

INO EKO NEUTRAL DISINFECTANT



MATERIAL SAFETY DATA SHEET

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED FOR: INO SOLUTIONS
9280 BOUL DU GOLF, ANJOU, MONTREAL, P.Q. H1J 3A1
EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666
PRODUCT NAME : INO EKO NEUTRAL DISINFECTANT (NO FRAGRANCE)
PRODUCT USE: FRAGRANCE FREE, CONCENTRATED CLEANER / DISINFECTANT
WHMIS CATEGORY: NOT WHMIS REGULATED (REGISTERED PRODUCT UNDER TPD WITH DIN)
PREPARED BY: REGULATORY DEPARTMENT.
PHONE NUMBER OF PREPARER: (905) 825-0850 EXT 250
DATE PREPARED: DECEMBER 31, 2009

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
ETHANOL	0.1-1	64-17-5	ACGIH TLV-TWA 1000 ppm NIOSH TLV-TWA 1000 ppm OSHA PEL-TWA 1000 ppm IDLH 3300 ppm	ORAL 7060 mg/Kg (RAT)	21000 ppm 4 HOUR EXPOSURE (MOUSE)
ALKYL (C12-16) DIMETHYL BENZYL AMMONIUM CHLORIDE (ADBAC)	1-5	68424-85-1	NOT AVAILABLE	SIMILAR PRODUCT (C8-10) ORAL 366 mg/ Kg (RAT) DERMAL 204 mg/ Kg; 645 mg/ Kg (RAT)	NOT AVAILABLE
DIDECYL DIMETHYL AMMONIUM CHLORIDE (DDMAC)	1-5	7173-51-5	NOT AVAILABLE	ORAL 84 mg/ Kg (RAT)	NOT AVAILABLE

SECTION 03: HAZARDS IDENTIFICATION**POTENTIAL ACUTE HEALTH EFFECTS:**

ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: PROLONGED SKIN CONTACT CAN CAUSE IRRITATION AND DERMATITIS.

SKIN ABSORPTION: NOT AVAILABLE

EYE: DIRECT CONTACT MAY CAUSE SERIOUS IRRITATION; BURNING, TEARING, REDNESS AND SWELLING. IF LEFT UNTREATED MAY CAUSE PERMANENT EYE DAMAGE.

INHALATION: EXCESSIVE INHALATION OF CONCENTRATED VAPOUR MAY CAUSE NOSE AND RESPIRATORY IRRITATION, HEADACHE, NAUSEA, DIZZINESS AND DROWSINESS. NOT A LIKELY ROUTE OF ENTRY UNDER NORMAL USE.

INGESTION: MAY BE HARMFUL IF SWALLOWED. MAY CAUSE BURNS TO MUCOUS MEMBRANES OF MOUTH, THROAT AND ESOPHAGUS. MAY CAUSE GASTRO INTESTINAL PAIN, NAUSEA, DIZZINESS, DIARRHEA, VOMITING.

ACUTE OVER-EXPOSURE

EFFECTS: AS ABOVE.

CHRONIC OVER EXPOSURE

EFFECTS: NONE EXPECTED UNDER NORMAL USE CONDITIONS.

SECTION 04: FIRST AID MEASURES

EYES: FLUSH EYES WITH ABUNDANT WATER FOR AT LEAST 20 MINUTES WHILE HOLDING EYELIDS OPEN TO ENSURE COMPLETE IRRIGATION OF THE ENTIRE EYE CAVITY. GET MEDICAL ATTENTION.

SKIN: WASH SKIN WITH SOAP AND ABUNDANT WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. GET MEDICAL ATTENTION.

INGESTION: **DO NOT INDUCE VOMITING.** IF VICTIM CONSCIOUS, GIVE 1 - 2 GLASSES OF WATER TO DILUTE STOMACH CONTENTS. **GET MEDICAL ATTENTION.** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SECTION 05: FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD OF

DETERMINATION: NONE (TCC)

UPPER EXPLOSION LIMIT

(% BY VOLUME): NOT APPLICABLE

LOWER EXPLOSION LIMIT

(% BY VOLUME): NOT APPLICABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY CLASSIFICATION: NON-FLAMMABLE LIQUID

CONDITIONS OF FLAMMABILITY: NONE (PRODUCT WILL NOT BURN).

MEANS OF EXTINCTION: AS FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING

PROCEDURES:

FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE EQUIPMENT AND USE APPROVED SELF CONTAINED BREATHING APPARATUS. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE RUPTURE. AVOID BREATHING VAPOURS OR FUMES.

HAZARDOUS COMBUSTION

PRODUCTS:

OXIDES OF CARBON AND NITROGEN; AMMONIA; HYDROGEN CHLORIDE.

EXPLOSION DATA:

NOT APPLICABLE

SENSITIVITY TO STATIC

DISCHARGE:

NOT SENSITIVE

SENSITIVITY TO MECHANICAL

IMPACT :

NOT SENSITIVE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL

PROCEDURES: CLEANUP PERSONNEL MUST USE FULL PROTECTIVE EQUIPMENT AS LISTED IN PERSONAL PROTECTION SECTION. REMOVE UNPROTECTED PERSONNEL AWAY FROM SPILL AREA. VENTILATE AREA. CAUTION: SPILL AREA MAY BE SLIPPERY.

SMALL SPILLS: MOP UP. FLUSH AREA WITH WATER.

LARGE SPILLS: DIKE TO CONTAIN LIQUID. RECLAIM ALL MATERIAL POSSIBLE. DO NOT ALLOW SPILL OR SPILL RESIDUES WATER TO ENTER OPEN WATERWAYS OR SEWERS. ABSORB REMAINDER ON INERT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. FLUSH RESIDUE AWAY WITH WATER.

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SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES

AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN OR CLOTHING. AVOID EXCESSIVE INTENTIONAL INHALATION OF SPRAY MISTS. WASH SKIN THOROUGHLY AFTER HANDLING. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE RE-USE. KEEP CONTAINER CLOSED WHEN NOT IN USE. DO NOT CONTAMINATE FOOD, WATER OR ANIMAL FEED DURING USE OR STORAGE OF THIS PRODUCT. READ AND FOLLOW LABEL INSTRUCTIONS. DO NOT RE-USE EMPTY CONTAINERS. TRIPLE RINSE CONTAINERS BEFORE DISPOSAL. MIX ONLY WITH WATER.

STORAGE

REQUIREMENTS: KEEP CONTAINER CLOSED WHEN NOT IN USE. STORE IN A COOL WELL VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS. KEEP FROM FREEZING. KEEP OUT OF REACH OF CHILDREN. STORE ONLY IN ORIGINAL CONTAINER. DO NOT REUSE CONTAINER.

SECTION 08: EXPOSURE CONTROLS/ PERSONAL PROTECTION

EYE PROTECTION: WEAR CHEMICAL SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL SPLASH GOGGLES.
RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED. USE NIOSH APPROVED RESPIRATOR IF EXPOSURE LEVELS ARE EXCEEDED OR IRRITATION OCCURS.
GLOVES: WEAR RUBBER OR NEOPRENE GLOVES.
OTHER PROTECTIVE EQUIPMENT: AS NEEDED TO PREVENT CONTACT WITH PRODUCT.
SPECIFIC ENGINEERING CONTROLS: NONE NORMALLY REQUIRED.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID
ODOUR AND APPEARANCE: FRAGRANCE FREE, MILD ODOUR, BLUE LIQUID
ODOUR THRESHOLD: NOT AVAILABLE
SPECIFIC GRAVITY: 1-1.004
VAPOUR PRESSURE : NOT AVAILABLE
VAPOUR DENSITY (AIR=1): NOT AVAILABLE
VOC CONTENT (%): 1.76 (ARB 310)
EVAPORATION RATE; NOT AVAILABLE
BOILING POINT; 100 °C (212 °F)
PH: 8-8.5
FREEZING POINT: NOT AVAILABLE
DENSITY (g/ ml): 1-1.004
COEFFICIENT OF WATER/OIL DISTRIBUTION: COMPLETELY WATER SOLUBLE

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE
INCOMPATIBLE MATERIALS: ACIDS AND STRONG OXIDIZING AGENTS
CONDITIONS OF REACTIVITY: NONE
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON AND NITROGEN, AMMONIA AND HYDROGEN CHLORIDE

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SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: MODERATE IRRITANT
SENSITIZATION TO MATERIAL: ADBAC AND DDMAC COMPONENTS ARE NOT A SENSITIZER WHEN USED IN SOLUTION OF 0.2% ACTIVE COMPONENTS
CARCINOGENICITY: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP. ETHANOL IN ALCOHOLIC BEVERAGES HAS BEEN CLASSIFIED AS A GROUP I CARCINOGEN. DOES NOT APPLY TO OCCUPATIONAL USE
REPRODUCTIVE EFFECTS: IT IS WELL DOCUMENTED THAT INGESTION OF ALCOHOLIC BEVERAGES (ETHANOL) CAN CAUSE SIGNIFICANT HARMFUL EFFECTS IN UNBORN CHILDREN. THERE ARE NO REPORTS OF ADVERSE EFFECTS ON PREGNANCY FOLLOWING OCCUPATIONAL EXPOSURES. NOT EXPECTED UNDER NORMAL USE.
TERATOGENICITY: THE INGESTION OF ETHANOL DURING PREGNANCY CAN CAUSE SIGNIFICANT HARMFUL EFFECTS IN UNBORN CHILDREN. NO REPORTS OF ADVERSE EFFECTS ON PREGNANCY FOLLOWING OCCUPATIONAL EXPOSURE TO ETHANOL. NOT EXPECTED UNDER NORMAL USE. NEONATAL AND MATERNAL ADVERSE EFFECTS OBSERVED IN ANIMALS DOSED AT 2000 ppm OF ADBAC COMPONENT. DDMAC COMPONENT SHOWED NO EVIDENCE OF DEVELOPMENTAL TOXICITY EFFECTS AT EXPOSURE DOSES RANGING FROM 10-50 mg/ Kg/ DAY ADMINISTERED FROM DAY 6 TO DAY 18 OF GESTATION. ADBAC COMPONENT IS NEGATIVE FOR MUTAGENICITY.
MUTAGENICITY: TOXICOLOGICALLY SYNERGISTIC PRODUCTS: ETHANOL APPEARS TO ENHANCE THE TOXICITY OF OTHER ALCOHOLS, KETONES, BENZENE, TOLUENE, HALOGENATED HYDROCARBONS, AROMATIC AMINES AND NITROSAMINES. NOT EXPECTED UNDER NORMAL USE CONDITIONS.
OTHER INFORMATION: ETHANOL COMPONENT CAN BE SECRETED THROUGH BREAST MILK.

SECTION 12: ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL INFORMATION AVAILABLE FOR PRODUCT. ECOTOXICOLOGICAL INFORMATION TO FOLLOW IS BASED LARGELY OR COMPLETELY ON INFORMATION FOR COMPONENTS.

ACUTE AQUATIC TOXICITY:

FISH SPECIES: ETHANOL LC 50,24 HR, FINGERLING TROUT: 11200 mg/ L
ETHANOL LC 50, 96 HR, RAINBOW TROUT (30 DAYS OLD): 12900 mg/ L
ETHANOL LC 50, 96 HR, FATHEAD MINNOW: 14200 mg/ L
ADBAC LC50, 96 HR, BLUEGILL: 0.52 mg/ L
ADBAC LC50, 96 HR, RAINBOW TROUT: 0.93 mg/ L
INVERTEBRATES: DDMAC, EC 50, 48 HR, DAPHNIA MAGNA: 0.058 mg/ L
ETHANOL EC 50, 48 HR, DAPHNIA PULEX: 24 µg/ L
MICROORGANISMS: NOT AVAILABLE
GROWTH INHIBITION) PLANTS: ETHANOL EC 50, 1-2 HR, GREEN ALGAE: 10000-25000 µg/ L

BIODEGRADABILITY: ETHANOL COMPONENT IS READILY BIODEGRADABLE.
MOBILITY: NOT AVAILABLE
PERSISTENCE: NOT AVAILABLE
BIOACCUMULATIVE: ETHANOL COMPONENT IS NOT EXPECTED TO BIOACCUMULATE.
CHEMICAL FATE
INFORMATION: NOT AVAILABLE
OTHER INFORMATION: NOT AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

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SECTION 14: TRANSPORT INFORMATION

TDG: NOT REGULATED UNDER TDG
ADDITIONAL INFORMATION: NOT AVAILABLE
MARINE POLLUTANT: NO

SECTION 15: REGULATORY INFORMATION

DSL STATUS: LISTED
HMIS CLASSIFICATION (H, F, R, PE): 2,0,0,B
WHMIS CLASSIFICATION: PRODUCT IS A REGISTERED PRODUCT UNDER TPD WITH DIN- NOT WHMIS CONTROLLED

SECTION 16: OTHER INFORMATION

DISCLAIMER: THIS INFORMATION WAS COMPILED FROM CURRENT, RELIABLE SOURCES AND IS BELIEVED TO BE CORRECT. AS DATA AND/ OR REGULATIONS CHANGE, AND CONDITIONS OF USE ARE BEYOND OUR CONTROL, NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.