



MURSATT CHEMICALS LIMITED
11 REGALCREST COURT
WOODBIDGE; ONTARIO, CANADA; L4L 8P3
(905)-850-8444

PRODUCT: 4-L-G

CODE: MUR0036

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER..... MURSATT CHEMICALS LIMITED
11 REGALCREST COURT
WOODBIDGE, ONTARIO
CANADA
L4L 8P3
PREPARED BY..... REGULATORY AFFAIRS
PREPARATION DATE..... Jun01/08
PRODUCT NAME..... 4-L-G
PRODUCT CODE..... MUR0036
CHEMICAL FORMULA..... MIXTURE.
MOLECULAR WEIGHT..... MIXTURE.
CHEMICAL FAMILY..... N.AV.
MATERIAL USE..... MICROBICIDE CONCENTRATE.
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

Section 02: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route, Species	LC/50 Route, Species
1,2-ETHANEDIAMINE,N,N,N',N',-TETRAMETHYL, POLYMER WITH 1,1'-OXYBIS (2-CHLOROETHANE)	30-60	N.AV.	31075-24-8	N.AV.	N.AV.

Section 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... NON-IRRITATING TO THE SKIN.
SKIN ABSORPTION
EYE CONTACT..... MIID IRRITANT. EFFECTS MAY VARY DEPENDING ON THE LENGTH OF EXPOSURE SOLUTION CONCENTRATION AND FIRST AID MEASURES.
INHALATION..... MAY CAUSE IRRITATION OF MUCOUS MEMBRANES AND LUNGS.
INGESTION..... INGESTION IS NOT EXPECTED TO BE A PRIMARY ROUTE OF EXPOSURE.
EFFECTS OF ACUTE EXPOSURE..... SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE..... THE EFFECTS FROM CHRONIC EXPOSURE TO THIS PRODUCT HAVE NOT BEEN FULLY EVALUATED.
INHALATION, CHRONIC..... N.AV.

Section 04: FIRST AID MEASURES

EYE CONTACT..... NO EFFECTS EXPECTED. IF IRRITATION DOES OCCUR, FLUSH CONTAMINATED EYE(S) WITH LUKEWARM, GENTLY FLOWING WATER OR 5 MINUTES OR UNTIL THE CHEMICAL IS REMOVED. IF IRRITATION PERSISTS, OBTAIN MEDICAL ADVICE.
SKIN CONTACT..... NO HEALTH EFFECTS EXPECTED. IF IRRITATION DOES OCCUR, FLUSH WITH LUKEWARM, GENTLY FLOWING WATER FOR 5 MINUTES OR UNTIL CHEMICAL IS REMOVED. IF IRRITATION PERSISTS, OBTAIN MEDICAL ADVICE. .
INGESTION..... NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS RAPIDLY LOSING CONSCIOUSNESS, OR IS UNCONSCIOUS OR CONVULSING. HAVE VICTIM RINSE MOUTH THOROUGHLY WITH WATER, DO NOT INDUCE VOMITING, HAVE VICTIM DRINK 240 TO 300 ML (8 TO 10 OZ.) OF WATER TO DILUTE MATERIAL IN STOMACH. IF VOMITING OCCURS NATURALLY, RINSE MOUTH AND REPEAT ADMINISTRATION OF WATER. IF BREATHING IS DIFFICULT, OXYGEN MAY BE BENEFICIAL IF ADMINISTERED BY TRAINED PERSONNEL, PREFERABLY ON A DOCTOR'S ADVICE. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
INHALATION..... USE PROPER RESPIRATORY PROTECTION TO IMMEDIATELY MOVE EXPOSED INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, OXYGEN MAY BE BENEFICIAL IF ADMINISTERED BY TRAINED PERSONNEL, PREFERABLY ON A DOCTOR'S ADVICE. IF BREATHING IS STOPPED, TRAINED PERSONNEL SHOULD BEGIN ARTIFICIAL RESPIRATION (AR) OR, IF THE HEART HAS STOPPED, CARDIOPULMONARY RESUSCITATION (CPR) IMMEDIATELY. AVOID MOUTH TO MOUTH CONTACT BY USING MOUTH GUARDS OR SHIELDS. IMMEDIATELY TRANSPORT VICTIM TO AN EMERGENCY CARE FACILITY.
NOTES TO PHYSICIAN..... N.AV.

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Section 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS..... NON FLAMMABLE.
 FLAMMABILITY..... NON FLAMMABLE.
 IF YES, UNDER WHICH CONDITIONS?..... WILL NOT BURN UNLESS WATER HAS EVAPORATED.
 EXTINGUISHING MEDIA..... USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL. WATER FOG, CARBON DIOXIDE, FOAM OR DRY CHEMICAL MAY BE USED TO EXTINGUISH FIRE.
 SPECIAL PROCEDURES..... WEAR NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS (SUCH AS "SCOTT AIR-PAK") AND FULL PROTECTIVE GEAR. ISOLATE "FUEL" SUPPLY FROM FIRE.
 FLASH POINT (C), METHOD..... >100C/212F TAG CLOSED CUP.
 AUTO IGNITION TEMPERATURE..... NOT DETERMINED.
 UPPER FLAMMABLE LIMIT (% BY VOL.)... NOT DETERMINED.
 LOWER FLAMMABLE LIMIT (% BY VOL.)... NOT DETERMINED.
 EXPLOSION DATA..... N.AV.
 EXPLOSIVE POWER..... N.AV.
 RATE OF BURNING..... N.AV.
 SENSITIVITY TO STATIC DISCHARGE..... NONE KNOWN.
 SENSITIVITY TO IMPACT..... NONE KNOWN.
 HAZARDOUS COMBUSTION PRODUCTS.. UNKNOWN. CARBON MONOXIDE MAY BE RELEASED ON BURNING.

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL..... BEFORE RESPONDING TO A SPILL OR LEAK OF THIS PRODUCT, REVIEW EACH SECTION OF THIS MSDS. FOLLOW THE RECOMMENDATIONS GIVEN IN THE "HANDLING PROCEDURES AND EQUIPMENT" SECTION. CHECK THE "FIRE AND EXPLOSION HAZARDS" SECTION TO DETERMINE IF THE USE OF NON-SPARKING TOOLS IS MERITED. INSURE THAT SPILLED OR LEAKED PRODUCT DOES NOT COME INTO CONTACT WITH MATERIALS LISTED AS INCOMPATIBLE. IF IRRITATING FUMES ARE PRESENT, CONSIDER EVACUATION OF AFFECTED AREAS. INITIALLY MINIMIZE AREA AFFECTED BY THE SPILL OR LEAK. BLOCK ANY POTENTIAL ROUTES TO WATER SYSTEMS. PLACE IN A PROPERLY LABELED CONTAINER FOR LATER DISPOSAL. LARGER SPILLS MAY REQUIRE A VACUUM.

Section 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT DO NOT HANDLE UNLESS THE SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. AVOID SKIN AND EYE CONTACT. AVOID INHALATION OF DUST OR VAPOURS. DO NOT PUNCTURE, DRAG OR SLIDE CONTAINERS. DO NOT SMOKE IN ANY CHEMICAL HANDLING OR STORAGE AREA. WASH HANDS BEFORE EATING.
 STORAGE NEEDS..... STORE IN A DRY WELL-VENTILATED LOCATION. PROTECT FROM FREEZING. KEEP CONTAINERS TIGHTLY CLOSED. STORE AWAY FROM INCOMPATIBLE MATERIALS AND IGNITION SOURCES.

Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE..... GLOVES.
 RESPIRATORY/TYPE..... IF MISTING CAN OCCUR, A NIOSH APPROVED FULL MASK RESPIRATOR FOR ORGANIC VAPOR IS REQUIRED. THE LOCAL EHS (ENVIRONMENTAL HEALTH AND SAFETY) PROFESSIONAL MUST IDENTIFY AND EVALUATE THE RESPIRATORY HAZARDS IN THE WORKPLACE. BASED ON THIS EVALUATION, THE EHS PROFESSIONAL MUST SELECT THE APPROPRIATE RESPIRATORY TYPE AND/OR FILTER AS REQUIRED.
 EYE/TYPE..... SAFETY GLASSES.
 FOOTWEAR/TYPE..... WEAR CHEMICAL RESISTANT FOOTWEAR.
 CLOTHING/TYPE..... SAFETY PROTECTIVE CLOTHING SUCH AS WORK COVERALLS OR LONG SLEEVE SHIRT AND TROUSERS IS REQUIRED.
 OTHER/TYPE..... AN EMERGENCY SHOWER COMPLETE WITH EYE-WASH FOUNTAIN IS STRONGLY RECOMMENDED.
 ENGINEERING CONTROLS..... GENERAL MECHANICAL VENTILATION SYSTEM IS ADEQUATE. HOWEVER. LOCAL EXHAUST SYSTEM IS PREFERRED TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS, WHENEVER MISTING CONDITIONS ARE PRESENT OR THE MATERIAL IS USED IN A CONFINED SPACE.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... CLEAR, PALE BROWN LIQUID.
 ODOUR..... MILD.
 ODOUR THRESHOLD..... NOT DETERMINED.
 VAPOUR PRESSURE (MMHG)..... N.AV.
 VAPOUR DENSITY (AIR=1)..... N.AV.
 BY VOLUME..... N.AV.
 BY WEIGHT..... N.AV.

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Section 09: PHYSICAL AND CHEMICAL PROPERTIES

EVAPORATION RATE..... N.AV.
 BOILING POINT..... >100 C.
 FREEZING/MELTING POINT..... N.AV.
 PH..... N.AV.
 SPECIFIC GRAVITY (WATER=1)..... 1.10.
 SOLUBILITY IN WATER (% W/W)..... COMPLETELY SOLUBLE.
 COEFFICIENT OF WATER/OIL DIST..... N.AV.

Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:
 YES..... STABLE UNDER NORMAL CONDITIONS OF USE AND STORAGE. .
 NO, WHICH CONDITIONS?
 CONDITIONS TO AVOID..... CONTACT WITH ICOMPATIBLES.
 COMPATABILITY WITH OTHER
 SUBSTANCES:
 YES
 NO, WHICH ONES?..... ANIONIC POLYMERS.
 REACTIVITY CONDITIONS..... CONTACT WITH INCOMPATIBLES.
 HAZARDOUS PRODUCTS OF UNKNOWN BUT CARBON MONOXIDE MAY BE RELEASED ON BURNING.
 DECOMPOSITION
 HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL..... N.AV.
 LC 50 OF MATERIAL, SPECIES & ROUTE.. ACUTE INHALATION LC50: 2.9 MG/L (RAT), (4 HRS).
 LD 50 OF MATERIAL, SPECIES & ROUTE.. ACUTE ORAL LD50: 1951 MG/KG (MALE RAT). ACUTE DERMAL LD50: > 2000 MG/KG (RABBIT).
 CARCINOGENICITY OF MATERIAL..... NOT LISTED IN ANY OF OSHA STANDARDS SECTION 1910,1200 SOURCES AS CARCINOGENIC. A TWO YEAR RAT CARCINOGENICITY STUDY SHOWED A SLIGHT INCREASE IN C-CELL ADENOMAS IN FEMALE RALS, STUDIES WITH MALE RATS AND MALE AND FEMALE MICE DID NOT SHOW ANY EVIDENCE OF CARCINOGENIC RESPONSE, THIS PRODUCT IS NOT CONSIDERED A CARCINOGEN.
 REPRODUCTIVE EFFECTS..... NONE KNOWN.
 IRRITANCY OF MATERIAL..... MILD TRANSIENT IRRITATION.
 SENSITIZING CAPABILITY OF MATERIAL. N.AV.
 SYNERGISTIC MATERIALS..... NONE KNOWN.
 MUTAGENICITY..... NONE KNOWN.
 TERATOGENICITY..... NONE KNOWN.

Section 12: ECOLOGICAL CONSIDERATIONS

ECOLOGICAL INFORMATION..... N.AV.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

Section 14: TRANSPORT INFORMATION

TDG CLASSIFICATION..... NOT REGULATED.
 UN NUMBER..... N.AP.
 PACKING GROUP..... N.AP.
 SPECIAL SHIPPING INSTRUCTIONS..... NOT REGULATED.

Section 15: REGULATORY INFORMATION

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.
 WHMIS CLASSIFICATION..... THIS IS NOT A WHMIS CONTROLLED PRODUCT.

Section 16: OTHER INFORMATION

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

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Section 16: OTHER INFORMATION

OTHER INFORMATION..... THE DATA IN THIS MSDS RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS. THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.