

SAFETY DATA SHEET

PRODUCT: REFLECTION

Page 1

SECTION 01: PRODUCT AND COMPANY INFORMATION

MANUFACTURER/SUPPLIER	LES INVESTISSEMENTS B.S.C. INC.
MANUFACTURER'S/SUPPLIERS ADDRESS.....	109 IBER RD., UNIT #3, OTTAWA, ON K2S 0X5 613-744-8896
PRODUCT NAME	REFLECTION
PRODUCT USE	COMMERCIAL DISHWASHER RINSE
EMERGENCY PHONE NUMBER.....	CANUTECH 613-996-6666

SECTION 02: HAZARDS IDENTIFICATION



ROUTE OF ENTRY:	
SKIN CONTACT	NOT A PRIMARY SKIN IRRITANT AFTER EXPOSURE OF SHORT DURATION.
SKIN ABSORPTION	N.A.V.
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/SYMPTOMS OF ACUTE EXPOSURE	EXPOSURE MAY OCCUR VIA INHALATION, INGESTION, SKIN ABSORPTION AND SKIN OR EYE CONTACT.
EFFECTS/SYMPTOMS OF CHRONIC EXPOSURE....	PROLONGED AND REPEATED CONTACT WITH SKIN CAN CAUSE DEFATTING AND DRYING OF THE SKIN RESULTING IN SKIN IRRITATION AND DERMATITIS.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.....	PRE-EXISTING EYE, SKIN AND RESPIRATORY CONDITIONS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS HAZARDS IDENTIFICATION

HAZARDOUS INGREDIENTS	C.A.S. #	%	TLV	LD50	LC50
ISOPROPYL ALCOHOL	67-63-0	10 - 30	200 PPM TWA-ACGIH 400 PPM STEL-ACGIH	12870 MG/KG (DERMAL, RABBIT) 4710 MG/KG (ORAL, RAT)	12000 PPM/8H (IHL, RAT)
POLYALKYLENE GLYCOL	9003-11-6	10 - 30	NONE ESTABLISHED.	> 4,000 Mg/Kg (ORAL, RAT), ESTIMATED. TYPICAL OF THIS FAMILY OF MATERIALS. > 10,000 MG/KG (DERMAL, RABBIT), ESTIMATED. TYPICAL OF THIS FAMILY OF MATERIALS.	N.A.V.

SECTION 04: FIRST AID MEASURES

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
--------------------	---

EYE CONTACT.....	WATER FOR 15 MINUTES. IF IRRITATION OCCURS AND PERSISTS, OBTAIN MEDICAL ATTENTION.
INHALATION.....	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.
INGESTION	REMOVE VICTIM FROM FURTHER EXPOSURE AND RESTORE BREATHING, IF REQUIRED. OBTAIN MEDICAL ATTENTION. 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.
NOTES TO PHYSICIAN.....	IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCURS BEFORE VOMITING, GASTRIC LAVAGE WITH A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED. METABOLISM OF ISOPROPANOL 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.

SECTION 05: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY	FLAMMABLE
MEANS OF EXTINCTION/EXTINGUISHING MEDIA: ..	DRY CHEMICAL, CARBON DIOXIDE, ALCOHOL FOAM, WATER FOG.
FLASH POINT.....	39.3 (C)
UPPER FLAMMABLE LIMIT (% BY VOLUME).....	N.AV.
LOWER FLAMMABLE LIMIT (% BY VOLUME).....	N.AV.
AUTO-IGNITION TEMPERATURE	N.AV.
SPECIAL FIRE FIGHTING PROCEDURES.....	FIRE FIGHTERS SHOULD WEAR FULL PROTECTIVE CLOTHING, INCLUDING SELF-CONTAINED BREATHING EQUIPMENT.
UNUSUAL FIRE AND EXPLOSION HAZARDS.....	N.AV.
EXPLOSION DATA.....	N.AV.
SENSITIVITY TO MECHANICAL IMPACT	N.AV.
SENSITIVITY TO STATIC DISCHARGE	N.AV.
HAZARDOUS COMBUSTION PRODUCTS	CARBON MONOXIDE AND CARBON DIOXIDE ARE PRODUCED ON COMBUSTION.

SECTION 06: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES.....	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.
----------------------------------	--

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT.....	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. LAUNDRER CONTAMINATED CLOTHING PRIOR TO REUSE. USE GOOD PERSONAL HYGIENE. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA BEFORE LAUNDERING.

STORAGE REQUIREMENTS.....

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 AND PERSONAL PROTECTION

ENGINEERING CONTROL.....

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.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION

IMPERVIOUS GLOVES (VITON, NITRILE) SHOULD BE WORN AT ALL TIMES WHEN HANDLING THIS PRODUCT. IMPERVIOUS CLOTHING (APRON, COVERALLS) SHOULD ALSO BE WORN IN CONFINED WORKSPACES OR WHERE THE RISK OF SKIN EXPOSURE IS MUCH HIGHER.

EYE/FACE PROTECTION.....

CHEMICAL SAFETY GOGGLES SHOULD BE WORN.

RESPIRATORY PROTECTION

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.

WORK/HYGIENE PRACTICES

PROVIDE AN EYEWASH STATION IN THE AREA. SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....

LIQUID

APPEARANCE & ODOUR.....

BLUE COLOUR – ALCOHOL ODOUR

ODOUR THRESHOLD.....

N.AV.

SPECIFIC GRAVITY.....

~ 0.981

VAPOUR PRESSURE (MMHG).....

N.AV.

VAPOUR DENSITY (AIR=1).....

N.AV.

EVAPORATION RATE.....

N.AV.

BOILING POINT.....

97°C

FREEZING/MELTING POINT

-6°C

PH.....

8

SOLUBILITY IN WATER (% W/W).....

SOLUBLE.

COEFFICIENT OF WATER/OIL DISTRIBUTION

N.AV.

SECTION 10: STABILITY AND REACTIVITY

STABILITY	STABLE UNDER NORMAL OPERATING CONDITIONS.
CONDITIONS TO AVOID.....	AVOID EXCESSIVE HEAT, OPEN FLAMES AND ALL IGNITION SOURCES. ISOPROPYL ALCOHOL IN CONTACT WITH AIR, PRODUCES PEROXIDES WHICH CAN EXPLODE WHEN CONCENTRATED.
INCOMPATIBILITY (MATERIALS TO AVOID).....	AVOID CONTACT WITH STRONG OXIDIZING AGENTS AND ACIDS. ALUMINUM AT HIGH TEMPERATURES.
HAZARDOUS DECOMPOSITION PRODUCT.....	SEE HAZARDOUS COMBUSTION PRODUCTS.
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMITS.....	SEE SECTION 3.
IRRITANCY OF MATERIAL	SEE SECTION 2.
SENSITIZATION TO PRODUCT	N.AV.
CARCINOGENICITY.....	ISOPROPYL ALCOHOL: IARC – GROUP 3.
REPRODUCTIVE TOXICITY	N.AV.
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.
MUTAGENICITY	ISOPROPYL ALCOHOL TESTED NEGATIVE IN TWO MUTAGENICITY ASSAYS; THE MOUSE MICRONUCLEUS AND CHINESE HAMSTER OVARY ASSAYS.
TOXICOLOGICAL SYNERGISTIC PRODUCTS.....	N.AV.
CHRONIC TOXICITY	N.AV.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION	N.AV.
OTHER INFORMATION.....	N.AV.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL.....	IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.
---------------------	---

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME.....	N.AP.
TDG CLASSIFICATION	NOT REGULATED
UN NUMBER	N.AP
PACKGING GROUP	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 CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION	PREPARED BY: REGULATORY AFFAIRS, TELEPHONE - (613)-744-8896 PREPARATION DATE: JULY1, 2016
-------------------------------	--

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