G.K. Chemical Specialties Co. Inc.
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SAFETY DATA SHEET (SDS)

PRODUCT NAME: ISOPROPYL ALCOHOL 99.9 %	
HEALTH HAZARD RATING:	(1)- SLIGHT HAZARD
FLAMMABILITY HAZARD RATING:	(3)- SERIOUS HAZARD
REACTIVITY HAZARD RATING:	(0)- MINIMAL HAZARD
PERSONAL PROTECTION:	H - (Splash goggles, Gloves, Synthetic apron, Vapor respirator)
HAZARD ALERT SIGN:	

SECTION 1 – **IDENTIFICATION**	
PRODUCT IDENTIFIER	
PRODUCT NAME	ISOPROPYL ALCOHOL 99.9 % PURIFIED OR ISOPROPANOL
MANUFACTURER'S NAME AND ADDRESS EMERGENCY PHONE NO.	G.K. Chemical Specialties Co. Inc. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605/ 416-526-4037
SUPPLIER'S NAME AND ADDRESS EMERGENCY PHONE NO.	
CHEMICAL NAME	ISOPROPANOL OR METHYL CARBINOL OR 2-PROPANOL OR IPA OR sec-PROPYL ALCOHOL
CHEMICAL FAMILY	ALCOHOL. Formula: C_3H_8O
TRADE NAME AND SYNONYMS	IPA , METHYL CARBINOL, 2-PROPANOL, Sec-PROPYL ALCOHOL
MATERIAL USE	INDUSTRIAL, MANUFACTURING OR LABORATORY USE

G.K. Chemical Specialties Co. Inc. has compiled the information and recommendations contained in this Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation.

G.K. Chemical Specialties Co. Inc. extends no warranty and assumes no responsibility as to the accuracy of the content or sufficiency of the information and expressly disclaims all liability for reliance thereon. This SDS provides guidelines for the safe handling of this product. It does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

G.K. Chemical Specialties Co. Inc. assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

INGREDIENTS. This SDS, under section of Ingredients, contains all ingredients listed under INGREDIENT DISCLOSURE LIST P.C. 1987-2719, 20/1/88 CANADA GAZETTE PART II VOL. 122, No 2 of HAZARDOUS PRODUCT ACT.
Percentage range of concentration of ingredients is expressed as percentage by weight of the total weight of the product. Ingredient List does not necessarily list all ingredients in the formulation and does not necessarily list all ingredient range of concentration, other than ingredients under the Disclosure List.

T.L.V. (units) or Threshold Limit Values refer to the limiting concentrations recommended by the Ministry of Labour. These values were adopted by the American Conference of Governmental Industrial Hygienists (A.C.G.I.H.). The figures refer to time-weighted average concentrations as P.P.M. (V/V) or mg/m^3 for a normal working day or at any time for some materials.

"C.A.S REG. No." means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.

"LC 50" means the concentration of a substance in air that when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.
"LD 50" means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause death of 50 per cent of a defined animal population.

FLASH POINT. The minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite.

NIOSH- National institute for occupational safety and health
STEL- Short term exposure limit
TWA- Time-weighted average
PEL- Permissible exposure limit
ACGIH- American conference of governmental industrial hygienist
OSHA- Occupational safety and health act

SECTION 2 – HAZARD IDENTIFICATION

Dangerous Goods- **WHMIS**: CLASS B, Div. 2, CLASS D, Div.2B
OSHA HAZARDS: Flammable liquid, Target Organ Effect, Irritant
Target Organs: Nerves, Kidney, Cardiovascular system, Gastrointestinal tract, Liver.
Signal Words: Danger.

GHS CLASSIFICATION
Flammable liquids- Category 2
Skin irritation- Category 3
Eye irritation- Category 2A
Specific target organ toxicity- single exposure- Category 3.

GHS Label Elements, including precautionary statements: Hazard Statements:
HAZARD STATEMENTS
H225- Highly flammable liquid and vapor
H316- Causes mild skin irritation
H319- Causes serious eye irritation
H336- May cause drowsiness or dizziness
H302-Harmful if swallowed

PREVENTION (see also section 4 –First aid and measures)
P210- Keep away from heat/sparks/open flames/hot surfaces
P261- Avoid breathing dust/fumes/gas/mist/vapors/spray
P280- Wear eye protection
P264- Wash skin thoroughly after handling
P405- Store locked up

RESPONSE
P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes: Remove contact lenses if present and easy to do so. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/attention
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P301 + P310; IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

POTENTIAL HEALTH EFFECTS
EYES: Causes eye irritation
INHALATION: May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. Can cause irritation of mucous membranes and central nervous system depression.
SKIN: May be harmful if absorbed through skin. Causes skin irritation
INGESTION: May be harmful if swallowed

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	APPROXIMATE CONCENTRATION%	C.A.S., N.A. OR U.N. NUMBERS	LD50 {SPECIFY SPECIES & ROUTE}	LC 50 {SPECIFY SPECIES & ROUTE}
Isopropyl Alcohol	➢ 99	67-63-0	Oral(Rat): 5045 mg/kg Dermal (Rabbit): 12,800mg/kg.	**Inhalation: Rat-8h: 16,000 ppm**

SECTION 4 – FIRST AID MEASURES	
SKIN CONTACT	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
EYE CONTACT	Immediately hold eyelids open and flush with water for at least 15 minutes. Seek medical attention.
INHALATION	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary
INGESTION	May be harmful if swallowed. Do not induce vomiting. Drink 1 or 2 glasses of water. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. If vomiting occur spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
NOTES TO PHYSICIAN	Treatment based on sound judgment of physician and individual reaction of patient.

SECTION 5 – FIRE-FIGHTING MEASURES	
FLASH POINT (^{0}C)	CLOSED CUP: 11.667^{0}C (53^{0}F)- 12.778^{0}C (55^{0}F) (TAG)
FLASH POINT METHOD	Closed Cup or Tag
AUTOIGNITION TEMPERATURE (^{0}C)	399^{0}C (750.2^{0}F)
UPPER FLAMMABLE LIMIT (% VOL.)	12.7 %
LOWER FLAMMABLE LIMIT (% VOL.)	2 %
HAZARDOUS COMBUSTION PRODUCTS	Carbon Dioxide (CO_2), Carbon monoxide,
UNUSUAL FIRE/ EXPLOSION HAZARDS	Risks of explosion of the product in presence of mechanical impact: Not available. Explosive in presence of open flames, sparks, or heat.
SENSITIVITY TO MECHANICAL IMPACT	May be
SENSITIVITY TO STATIC DISCHARGE	yes
EXTINGUISHING MEDIA	Water spray, foam, dry powder or Carbon Dioxide. Use media appropriate for surrounding fire
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should wear full protective clothing, including self-contained breathing equipment. Vapor may travel considerable distance to source of ignition and flash back. CAUTION: MAY BURN NEAR INVISIBLE FLAME. Isopropyl Alcohol ignites on contact with dioxgenyl tetrafluorborate, chromium trioxide and potassium tert-butoxide.

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
LEAK AND SPILL PROCEDURE	Stop leak. Move containers from spill are. Absorb spill with vermiculite or other noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination.
ENVIRONMENTAL PRECAUTIONARY	Prevent entry into sewers or streams. Any release to the environment may be subject to federal or local reporting requirements.
PERSONAL PRECAUTIONARY MEASURES	Wear protective clothing during cleanup. See section 8 for recommendations on the use of personal protective equipment. Avoid breathing vapors, mist or gas

SECTION 7 – HANDLING AND STORAGE	
HANDLING PROCETURES	Avoid contact with eyes. Avoid ingestion. Use good industrial hygiene practices in handling this product. Keep container closed when not in use. Take measure to prevent the buildup of electrostatic charge
STORAGE NEEDS	Keep container tightly closed. Store in a cool area. Do not store with strong oxidizing agents, strong acids, peroxides, aldehydes, halogens, ammonia, acid anhydrides or alkali metals.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION	
VENTILATION REQUIREMENTS	General ventilation is recommended. When TLV (Threshold Limit Value over 8 hours of work) is greater than 200 ppm (492 mg/ m^3) provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective TLV. STEL (Short Term Exposure Limit) 500 ppm (1225 mg/m^3 Entity NIOSH
PROTECTIVE EQUIPMENT	Ensure that eyewash stations are proximal to the work-station location. The selection of personal protective equipment will vary depending on the condition of use
EYE/TYPE	Splash goggles
RESPIRATORY/TYPE	Approved/ certified vapor respirator
GLOVE/TYPE	Nitrile, Vinyl, Latex impervious gloves
FOOTWEAR/TYPE	Boots
BODY/TYPE	Protective clothing is required. Use impervious clothing (apron, coveralls). The selection of personal protective equipment will vary depending on the conditions of use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE – PHYSICAL STATE	Clear thin liquid
ODOUR	Alcohol resembling that of a mixture of ethanol and Acetone
ODOUR THRESHOLD (PPM)	22 PPM
PH	Not available
MELTING POINT (^{0}C)	See freezing point
BOILING POINT (^{0}C)	82^{0}C (180^0 F) INITIAL
FREEZING POINT (^{0}C)	-89^{0}C (-129^0 F)
EVAPORATION RATE	1.5 (ASTM D 3539)
FLAMMABILITY	Flammable
FLASH POINT (^{0}C)	12^{0}C (54^{0}F)
AUTO IGNITION TEMPERATURE	399^{0}C (750^{0}F)
DECOMPOSITION TEMPERATURE	Not available
VAPOUR DENSITY	(air= 1) 2.07
VAPOUR PRESSURE	@ 20^{0}C) 33mmHg = 6.02 PA
SOLUBILITY	Completely soluble in water
VISCOSITY	Thin liquid
% VOLATILE BY VOLUME	100 %
SPECIFIC GRAVITY	0.786 ± 0.01 gm / cm^3

SECTION 10 – STABILITY AND REACTIVITY	
REACTIVITY	Reacts violently with hydrogen + palladium combination, Nitroform, oleum, Aluminum triisopropoxide. Vigorous reaction with sodium dichromate + sulfuric acid

CHEMICAL STABILITY	Stable
POSSIBILITY OF HAZARDOUS REACTIONS	No
CONDITIONS TO AVOID	Keep away from heat, flame and sparks. Avoid incompatible materials
INCOMPATIBLE MATERIALS	Acids, Alkali metals, oxidizing agents, iron salts, potassium. May attack some plastic materials
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon Dioxide ($C0_2$), Carbon monoxide,

SECTION 11 –TOXICOLOGICAL INFORMATION	
TOXICITY EFFECTS ON ANIMALS	Acute oral toxicity (LD50): 3600 mg/kg (Mouse)
TOXIC EFFECTS ON HUMANS	Hazardous in case of ingestion or inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer, permeator)
CHRONIC EFFECTS ON HUMANS	May cause damage to kidneys, liver, skin and central nervous system
CARCINOGENICITY	No evidence
TERATOGENICITY	No evidence
MUTAGENICITY	No evidence
REPRODUCTIVE EFFECTS	No evidence

SECTION 12 –ECOLOGICAL INFORMATION	
ECOTOXICITY DATA	Ecotoxicity in water (LC50): 100000 mg/l 96 hours (fathead Minnow)
BIODEGRADABILITY	Biodegradable
PRODUCTS OF DEGRADATION	The product itself and its products of degradation are not toxic

SECTION 13 – DISPOSAL CONSIDERATIONS	
WASTE DISPOSAL	Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations
INFORMATION ON SAFE HANDLING FOR DISPOSAL INCLUDING ANY CONTAMINATED PACKAGING	Suitable waste facility

SECTION 14 – TRANSPORT INFORMATION	
UN NUMBER	1219
UN PROPER SHIPPING NAME	Isopropyl Alcohol
TRANSPORT HAZARD CLASS	CLASS 3: Flammable liquid
PACKAGING GROUP	Pk: II
ENVIRONMENTAL HAZARDS	NO
TRANSPORT IN BULK, if applicable	NOT AVAILABLE
SPECIAL PRECAUTIONS	Guide to Canadian transportation. Emergency Response Guidebook (ERG: # 129

SECTION 15 – REGULATORY INFORMATION	
SAFETY HEALTH & ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT	U.S. TSCA inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) INVENTORY List or exempt. Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

SECTION 16 – OTHER INFORMATION	
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DATE OF THE LATEST REVISION OF SDS:	May 8, 2024