

MATERIAL SAFETY DATA SHEET

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Date of Last Revision: 08-00

SECTION I - PRODUCT IDENTIFICATION

Product Name: **Flex 95**
Common Synonyms: Methyl alcohol, Isopropyl alcohol
Chemical family: Alcohols
Formula (CH₃)₂CHOH – Isopropanol
CH₃OH - Methanol

SECTION II - COMPOSITION AND HAZARDOUS INGREDIENTS INFORMATION

Hazardous Ingredients	CAS Number	LD50 (Species and Route)	LC50 (Species)
Isopropanol	67-63-0	5045 mg/kg rat	16000 ppm rat
Methanol	67-56-1	5628 mg/kg rat	6.4%/4hr rat
Water	7732-18-5	N/A	N/A

SECTION III – PHYSICAL DATA

Physical State Liquid	Odor and Appearance Alcohol Odor – Clear liquid			Odor Threshold (ppm) 1000 ppm
Vapor Pressure 47 mm Hg	Vapor Density 1.4 (air = 1)	Evaporation Rate 2.9 (butyl acetate = 1)	Boiling Point 73.3° – 80.0° C (164°-176° F)	Freezing Point -89° C
pH N/A	Specific Gravity 0.82 @ 21°C	Coeff. Water/oil Dist. N/A		

SECTION IV – FIRE AND EXPLOSION DATA

Flammability Yes X No	If yes, under which conditions? ➔ Excessive heat, sparks or open flames
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Means of Extinction Water, carbon dioxide, dry chemical, foam		
Flashpoint and Method 16.6°C (61.9° F) Closed Cup	Upper Flammable Limit (% by vol.) 36.0	Lower Flammable Limit 2.0
Autoignition Temperature 385°C (Methanol)	Hazardous Combustion Products Carbon monoxide, carbon dioxide, formaldehyde	
Explosion Data Vapors are heavier than air and may settle in low areas. Vapors may travel long distances to an ignition source and flash back explosively. Flame may be invisible. Not sensitive to impact	Sensitivity to Impact	Sensitivity to Static Charge Static ignition hazard can result from handling and use. Use proper grounding during product transfer (NFPA 77)

SECTION V – REACTIVITY DATA

Chemical Stability If no, under ➔ Yes X No which conditions?
Incompatibility with other substances Yes X No ___ If so, which ones? ➔ Strong oxidizing agents, strong acids, strong bases
Reactivity and under what conditions Contact with incompatibilities
Hazardous decomposition products See hazardous combustion products in Section IV.

SECTION VI – TOXICOLOGICAL PROPERTIES

Skin Contact – May cause mild irritation, redness, cracking and drying.			
Skin Absorption – May be absorbed by the skin. Moderately toxic.			
Eye Contact – Causes irritation, redness, pain and blurred vision			
Inhalation – Causes irritation of the respiratory tract. High concentrations may cause central nervous system depression, with weakness, drowsiness, nausea, vomiting, diarrhea, fatigue and loss of consciousness.			
Ingestion – Poisonous. Causes nausea, headache, double vision. May cause unconsciousness or death			
Effects of Acute Exposure See above			
Effects of Chronic Exposure Repeated exposure by inhalation or absorption may cause systemic poisoning, impaired vision or blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin exposure may cause defatting of the skin.			
Exposure Limits	PEL	STEL	Agency
Isopropanol	400 ppm	500 ppm	OSHA, ACGIH
Methanol	200 ppm	250 ppm	OSHA, ACGIH
Irritancy – Mild irritant to skin. Moderate to severe irritant to eyes.			
Sensitization – Insufficient information			
Carcinogenicity – No			
Teratogenicity – Very toxic teratogen			
Reproductive Toxicity – Insufficient information			
Mutagenicity – Insufficient information			
Synergistic – Can enhance the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene and dimethylnitrosamine.			

SECTION VII – PREVENTIVE MEASURES

Gloves Yes, with appropriate breakthrough resistance. (Nitrile or butyl rubber)	Respirator NIOSH/MSHA approved respirator in the absence of proper ventilation	Eye Protection Goggles or face shield
Footwear N/A	Clothing Laboratory Coat	Other
Engineering Controls General mechanical ventilation or fume hood		
Leak and Spill Procedure Eliminate or shut off all ignition sources. Avoid eye or skin contact. Place leaking containers in a well ventilated area. Contain spill to minimize contaminated area using an absorbent material. Place waste materials into a properly labeled container for disposal. For larger spills, dike the spill to minimize contamination and facilitate salvage or disposal. Avoid runoff into storm sewers and ditches which lead to natural waterways. If fire potential exists, blanket spill with foam or use water spray to disperse vapors.		
Waste Disposal Dispose of this material in accordance with applicable federal, provincial, state and local authorities. RCRA Hazardous Waste Code – D001 for ignitability or F003 if used for solvent characteristics		
Handling Procedures and Equipment Hydrostatically ground drums during dispensing. Do not use near open flame or sparks. Keep container closed and out of reach of children. Assure adequate fire protection is available.		
Storage Requirements Store at room temperature: 15°-30°C (59° –86°F). Store in a flammable liquid safety cabinet if possible.		

SECTION VIII – FIRST AID MEASURES

Specific Measures Eye Contact – Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. If eye irritation persists due to exposure refer to an ophthalmologist for evaluation. Skin Contact – Remove contaminated clothing immediately. Wash the affected area of your body with soap or mild detergent and large amounts of water for at least 15 minutes. Inhalation – Move individual to fresh air immediately. If breathing is difficult, give oxygen. If breathing has stopped, administer artificial respiration. Call a physician. Ingestion – Immediately induce vomiting by drinking two glasses of salt water and sticking finger down throat or giving ipecac syrup. Never give anything by mouth to an unconscious person. Call a physician.
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SECTION IX – REGULATORY INFORMATION

Ingredient	RCRA	SARA Title III		CERCLA	
		302 / 304	313	102(A)	RQ
Isopropanol	D001	Not Listed	Not Listed	Not Listed	N/A
Methanol	D001,F003 U154	Not Listed	Listed	Listed	5000 lbs.

Ingredient	NFPA Rating	Canadian WHMIS Proposed	Hazardous Per OSHA	California Proposition 65
Isopropanol	1,3,0	B2, D2A, D2B	Yes	Not Listed
Methanol	1,3,0	B2, D2A, D2B	Yes	Not Listed

Proper USDOT Shipping Name	Hazard Class	UN/NA	Packing Group
Flammable Liquid N.O.S. (Ethanol, Methanol)	3	1993	II

SECTION X – DATE PREPARED

Prepared By	Phone Number	Date
Richard-Allan Scientific Regulatory Affairs Department	1800-522-7270	August of 2000