



INO EKO WASHROOM CLEANER

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 WASHROOM CLEANER
 PRODUCT USE: FRAGRANCE FREE, WASHROOM & FIXTURE CLEANER
 WHMIS CATEGORY: D2B
 PREPARED BY: REGULATORY DEPARTMENT.
 PHONE NUMBER OF PREPARER: (905) 825-0850 EXT 250
 DATE PREPARED: AUGUST 22, 2014



SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
SODIUM HYDROXIDE	1-5	1310-73-2	ACGIH TLV-TWA 2 mg/ m ³ OSHA PEL-C 2 mg/ m ³ IDLH 10mg/ m ³	ORAL 140-340 mg/ Kg (RAT) DERMAL 1350 mg/ Kg (RABBIT)	NOT AVAILABLE
CITRIC ACID	5-10	77-92-9	OSHA TWA TOTAL 15 mg/ m ³ OSHA TWA RESPIRABLE 5 mg/ m ³ ACGIH TWA TOTAL 10 mg/ m ³	ORAL 3000- 11, 700 mg/ Kg (RAT)	NOT AVAILABLE
OTHER INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
GLUCONIC ACID	3-7	526-95-4	NOT AVAILABLE	ORAL 7630 mg/ Kg (RAT)	NOT AVAILABLE

SECTION 03: HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:
 ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: PROLONGED OR REPEATED CONTACT MAY CAUSE IRRITATION.
 SKIN ABSORPTION: NOT AVAILABLE.
 EYE: MAY CAUSE IRRITATION.
 INHALATION: SPRAY MIST MAY CAUSE IRRITATION TO THE NOSE, THROAT AND UPPER RESPIRATORY TRACT.
 INGESTION: MAY CAUSE IRRITATION AND NAUSEA.
 ACUTE OVER-EXPOSURE EFFECTS: AS ABOVE.
 CHRONIC OVER EXPOSURE EFFECTS: NONE KNOWN.

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SECTION 04: FIRST AID MEASURES

EYES: FLUSH EYES WITH ABUNDANT WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN TO ENSURE COMPLETE IRRIGATION OF THE ENTIRE EYE CAVITY. **GET MEDICAL ATTENTION.**

SKIN: WASH SKIN WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. IF SYMPTOMS PERSIST, 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.

NOTES TO PHYSICIAN: ALL TREATMENTS SHOULD BE BASED ON OBSERVED SIGNS/SYMPTOMS OF DISTRESS IN THE PATIENT. THE POSSIBILITY OF OVEREXPOSURE TO MATERIALS OTHER THAN THIS PRODUCT SHOULD BE CONSIDERED

SECTION 05: FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD OF DETERMINATION: NONE TO BOILING, TCC

UPPER EXPLOSION LIMIT (% BY VOLUME): NOT AVAILABLE

LOWER EXPLOSION LIMIT (% BY VOLUME): NOT AVAILABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY CLASSIFICATION: NON-FLAMMABLE LIQUID

CONDITIONS OF FLAMMABILITY: NONE.

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. DO NOT SPATTER OR SPLASH PRODUCT. DIKE TO CONTAIN WATER USED IN FIGHTING FIRE. DO NOT ALLOW THIS WATER INTO OPEN WATERWAYS OR SEWERS.

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON AND NITROGEN.

EXPLOSION DATA: NOT APPLICABLE

SENSITIVITY TO STATIC DISCHARGE: NOT SENSITIVE.

SECTION 06: ACCIDENTAL RELEASE MEASURES

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

SMALL SPILLS: MOP UP, AND FLUSH AREA WITH WATER.

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

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT: AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH SKIN THOROUGHLY AFTER HANDLING. DO NOT BREATHE MISTS/ SPRAYS. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE RE-USE. KEEP CONTAINER CLOSED WHEN NOT IN USE. MIX ONLY WITH WATER. READ AND FOLLOW LABEL INSTRUCTIONS. DO NOT CONTAMINATE FOOD, WATER OR FEED DURING USE OR STORAGE OF THIS PRODUCT.

STORAGE REQUIREMENTS: STORE INDOORS IN A COOL WELL VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS. KEEP FROM FREEZING. KEEP OUT OF REACH OF CHILDREN. DO NOT REUSE CONTAINER.

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SECTION 08: EXPOSURE CONTROLS/ PERSONAL PROTECTION

EYE PROTECTION: WEAR CHEMICAL SAFETY GLASSES OR GOGGLES.
RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED. USE NIOSH APPROVED RESPIRATOR IF EXCESSIVE INHALATION OF SPRAY MIST CAUSES IRRITATION.
GLOVES: WEAR RUBBER OR VINYL GLOVES.
OTHER PROTECTIVE EQUIPMENT: AS NEEDED TO PREVENT ALL CONTACT WITH PRODUCT.
SPECIFIC ENGINEERING CONTROLS: USE WITH ADEQUATE VENTILATION IF MIST IN AIR OR IN AN ENCLOSED SPACE.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID
ODOUR AND APPEARANCE: GREEN LIQUID WITH MILD ODOUR. FRAGRANCE FREE
ODOUR THRESHOLD: NOT AVAILABLE
SPECIFIC GRAVITY: 1.07-1.11
VAPOUR PRESSURE : NOT AVAILABLE
VAPOUR DENSITY (AIR=1): NOT AVAILABLE
VOC CONTENT (%): 0.45-0.85 (EPA METHOD 24)
EVAPORATION RATE; NOT AVAILABLE
BOILING POINT: 100⁰ C (212⁰ F)
PH: 4-4.3
FREEZING POINT: NOT AVAILABLE
DENSITY (g/ ml): 1.07-1.11
COEFFICIENT OF WATER/OIL DISTRIBUTION: COMPLETELY WATER SOLUBLE

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE WHEN USED AND STORED AS DIRECTED.
INCOMPATIBLE MATERIALS: ALKALINE SOLUTIONS WILL NEUTRALIZE ACTIVE INGREDIENTS.
CONDITIONS OF REACTIVITY: NONE.
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON AND NITROGEN.

SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: MILD IRRITANT
SENSITIZATION TO MATERIAL: GLUCONIC ACID COMPONENT IS NOT A SKIN SENSITIZER
CARCINOGENICITY: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP.
REPRODUCTIVE EFFECTS: NO KNOWN REPRODUCTIVE EFFECTS.
TERATOGENICITY: SODIUM HYDROXIDE AND CITRIC ACID COMPONENTS ARE NOT EXPECTED TO BE TERATOGENIC.
MUTAGENICITY: SODIUM HYDROXIDE COMPONENT IS NOT MUTAGENIC IN AMES ASSAY AND IN SYRIAN HAMSTER EMBRYO (SA7/SHE) CELL TRANSFORMATION ASSAY. CITRIC ACID COMPONENT IS NOT EXPECTED TO BE MUTAGENIC.
TOXICOLOGICALLY SYNERGISTIC PRODUCTS: NOT AVAILABLE

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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.

AQUATIC TOXICITY:

FISH SPECIES DATA: SODIUM HYDROXIDE LC50, 48 HR, BLUEGILL SUNFISH: 300 mg/L
SODIUM HYDROXIDE LC50, 96 HR, MOSQUITO FISH: 740 mg/ L
SODIUM HYDROXIDE LC50, 24 HR, BROOK TROUT: 25 ppm
SODIUM HYDROXIDE LC50, RAINBOW TROUT: 1149 mg/ L
SODIUM HYDROXIDE LC50, 96 HR, RAINBOW TROUT: 45.4 mg/ L
SODIUM HYDROXIDE LC50, CHINOOK SALMON: 152 mg/ L
CITRIC ACID LC 50, 96 HR, BLUEGILL: 1516 mg/ L

INVERTEBRATES: CITRIC ACID LC 50, 96 HR, GOLDFISH 440 – 706 mg/ L
SODIUM HYDROXIDE. LC 50, 48 HR, SHRIMP: 33-100 ppm
SODIUM HYDROXIDE, LC 50, 48 HR, COCKLE: 220-1000 ppm
SODIUM HYDROXIDE, LC 100, 48 HR, DAPHNIA MAGNA: 156 mg/ L

MICROORGANISMS: CITRIC ACID EC 50, 15 MINUTES, PHOTOBACTERIUM PHOSPHOREUM: 14 mg/L

(GROWTH INHIBITION) PLANTS: NOT AVAILABLE

TOXICITY OF SODIUM HYDROXIDE COMPONENT IS PRIMARILY ASSOCIATED WITH PH. AQUATIC ORGANISMS BECOME INCREASING STRESSED AS PH EXCEEDS 9, WITH MANY ORGANISMS BEING INTOLERANT OF PH LEVELS IN EXCESS OF 10. TOXICITY OF CITRIC ACID COMPONENT IS PRIMARILY ASSOCIATED WITH PH. AQUATIC ORGANISMS BECOME INCREASING STRESSED AS PH BECOMES MORE ACIDIC.

BIODEGRADABILITY: GLUCONIC ACID COMPONENT IS READILY BIODEGRADABLE. SODIUM HYDROXIDE IS AN INORGANIC CHEMICAL AND ARE NOT AMENABLE TO BIODEGRADATION. IT HAS NO BOD.
CITRIC ACID BOD 5 = 0.528 mg/ Kg CITRIC ACID COD 5 = 0.728 mg/ Kg
CITRIC ACID BIODEGRADATION IS 98% AFTER 2 DAYS.

MOBILITY: NOT AVAILABLE

PERSISTENCE: NOT AVAILABLE

BIOACCUMULATIVE: SODIUM HYDROXIDE AND CITRIC ACID COMPONENTS DO NOT BIOACCUMULATE.

CHEMICAL FATE INFORMATION: NOT AVAILABLE

OTHER INFORMATION: NOT AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

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): 1,0,0, B

WHMIS CLASSIFICATION: D2B

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR(CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

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.