to 10600000 ug/L Fresh water	Fish – Fathead minnow – Pimephales promelas	96 hours
	-	Acute LC50 9640000 to 10000000 ug/L Fresh water	Fish – Fathead minnow – Pimephales promelas	96 hours
	-	Acute LC50 6550000 to 7450000 ug/L Fresh water	Fish – Fathead minnow – Pimephales promelas	96 hours
	-	Acute LC50 4200000 ug/L Fresh water	Fish - Harlequinfish, red rasbora – Rasbora heteromorpha	96 hours
	-	Acute LC50 >1400000 ug/L	Fish – Western mosquitofish - Gambusia affinis	96 hours
	-	Acute LC50 1400000 to 1950000 ug/L	Marine water Crustaceans - Common shrimp, sand shrimp	
			-Crangon crangon	48 hours

Conclusion/Summary :Not available.

Biodegradability Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazard

REPORTING

US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is: **1-800-424-8802**

SECTION 13: DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name	UN Number	Hazard Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
<u>Air:</u> Isopropanol	UN 1219	3	NA	II	Flammable Liquid	305 307	5L 60L
<u>Ground:</u> Consumer Commodity ORM-D	NA	ORM-D	NA	NA	ORM-D	Pkg. Auth.	173.202 173.150

For ES105, ES505, ES5505:

<u>Ground:</u> Isopropanol	UN 1219	3	NA	II	Flammable Liquid	Pkg. Auth.	173.202
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SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

This information should be included on all MSDSs copied and distributed for this material.

HCS Classification :Flammable liquid. Target organ effects

U.S. Federal regulations: TSCA 4(a) final test rules: propan-2-ol

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

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: propan-2-ol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: propan-2-ol: Fire hazard,

Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

	Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
<u>State regulations:</u>	Connecticut Carcinogen Reporting: None of the components are listed. Connecticut Hazardous Material Survey: None of the components are listed. Florida substances: None of the components are listed. Illinois Chemical Safety Act: None of the components are listed. Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed. Louisiana Reporting: None of the components are listed. Louisiana Spill: None of the components are listed. Massachusetts Spill: None of the components are listed. Massachusetts Substances: The following components are listed: ISOPROPYL ALCOHOL Michigan Critical Material: None of the components are listed. Minnesota Hazardous Substances: None of the components are listed. New Jersey Hazardous Substances: The following components are listed: ISOPROPYL ALCOHOL New Jersey Spill: None of the components are listed. New Jersey Toxic Catastrophe Prevention Act: None of the components are listed. New York Acutely Hazardous Substances: None of the components are listed. New York Toxic Chemical Release Reporting: None of the components are listed. Pennsylvania RTK Hazardous Substances: The following components are listed: 2-PROPANOL Rhode Island Hazardous Substances: None of the components are listed.
<u>California Prop. 65:</u>	No products were found.
<u>WHMIS:</u>	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
<u>Canadian lists:</u>	CEPA Toxic substances: None of the components are listed. Canadian ARET: None of the components are listed. Canadian NPRI: None of the components are listed. Alberta Designated Substances: None of the components are listed. Ontario Designated Substances: None of the components are listed. Quebec Designated Substances: None of the components are listed.
<u>Canada inventory:</u>	All components are listed or exempted.
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.	
<u>International lists:</u>	This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

SECTION 16: OTHER INFORMATION

Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.