



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

PRODUCT: BUFFER

CODE: MUR0034

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..... May25/11
PRODUCT NAME..... BUFFER
PRODUCT CODE..... MUR0034
CHEMICAL FORMULA..... N.AV.
MOLECULAR WEIGHT..... N.AV.
CHEMICAL FAMILY..... N.AV.
MATERIAL USE..... N.AV.
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

Section 02: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... NO SIGNIFICANT EFFECTS ANTICIPATED.
SKIN ABSORPTION..... N.AV.
EYE CONTACT..... NO SIGNIFICANT EFFECTS ANTICIPATED.
INHALATION..... NO SIGNIFICANT EFFECTS ANTICIPATED.
INGESTION..... NO SIGNIFICANT EFFECTS ANTICIPATED.
EFFECTS OF ACUTE EXPOSURE..... SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE..... SEE ABOVE.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
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NONE

Section 04: FIRST AID MEASURES

EYE CONTACT..... FLUSH WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF IRRITATION OCCURS AND PERSISTS.
SKIN CONTACT..... WASH WITH PLENTY OF SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION OCCURS AND PERSISTS.
INGESTION..... DRINK PLENTY OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF ANY DISCOMFORT PERSISTS, OBTAIN MEDICAL ATTENTION. .
INHALATION..... REMOVE TO FRESH AIR. IF BREATHING DIFFICULTY OR DISCOMFORT OCCURS AND PERSISTS, OBTAIN MEDICAL ATTENTION. .
NOTES TO PHYSICIAN..... INTERNAL TOXICITY IS LOW. TREATMENT IS SYMPTOMATIC AND SUPPORTIVE. .

Section 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS..... NON FLAMMABLE.
FLAMMABILITY..... NON FLAMMABLE.
IF YES, UNDER WHICH CONDITIONS?
EXTINGUISHING MEDIA..... WATER, WATER FOG, CARBON DIOXIDE (CO2), DRY CHEMICAL.
SPECIAL PROCEDURES..... N.AV.
FLASH POINT (C), METHOD..... N.AP.
AUTO IGNITION TEMPERATURE..... N.AP.
UPPER FLAMMABLE LIMIT (% BY VOL.).... N.AP.
LOWER FLAMMABLE LIMIT (% BY VOL.)... N.AP.
EXPLOSION DATA..... N.AV.
EXPLOSIVE POWER..... N.AV.
RATE OF BURNING..... N.AV.
OXIDIZING PROPERTIES..... N.AP.
SENSITIVITY TO STATIC DISCHARGE..... NONE.
SENSITIVITY TO IMPACT..... NONE.
HAZARDOUS COMBUSTION PRODUCTS.. NONE.

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Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL..... CLEAN-UP: THIS PRODUCT, IF SPILLED, CAN BE RECOVERED AND RE-USED IF CONTAMINATION DOES NOT PRESENT A PROBLEM. VACUUM OR SWEEP UP THE MATERIAL.

Section 07: HANDLING AND STORAGE

HANDLING..... USE AIR CONVEYING/MECHANICAL SYSTEMS FOR BULK TRANSFER TO STORAGE. FOR MANUAL HANDLING OF BULK TRANSFER USE MECHANICAL VENTILATION TO REMOVE AIRBORNE DUST FROM RAILCAR, SHIP OR TRUCK. USE APPROVED RESPIRATORY PROTECTION WHEN VENTILATION SYSTEMS ARE NOT AVAILABLE. SELECTION OF RESPIRATORS IS BASED ON THE DUST CLOUD GENERATED. .

STORAGE..... PROTECT FROM EXCESSIVE HEAT AND MOISTURE. STORE AWAY FROM ACIDS.

COMMENTS..... USE GENERAL ROOM DILUTION OR LOCAL EXHAUST VENTILATION WHEN EXCESSIVE DUST IS EXPECTED IN THE WORK ENVIRONMENT. .

Section 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

GLOVES/ TYPE..... SEE BELOW.

RESPIRATORY/TYPE..... WHENEVER DUST IN THE WORKER'S BREATHING ZONE CANNOT BE CONTROLLED WITH VENTILATION OR OTHER ENGINEERING MEANS, WORKERS SHOULD WEAR RESPIRATORS OR DUST MASKS APPROVED BY NIOSH/MSHA, EU CEN OR COMPARABLE CERTIFICATION ORGANIZATION TO PROTECT THEM AGAINST AIRBORNE DUST. .

EYE/TYPE..... APPROPRIATE EYE AND FACE PROTECTION EQUIPMENT (ANSI Z87 APPROVED) SHOULD BE SELECTED FOR THE PARTICULAR USE INTENDED FOR THIS MATERIAL. SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED. .

FOOTWEAR/TYPE
CLOTHING/TYPE..... DRY PRODUCT IS GENERALLY NON-IRRITATING TO INTACT SKIN. HOWEVER, THIS PRODUCT CAN BE IRRITATING WHERE SKIN HAS BEEN DAMAGED AND CAN CREATE SKIN IRRITATION AFTER LONG EXPOSURES WHEN MOISTURE IS PRESENT. UNDER SUCH CONDITIONS, GLOVES AND LONG-SLEEVED CLOTHING ARE RECOMMENDED TO MINIMIZE SKIN CONTACT. .

OTHER/TYPE..... N.AV.

ENGINEERING CONTROLS..... WHERE POSSIBLE, PROVIDE GENERAL MECHANICAL AND/OR LOCAL EXHAUST VENTILATION TO PREVENT RELEASE OF AIRBORNE DUST INTO THE WORK ENVIRONMENT. .

COMMENTS..... ADDITIONAL EXPOSURE GUIDELINES: FEDERAL GUIDELINES TREAT THE INGREDIENT(S) IN THIS PRODUCT AS A NUISANCE DUST, AS NO PRODUCT-SPECIFIC GUIDELINES HAVE BEEN ISSUED FOR EXPOSURE. AS WITH ALL NUISANCE DUSTS, WORKER BREATHING ZONE CONCENTRATIONS SHOULD BE MEASURED BY VALIDATED SAMPLING AND ANALYTICAL METHODS. THE FOLLOWING LIMITS (OSHA AND MSHA) APPLY TO THIS MATERIAL. . THE INFORMATION NOTED ABOVE PROVIDES GENERAL GUIDANCE FOR HANDLING THIS PRODUCT. SPECIFIC WORK ENVIRONMENTS AND MATERIAL HANDLING PRACTICES WILL DICTATE THE SELECTION AND USE OF PERSONAL PROTECTION EQUIPMENT (PPE). . PARTICULATES NOT OTHERWISE REGULATED: OSHA (PEL / TWA): 15 MG/M³ (TOTAL DUST); 5 MG/M³ (RESP FRACTION) MSHA (PEL / TWA): 10 MG/M³ (TOTAL DUST) .

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... WHITE, GRANULAR SOLID.

ODOUR..... ODOURLESS.

ODOUR THRESHOLD..... N.AP.

VAPOUR PRESSURE (MMHG)..... N.AP.

VAPOUR DENSITY (AIR=1)
BY VOLUME..... N.AP.

BY WEIGHT..... N.AP.

EVAPORATION RATE..... N.AP.

BOILING POINT..... N.AP.

PH..... 8.3 (1% SOLUTION).

SPECIFIC GRAVITY (WATER=1)..... 2.20.

DENSITY (G/ML)..... 0.88.

SOLUBILITY IN WATER (% W/W)..... @ 20°C (68°F): 9.0.

COEFFICIENT OF WATER/OIL DIST..... N.AV.

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Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:
 YES..... YES.
 NO, WHICH CONDITIONS?
 CONDITIONS TO AVOID..... CONTACT WITH ACIDS EXCEPT UNDER CONTROLLED CONDITIONS. .
 COMPATABILITY WITH OTHER
 SUBSTANCES:
 YES
 NO, WHICH ONES?..... REACTS WITH ACIDS TO RELEASE CARBON DIOXIDE GAS AND HEAT. .
 HAZARDOUS PRODUCTS OF NONE.
 DECOMPOSITION
 HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL..... U.S. FEDERAL GUIDELINES TREAT THE INGREDIENT(S) IN THIS PRODUCT AS A NUISANCE DUST, AS NO PRODUCT-SPECIFIC GUIDELINES HAVE BEEN ISSUED FOR EXPOSURE. AS WITH ALL NUISANCE DUSTS, WORKER BREATHING ZONE CONCENTRATIONS SHOULD BE MEASURED BY VALIDATED SAMPLING AND ANALYTICAL METHODS. THE FOLLOWING LIMITS (OSHA AND MSHA) APPLY TO THIS MATERIAL - PARTICULATES NOT OTHERWISE REGULATED: OSHA (PEL / TWA): 15 MG/M³ (TOTAL DUST); 5 MG/M³ (RESP FRACTION). MSHA (PEL / TWA): 10 MG/M³ (TOTAL DUST). THE INFORMATION NOTED ABOVE PROVIDES GENERAL GUIDANCE FOR HANDLING THIS PRODUCT. SPECIFIC WORK ENVIRONMENTS AND MATERIAL HANDLING PRACTICES WILL DICTATE THE SELECTION AND USE OF PERSONAL PROTECTION EQUIPMENT (PPE).

LC 50 OF MATERIAL, SPECIES & ROUTE.. NO TEST DATA FOUND FOR PRODUCT.
 LD 50 OF MATERIAL, SPECIES & ROUTE.. ORAL: 20% SLURRY: 4,300 MG/KG (RAT); 50 % SLURRY: 6,000 MG/KG (RAT). .
 DERMAL: NO DATA AVAILABLE FOR THE PRODUCT.

ACUTE EFFECTS FROM OVEREXPOSURE THIS PRODUCT, WHEN DRY, IS GENERALLY NON-IRRITATING TO INTACT SKIN. HOWEVER, WHEN MOISTURE IS PRESENT, IT CAN BE IRRITATING TO DAMAGED SKIN AND CAN CREATE IRRITATION AFTER LONG EXPOSURES. THIS PRODUCT IS APPROVED FOR USE AS A FOOD INGREDIENT AND IS GENERALLY RECOGNIZED AS SAFE (GRAS). NO SIGNIFICANT ACUTE TOXICOLOGICAL EFFECTS EXPECTED. .

CHRONIC EFFECTS FROM ADMINISTRATION OF LARGE DOSES OF THIS PRODUCT TO PATIENTS WITH OVEREXPOSURE RENAL INSUFFICIENCY CAN PRODUCE SYSTEMIC ALKALOSIS. .
 CARCINOGENICITY OF MATERIAL..... NTP: NOT LISTED; IARC: NOT LISTED; OSHA: NOT LISTED; OTHER: (ACGIH) NOT LISTED. .

REPRODUCTIVE EFFECTS..... N.AV.
 IRRITANCY OF MATERIAL..... EYE EFFECTS: NON-IRRITATING (RABBIT), J. AMER. COLL. TOXICOL. 1987. SKIN EFFECTS: NON-IRRITATING (RABBIT), J. AMER. COLL. TOXICOL. 1987.

SENSITIZING CAPABILITY OF MATERIAL. N.AV.
 SYNERGISTIC MATERIALS..... N.AV.

Section 12: ECOLOGICAL CONSIDERATIONS

ECOLOGICAL INFORMATION..... 48 HR LC50 = 2000 MG/L (CULEX SP. LARVAE OR MOSQUITO) .
 CHEMICAL FATE INFORMATION..... NO DATA AVAILABLE FOR THE PRODUCT.

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.

Section 15: REGULATORY INFORMATION

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

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Section 16: OTHER INFORMATION

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