



Canada Colors and Chemicals Limited

CANADA COLORS & CHEMICALS LTD
152 KENNEDY ROAD SOUTH
BRAMPTON, ONTARIO
CANADA L6W 3G4
(905) 459-1232;

PRODUCT: ISOPROPYL ALCOHOL 99

CODE: 511501

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER..... CANADA COLORS & CHEMICALS LTD.
152 KENNEDY ROAD SOUTH
BRAMPTON, ONTARIO
CANADA
L6W 3G4
PREPARED BY..... Regulatory Affairs
PREPARATION DATE..... Dec19/08
PRODUCT NAME..... ISOPROPYL ALCOHOL 99
PRODUCT CODE..... 511501
CHEMICAL FORMULA..... N.AV.
MATERIAL USE..... ORGANIC SOLVENT. REFER TO TECHNICAL LITERATURE.
EMERGENCY PHONE NO..... (416)-444-2112.

Section 02: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route, Species	LC/50 Route, Species
*** AS PER % ***					
ISOPROPYL ALCOHOL	40-100	SEE SECTION 11	67-63-0	SEE SECTION 11	SEE SECTION 11

Section 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... NOT A PRIMARY SKIN IRRITANT AFTER EXPOSURE OF SHORT DURATION.
SKIN ABSORPTION..... N.AV.
EYE CONTACT..... IRRITATING TO EYES. EXPOSURE TO HIGH VAPOUR CONCENTRATIONS MAY CAUSE EYE IRRITATION.
INHALATION..... EXPOSURE TO HIGH VAPOUR CONCENTRATIONS MAY CAUSE RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, NAUSEA, INCOORDINATION, DROWSINESS AND LOSS OF CONSCIOUSNESS.
INGESTION..... ALTHOUGH INGESTION IS UNLIKELY, LIQUID WOULD IRRITATE UPPER DIGESTIVE TRACT IF SWALLOWED. INGESTION OF THIS PRODUCT MAY CAUSE HEADACHE, DIZZINESS, FATIGUE AND CENTRAL NERVOUS SYSTEM DEPRESSION.
EFFECTS OF ACUTE EXPOSURE..... EXPOSURE MAY OCCUR VIA INHALATION, INGESTION, SKIN ABSORPTION AND SKIN OR EYE CONTACT.
EFFECTS OF CHRONIC EXPOSURE..... PROLONGED AND REPEATED CONTACT WITH SKIN CAN CAUSE DEFATTING AND DRYING OF THE SKIN RESULTING IN SKIN IRRITATION AND DERMATITIS.
PRE-EXISTING CONDITIONS..... PRE-EXISTING EYE, SKIN AND RESPIRATORY CONDITIONS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

Section 04: FIRST AID MEASURES

INSTRUCTIONS:..... EYES:.. FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. OBTAIN MEDICAL ATTENTION AS SOON AS POSSIBLE AFTER FIRST AID HAS BEEN INITIATED AND COMPLETED. SKIN CONTACT:.. FLUSH AFFECTED SKIN WITH GENTLY FLOWING LUKEWARM WATER FOR AT LEAST 20 MINUTES. REMOVE CONTAMINATED CLOTHING WHILE RINSING. WASH CONTAMINATED SKIN WITH MILD SOAP AND WATER FOR 15 MINUTES. IF IRRITATION OCCURS AND PERSISTS, OBTAIN MEDICAL ATTENTION. INGESTION:.. DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. GUARD AGAINST ASPIRATION INTO LUNGS BY HAVING THE INDIVIDUAL TURN ON TO THEIR LEFT SIDE. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. OBTAIN MEDICAL ATTENTION IMMEDIATELY. INHALATION:.. REMOVE VICTIM FROM FURTHER EXPOSURE AND RESTORE BREATHING, IF REQUIRED. OBTAIN MEDICAL ATTENTION.
NOTES TO PHYSICIAN:..... IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE VOMITING, GASTRIC LAVAGE WITH A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED. METABOLISM OF ISOPROPRANOL FORMS ACETONE, WHICH MAY BE DETECTED IN THE URINE AND EXPIRED AIR. IN CONTRAST TO DIABETIC ACIDOSIS, ACIDOSIS WILL OCCUR IN THE ABSENCE OF HYPERGLYCEMIA. HEMODIALYSIS SHOULD BE CONSIDERED IN SEVERE ACUTE INTOXICATIONS.

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Section 05: FIRE FIGHTING MEASURES

FLAMMABILITY..... SEE FLASH POINT.
 IF YES, UNDER WHICH CONDITIONS?
 EXTINGUISHING MEDIA..... DRY CHEMICAL, CARBON DIOXIDE, ALCOHOL FOAM, WATER FOG.
 SPECIAL PROCEDURES..... VAPOURS FORM A FLAMMABLE/EXPLOSIVE MIXTURE WITH AIR BETWEEN UPPER AND LOWER FLAMMABLE LIMITS. DO NOT ENTER CONFINED FIRE SPACE WITHOUT ADEQUATE PROTECTIVE CLOTHING AND AN APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. EVACUATE HAZARD AREA. USE WATER TO COOL FIRE EXPOSED CONTAINERS. CONTAINERS MAY EXPLODE IN HEAT OR FIRE. VAPOURS MAY CONCENTRATE IN CONFINED AREAS. CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOUR PRESSURE BUILD UP 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. FIGHT FIRE FROM MAXIMUM DISTANCE. ALWAYS STAY AWAY FROM ENDS OF CONTAINERS DUE TO EXPLOSIVE POTENTIAL. FLAMMABLE.

FLASH POINT (C), METHOD..... 12 C/ 54 F (ABEL). (ISOPROPYL ALCOHOL).
 AUTO IGNITION TEMPERATURE..... 425 C/ 797 F (ASTM D-2155). (ISOPROPYL ALCOHOL).
 UPPER FLAMMABLE LIMIT (% BY VOL.)... 12.0.
 LOWER FLAMMABLE LIMIT (% BY VOL.)... 2.0.
 EXPLOSION DATA..... N.AV.
 EXPLOSIVE POWER..... N.AV.
 RATE OF BURNING..... N.AV.
 SENSITIVITY TO STATIC DISCHARGE..... YES.
 SENSITIVITY TO IMPACT..... NO.
 HAZARDOUS COMBUSTION PRODUCTS.. CARBON MONOXIDE AND CARBON DIOXIDE ARE PRODUCED ON COMBUSTION.

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL..... ISSUE WARNING "FLAMMABLE". ELIMINATE ALL SOURCES OF IGNITION. ISOLATE HAZARD AREA AND RESTRICT ACCESS. TRY TO WORK UP WIND OF SPILL. AVOID DIRECT CONTACT WITH MATERIAL. SATURATED CLOTHING SHOULD BE IMMEDIATELY REMOVED TO AVOID FLAMMABILITY HAZARD. WEAR APPROPRIATE BREATHING APPARATUS (IF APPLICABLE) AND PROTECTIVE CLOTHING. STOP LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN LAND SPILLS; CONTAIN WATER SPILLS BY BOOMING. USE WATER FOG TO KNOCK DOWN VAPOURS; CONTAIN RUN-OFF. FOR LARGE SPILLS REMOVE BY MECHANICAL MEANS AND PLACE IN CONTAINERS. ABSORB RESIDUE OR SMALL SPILLS WITH ABSORBENT MATERIAL AND REMOVE TO NON-LEAKING CONTAINERS FOR DISPOSAL. RECOMMENDED MATERIALS: SAND OR EARTH. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. DISPOSE OF RECOVERED MATERIAL AS NOTED UNDER DISPOSAL CONSIDERATIONS. NOTIFY APPROPRIATE ENVIRONMENTAL AGENCY(IES).

Section 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND FLAMMABLE. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR EQUIPMENT OPERATIONS ON OR NEAR CONTAINERS. VAPOURS MAY ACCUMULATE AND TRAVEL TO DISTANT IGNITION SOURCES AND FLASHBACK. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS PRODUCT RESIDUES. FIXED EQUIPMENT AS WELL AS TRANSFER CONTAINERS AND EQUIPMENT SHOULD BE GROUNDED TO PREVENT ACCUMULATION OF STATIC CHARGE. HOT SURFACES MAY BE SUFFICIENT TO IGNITE LIQUID EVEN IN THE ABSENCE OF SPARKS OR FLAMES. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPOURS ARE GONE. DO NOT PRESSURIZE DRUM CONTAINERS TO EMPTY THEM. AVOID BREATHING VAPORS AND PROLONGED OR REPEATED CONTACT WITH SKIN. LAUNDRY CONTAMINATED CLOTHING PRIOR TO REUSE. USE GOOD PERSONAL HYGIENE. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA BEFORE LAUNDERING. AVOID FREQUENT OPENING AND CLOSING OF CONTAINERS AND REPEATED EXPOSURE TO AIR AS EXPLOSIVE PEROXIDES MAY BE FORMED.

STORAGE NEEDS..... STORE IN A COOL, DRY, WELL VENTILATED AREA, AWAY FROM HEAT AND IGNITION SOURCES. USE EXPLOSION PROOF VENTILATION TO PREVENT VAPOUR ACCUMULATION. CAN ATTACK ALUMINUM AT ELEVATED TEMPERATURE.

Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

NOTE..... THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THE PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE.

GLOVES/ TYPE..... IMPERVIOUS GLOVES (VITON, NITRILE) SHOULD BE WORN AT ALL TIMES WHEN HANDLING THIS PRODUCT.

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RESPIRATORY/TYPE.....	IF EXPOSURE EXCEEDS OCCUPATIONAL EXPOSURE LIMITS, USE AN APPROPRIATE NIOSH-APPROVED RESPIRATOR. USE A NIOSH-APPROVED CHEMICAL CARTRIDGE RESPIRATOR WITH ORGANIC VAPOUR CARTRIDGES OR USE A NIOSH-APPROVED SUPPLIED-AIR RESPIRATOR. FOR HIGH AIRBORNE CONCENTRATIONS, USE A NIOSH-APPROVED SUPPLIED-AIR RESPIRATOR, EITHER SELF-CONTAINED OR AIRLINE BREATHING APPARATUS, OPERATED IN POSITIVE PRESSURE MODE.
EYE/TYPE.....	CHEMICAL SAFETY GOGGLES SHOULD BE WORN.
FOOTWEAR/TYPE.....	N.A.V.
CLOTHING/TYPE.....	IMPERVIOUS CLOTHING (APRON, COVERALLS) SHOULD ALSO WORN IN CONFINED WORKSPACES OR WHERE THE RISK OF SKIN EXPOSURE IS MUCH HIGHER.
OTHER/TYPE.....	PROVIDE AN EYEWASH STATION IN THE AREA. SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.
ENGINEERING CONTROLS.....	MECHANICAL VENTILATION IS RECOMMENDED FOR ALL INDOOR SITUATIONS TO CONTROL FUGITIVE EMISSIONS. ELECTRICAL AND MECHANICAL EQUIPMENT SHOULD BE EXPLOSION-PROOF. CONCENTRATIONS IN AIR SHOULD BE MAINTAINED BELOW THE RECOMMENDED THRESHOLD LIMIT VALUE IF UNPROTECTED PERSONNEL ARE INVOLVED. MAKE-UP AIR SHOULD ALWAYS BE SUPPLIED TO BALANCE AIR EXHAUSTED (EITHER GENERALLY OR LOCALLY). LOCAL VENTILATION RECOMMENDED WHERE MECHANICAL VENTILATION IS INEFFECTIVE IN CONTROLLING AIRBORNE CONCENTRATIONS BELOW THE RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT. FOR PERSONNEL ENTRY INTO CONFINED SPACES (I.E. BULK STORAGE TANKS) A PROPER CONFINED SPACE ENTRY PROCEDURE MUST BE FOLLOWED INCLUDING VENTILATION AND TESTING OF TANK ATMOSPHERE.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	COLOURLESS. MOBILE LIQUID.
ODOUR.....	ALCOHOL ODOUR.
ODOUR THRESHOLD.....	40 PPM. (ISOPROPYL ALCOHOL).
VAPOUR PRESSURE (MMHG).....	4,100 PA AT 20 C/ 68 F. (ISOPROPYL ALCOHOL).
VAPOUR DENSITY (AIR=1).....	2 AT 20 C/ 68 F. (ISOPROPYL ALCOHOL).
EVAPORATION RATE.....	1.5 (ASTM D 3539). (ISOPROPYL ALCOHOL).
BOILING POINT.....	82-83 C. (ISOPROPYL ALCOHOL).
FREEZING POINT.....	-89 - -86 C. (ISOPROPYL ALCOHOL).
PH.....	N.A.V.
MOLECULAR WEIGHT.....	60.1 (ISOPROPYL ALCOHOL).
CHEMICAL FORMULA.....	(CH ₃) ₂ CHOH.
SPECIFIC GRAVITY (WATER=1).....	0.787. (ISOPROPYL ALCOHOL).
SOLUBILITY IN WATER (% W/W).....	COMPLETE.
SOLUBLE IN OTHER SOLVENTS.....	ALCOHOLS.
OCTANOL/WATER PARTITION COEFFICIENT.....	0.05.

Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:	
YES.....	YES.
NO, WHICH CONDITIONS?	
COMPATABILITY WITH OTHER SUBSTANCES:	
YES	
NO, WHICH ONES?.....	AVOID CONTACT WITH STRONG OXIDIZING AGENTS AND ACIDS. ALUMINUM AT HIGH TEMPERATURES.
REACTIVITY CONDITIONS?.....	AVOID EXCESSIVE HEAT, OPEN FLAMES AND ALL IGNITION SOURCES. ISOPROPYL ALCOHOL IN CONTACT WITH AIR, PRODUCES PEROXIDES WHICH CAN EXPLODE WHEN CONCENTRATED.
HAZARDOUS PRODUCTS OF DECOMPOSITION.....	SEE HAZARDOUS COMBUSTION PRODUCTS.
HAZARDOUS POLYMERIZATION.....	NO.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL.....	ISOPROPYL ALCOHOL: 200 PPM TWA-ACGIH; 400 PPM STEL-ACGIH.
LC 50 OF MATERIAL, SPECIES & ROUTE..	INHALATION-RAT: 12,000 PPM FOR 8 HOURS.
LD 50 OF MATERIAL, SPECIES & ROUTE..	ORAL-RAT: >4,710 MG/KG; DERMAL RABBIT: >12,870 MG/KG.
CARCINOGENICITY OF MATERIAL.....	ISOPROPYL ALCOHOL TESTED NEGATIVE IN TWO MUTAGENICITY ASSAYS; THE MOUSE MICRONUCLEUS AND CHINESE HAMSTER OVARY ASSAYS.

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TERATOGENICITY..... ISOPROPYL ALCOHOL, WHEN ADMINISTERED ORALLY TO RATS AND RABBITS, PRODUCES REDUCED FETAL BODY WEIGHTS IN RATS ONLY AT DOSES WHICH RESULT IN TREATMENT RELATED TO MATERNAL DEATHS AND PRODUCES NO INDICATION OF FETAL EFFECTS IN RABBITS EVEN AT DOSE WHICH RESULTED IN SIGNIFICANT MATERNAL MORTALITY. ISOPROPYL ALCOHOL PRODUCES NO EVIDENCE OF DEVELOPMENTAL NEUROTOXICITY.

IRRITANCY OF MATERIAL..... THIS PRODUCT IS IRRITATING TO THE EYES BUT IS NOT PRIMARY SKIN IRRITANT AFTER EXPOSURE OF SHORT DURATION.

SENSITIZING CAPABILITY OF MATERIAL..... NOT A SKIN SENSITIZER.

SYNERGISTIC MATERIALS..... NONE.

Section 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL STATEMENT..... DO NOT ALLOW PRODUCT OR RUNOFF FROM FIRE CONTROL TO ENTER STORM OR SANITARY SEWERS, LAKES, RIVERS, STREAMS, OR PUBLIC WATERWAYS. BLOCK OFF DRAINS AND DITCHES. PROVINCIAL REGULATIONS REQUIRE AND FEDERAL REGULATIONS MAY REQUIRE THAT ENVIRONMENTAL AND/OR OTHER AGENCIES BE NOTIFIED OF A SPILL INCIDENT. SPILL AREA MUST BE CLEANED AND RESTORED TO ORIGINAL CONDITION OR TO THE SATISFACTION OF AUTHORITIES. MAY BE HARMFUL TO AQUATIC LIFE. AQUATIC TOXICITY RATING (TLm 96)=10 TO 100 PPM.

BIODEGRADATION..... BIODEGRADABLE (FAST). RAPID VOLATILIZATION. NO FOOD CHAIN CONCENTRATION POTENTIAL.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... WASTE MANAGEMENT PRIORITIES (DEPENDING ON VOLUMES AND CONCENTRATION OF WASTE) ARE: 1. RECYCLE (REPROCESS), 2. ENERGY RECOVERY (CEMENT KILNS, THERMAL POWER GENERATION), 3. INCINERATION, 4. DISPOSAL AT A LICENCED WASTE DISPOSAL FACILITY. DO NOT ATTEMPT TO COMBUST WASTE ON-SITE. INCINERATE AT A LICENCED WASTE DISPOSAL SITE WITH APPROVAL OF ENVIRONMENTAL AUTHORITY.

Section 14: TRANSPORT INFORMATION

TDG CLASSIFICATION..... 3.

UN NUMBER..... 1219.

PACKING GROUP..... II.

SPECIAL SHIPPING INSTRUCTIONS..... N.AP.

Section 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION..... B2, D2B.

CPR COMPLIANCE..... THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

Section 16: OTHER INFORMATION

DSL
N.AV.=NOT AVAILABLE
N.AP.=NOT APPLICABLE