



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

PRODUCT: NU-BLU

CODE: MUR0041

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..... May06/14
PRODUCT NAME..... NU-BLU
PRODUCT CODE..... MUR0041
CHEMICAL FORMULA..... N.AV.
MOLECULAR WEIGHT..... N.AV.
CHEMICAL FAMILY..... N.AV.
MATERIAL USE..... COAGULANT FOR THE TREATMENT OF SWIMMING POOLS AND SPA WATERS.
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

Section 02: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... CAUSES MODERATE SKIN IRRITATION.
SKIN ABSORPTION..... N.AV.
EYE CONTACT..... CAUSES EYE IRRITATION.
INHALATION..... MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT.
INGESTION..... GASTROINTESTINAL IRRITATION.
EFFECTS OF ACUTE EXPOSURE..... SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE..... REPEATED OR PROLONGED SKIN CONTACT MAY CAUSE: SKIN IRRITATION DRY SKIN. MAY CAUSE IRREVERSIBLE EYE DAMAGE.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
ALUMINUM CHLORIDE HYDROXIDE SULFATE	30-35	SEE SECTION 11	39290-78-3	SEE SECTION 11	SEE SECTION 11

Section 04: FIRST AID MEASURES

EYE CONTACT..... RINSE IMMEDIATELY WITH PLENTY OF WATER, ALSO UNDER THE EYELIDS, FOR AT LEAST 10 MINUTES. IF POSSIBLE USE LUKEWARM WATER. SEEK MEDICAL ADVICE.
SKIN CONTACT..... WASH OFF IMMEDIATELY WITH PLENTY OF WATER REMOVING ALL CONTAMINATED CLOTHES AND SHOES. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS AND PERSISTS.
INHALATION..... IF BREATHING IS DIFFICULT, REMOVE TO FRESH AIR AND PROVIDE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. SEEK MEDICAL ATTENTION IF COUGH OR OTHER SYMPTOMS DEVELOP.
INGESTION..... DO NOT INDUCE VOMITING WITHOUT MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DRINK 1 OR 2 GLASSES OF WATER. OBTAIN MEDICAL ATTENTION.
NOTES TO PHYSICIAN..... N.AV.

Section 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS..... NOT REGULATED.
FLAMMABILITY..... NON FLAMMABLE.
EXTINGUISHING MEDIA..... USE EXTINGUISHING MEASURES THAT ARE APPROPRIATE TO LOCAL CIRCUMSTANCES AND THE SURROUNDING ENVIRONMENT.
SPECIAL FIREFIGHTING PROCEDURES... WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE SUIT.
FLASH POINT (C), METHOD..... N.AP.
AUTO IGNITION TEMPERATURE..... N.AV.
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..... DOES NOT BURN.
SENSITIVITY TO STATIC DISCHARGE..... NONE.
SENSITIVITY TO IMPACT..... NONE.
HAZARDOUS COMBUSTION PRODUCTS.. ALUMINIUM COMPOUNDS, SULPHUR OXIDES, HYDROGEN CHLORIDE.

PRODUCT: NU-BLU

CODE: MUR0041

Section 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS..... WEAR PERSONAL PROTECTIVE EQUIPMENT.
 ENVIRONMENTAL PRECAUTIONS..... SHOULD NOT BE RELEASED INTO THE SOIL, SURFACE WATER OR GROUND WATER SYSTEM. MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS.
 METHODS FOR CLEANING UP..... SMALL AMOUNTS: ABSORB WITH MATERIALS SUCH AS; CLAY. OR NEUTRALIZE WITH LIME OR SODA. COLLECT FOR SUBSEQUENT DISPOSAL. LARGE AMOUNTS: IN CASE OF LARGE SPILLAGE, CONTAIN BY DAMMING UP. COLLECT BY PUMP OR WITH SUITABLE INERT ABSORBENT MATERIAL. NEUTRALIZE WITH LIME OR SODA. FLUSH AWAY TRACES WITH WATER.

Section 07: HANDLING AND STORAGE

HANDLING..... AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH CONTACT AREAS AFTER HANDLING.
 STORAGE..... STORE IN ORIGINAL CONTAINER. FOLLOW ALL MSDS/LABEL PRECAUTIONS EVEN AFTER CONTAINER IS EMPTIED BECAUSE THEY MAY RETAIN PRODUCT RESIDUES. STORE IN CORROSIVE RESISTANT STAINLESS STEEL CONTAINER WITH A RESISTANT INNER LINER. PLASTIC WITH FIBERGLASS REINFORCEMENT OR PLASTIC. KEEP CONTAINERS TIGHTLY CLOSED IN A COOL, WELL-VENTILATED PLACE.
 MATERIALS FOR PACKAGING..... SUITABLE MATERIAL: BUTYL-RUBBER, PLASTIC.

Section 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

GLOVES/ TYPE..... WEAR PROTECTIVE GLOVES.
 RESPIRATORY/TYPE..... WHEN THERE IS POTENTIAL FOR AIRBORNE EXPOSURES IN EXCESS OF APPLICABLE LIMITS, WEAR NIOSH/MSHA APPROVED RESPIRATORY PROTECTION.
 EYE/TYPE..... TIGHTLY FITTING SAFETY GOGGLES OR FACE-SHIELD.
 FOOTWEAR/TYPE..... PROTECTIVE FOOTWEAR.
 CLOTHING/TYPE..... WEAR SUITABLE PROTECTIVE CLOTHING.
 OTHER/TYPE..... ENSURE ADEQUATE VENTILATION. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.
 ENGINEERING CONTROLS..... PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... CLEAR BLUE LIQUID.
 ODOUR..... SLIGHT.
 ODOUR THRESHOLD..... N.AV.
 VAPOUR PRESSURE (MMHG)..... N.AV.
 VAPOUR DENSITY (AIR=1)..... 1.3.
 EVAPORATION RATE..... N.AV.
 BOILING POINT..... 102 (C).
 FREEZING POINT..... -12 (C).
 PH..... 1.8 - 3.4.
 SPECIFIC GRAVITY (WATER=1)..... 1.16 - 1.30.
 SOLUBILITY IN WATER (% W/W)..... COMPLETE.
 COEFFICIENT OF WATER/OIL DIST..... N.AV.

Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY..... STABLE.
 CONDITIONS TO AVOID..... AVOID EXTREME TEMPERATURES.
 MATERIALS TO AVOID..... IRON, STEEL, METALS (INCLUDING THEIR ALLOYS). CORRODES BASE METALS. CARBON STEEL, ALUMINIUM, CARBON, BRASS, NYLON, MINERAL ACIDS, BASES, ALKALINE MATERIALS.
 HAZARDOUS PRODUCTS OF DECOMPOSITION..... SULPHUR OXIDES (SOX), ALUMINIUM OXIDE, HYDROGEN CHLORIDE GAS.
 HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL..... NONE ESTABLISHED.
 LC 50 OF MATERIAL, SPECIES & ROUTE.. ALUMINIUM CHLORIDE HYDROXIDE SULFATE: LC50/INHALATION/4 H/RAT: > 5 MG/L.
 LD 50 OF MATERIAL, SPECIES & ROUTE.. ALUMINIUM CHLORIDE HYDROXIDE SULFATE: LD50/ORAL/RAT: 2,360 MG/KG; LD50/DERMAL/RAT/MALE AND FEMALE: > 2,000 MG/KG.
 CARCINOGENICITY OF MATERIAL..... ALUMINIUM CHLORIDE HYDROXIDE SULFATE. IARC: NOT LISTED.
 REPRODUCTIVE EFFECTS..... ALUMINIUM CHLORIDE HYDROXIDE SULFATE: ORAL/RAT/FEMALE/REPRODUCTIVE EFFECTS/OECD TEST GUIDELINE 452: NOAEL: 3,225 MG/KG; NOAEL F1: REMARKS:

PRODUCT: NU-BLU

CODE: MUR0041

Section 11: TOXICOLOGICAL INFORMATION

REPRODUCTIVE EFFECTS..... READ-ACROSS (ANALOGY) CAS-NO. 31142-56-0, NO KNOWN EFFECT. ORAL/RAT/MALE AND FEMALE/SCREENING TEST/OECD TEST GUIDELINE 422: NOAEL: 1,000 MG/KG; NOAEL F1: REMARKS: READ-ACROSS (ANALOGY) 1327-41-9 NO KNOWN EFFECT. NOT BELIEVED TO BE TOXIC FOR REPRODUCTION.

IRRITANCY OF MATERIAL..... ALUMINIUM CHLORIDE HYDROXIDE SULFATE: SKIN: RABBIT/OECD TEST GUIDELINE 404: NO IRRITATING EFFECTS. EYES: RABBIT/72 H/OECD TEST GUIDELINE 405: NO EYE IRRITATION.

SENSITIZING CAPABILITY OF MATERIAL. ALUMINIUM CHLORIDE HYDROXIDE SULFATE: GUINEA PIG/OECD TEST GUIDELINE 406 REMARKS: READ-ACROSS (ANALOGY) CAS-NO. 12042-91-0 NOT SENSITIZING.

SYNERGISTIC MATERIALS..... N.AV.

MUTAGENICITY..... ALUMINIUM CHLORIDE HYDROXIDE SULFATE: MUTAGENICITY (SALMONELLA TYPHIMURIUM - REVERSE MUTATION ASSAY)/AMES TEST/OECD TEST GUIDELINE 471: RESULT: NEGATIVE, METABOLIC ACTIVATION: WITH AND WITHOUT. IN VITRO MAMMALIAN CELLS/MICRONUCLEUS TEST/OECD TEST GUIDELINE 487: RESULT: NEGATIVE, METABOLIC ACTIVATION: WITH AND WITHOUT, REMARKS: READ-ACROSS (ANALOGY) 1327-41-9. IN VITRO GENE MUTATION STUDY IN MAMMALIAN CELLS/LYMPHOMA/OECD TEST GUIDELINE 476: RESULT: NEGATIVE, METABOLIC ACTIVATION: WITH AND WITHOUT, REMARKS: READ-ACROSS (ANALOGY) 1327-41-9.

TERATOGENICITY..... ALUMINIUM CHLORIDE HYDROXIDE SULFATE: ORAL/RAT/OECD TEST GUIDELINE 452: NOAEL: 1,075 MG/KG READ-ACROSS (ANALOGY) DID NOT SHOW MUTAGENIC OR TERATOGENIC EFFECTS IN ANIMAL EXPERIMENTS. CAS NO. 31142-56-0.

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..... 8.

UN NUMBER..... 3264.

PACKING GROUP..... III.

PROPER SHIPPING NAME..... CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM CHLORIDE HYDROXIDE SULFATE).

SPECIAL SHIPPING INSTRUCTIONS..... CORROSIVE MATERIAL.

Section 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION..... E.

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.

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.