



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

PRODUCT: POOL POLISH

CODE: MUR0042

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..... POOL POLISH
PRODUCT CODE..... MUR0042
CHEMICAL FORMULA..... Al₂(SO₄)₃.14H₂O.
MOLECULAR WEIGHT..... 594.
CHEMICAL FAMILY..... INORGANIC.
MATERIAL USE..... N.AV.
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

Section 02: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... MAY CAUSE SKIN IRRITATION, ESPECIALLY UNDER REPEATED OR PROLONGED CONTACT OR WHEN MOISTURE IS PRESENT. ALUMINUM IS VERY POORLY ABSORBED THROUGH THE SKIN AND TOXIC EFFECTS WOULD NOT BE EXPECTED FOLLOWING SHORT-TERM SKIN CONTACT. PROLONGED AND REPEATED EXPOSURE TO DILUTE SOLUTIONS OFTEN CAUSES IRRITATION, REDNESS, PAIN AND DRYING AND CRACKING OF THE SKIN.
SKIN ABSORPTION..... N.AV.
EYE CONTACT..... MAY IRRITATE OR BURN EYES. SIMILAR FOR THE AQUEOUS SOLUTION. THE DUST BECOMES ACIDIC FOLLOWING CONTACT WITH MOISTURE IN THE EYE AND MAY RESULT IN MODERATE TO SEVERE IRRITATION TO EYES.
INHALATION..... DUST OR MIST INHALATION MAY IRRITATE NOSE, THROAT AND LUNGS.
INGESTION..... MAY IRRITATE THE GASTROINTESTINAL TRACT AND CAUSE NAUSEA, VOMITING AND PURGING. ACUTE EXPOSURE CAN CAUSE INCOORDINATION, MUSCLE SPASMS AND KIDNEY EFFECTS.
EFFECTS OF ACUTE EXPOSURE..... SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE..... N.AV.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
ALUMINUM SULFATE HYDRATE	60-100	SEE SECTION 11	16828-12-9	SEE SECTION 11	SEE SECTION 11

Section 04: FIRST AID MEASURES

EYE CONTACT..... IN CASE OF CONTACT, OR SUSPECTED CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION IMMEDIATELY AFTER FLUSHING.
SKIN CONTACT..... IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING AND LAUNDRER BEFORE REUSE.
INHALATION..... REMOVE PERSON TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GET IMMEDIATE MEDICAL ATTENTION.
INGESTION..... DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. SEEK IMMEDIATE MEDICAL ATTENTION. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS.
NOTES TO PHYSICIAN..... TREATMENT BASED ON SOUND JUDGMENT OF PHYSICIAN AND INDIVIDUAL REACTIONS OF PATIENT.

Section 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS..... NON FLAMMABLE.
FLAMMABILITY..... NON FLAMMABLE.
IF YES, UNDER WHICH CONDITIONS?
EXTINGUISHING MEDIA..... USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

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Section 05: FIRE FIGHTING MEASURES

SPECIAL PROCEDURES..... DRY ALUM WILL DISSOLVE IN WATER TO FORM SULFURIC ACID WHICH REACTS WITH SOME METALS, ESPECIALLY WHEN DILUTE, TO GIVE FLAMMABLE, POTENTIALLY EXPLOSIVE HYDROGEN GAS. HYDROGEN GAS CAN ACCUMULATE TO EXPLOSIVE CONCENTRATIONS INSIDE CONFINED SPACES. FIRE FIGHTERS SHOULD WEAR FULL PROTECTIVE CLOTHING, INCLUDING SELF-CONTAINED BREATHING EQUIPMENT.

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..... N.AV.
 SENSITIVITY TO STATIC DISCHARGE..... N.AV.
 SENSITIVITY TO IMPACT..... N.AV.
 HAZARDOUS COMBUSTION PRODUCTS.. OXIDES OF SULPHUR. ALUMINUM OXIDES. CORROSIVE FUMES.

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL..... WEAR APPROPRIATE PROTECTIVE EQUIPMENT. PREVENT FROM ENTERING INTO SOIL, DITCHES, SEWERS, WATERWAYS AND/OR GROUNDWATER. PICK UP SOLIDS AND PUT IN AN APPROPRIATE SEALED CONTAINER FOR LATER DISPOSAL. NEUTRALIZE WITH LIME SLURRY, LIMESTONE, OR SODA ASH. THIS WILL GENERATE CARBON DIOXIDE, SO ADDITIONAL VENTILATION MAY BE NECESSARY.

Section 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING IN DUST. EQUIPMENT AVOID BREATHING VAPORS, MIST, FUME OR DUST. DO NOT INGEST. USE GOOD PERSONAL HYGIENE. KEEP THE CONTAINERS CLOSED WHEN NOT IN USE. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS PRODUCT RESIDUES. GOOD HOUSEKEEPING PROCEDURES SHOULD BE FOLLOWED TO MINIMIZE DUST GENERATION AND ACCUMULATION. WHEN THERE IS A LARGE-SCALE USE, DO NOT USE IN AREAS EQUIPPED WITH SPRINKLER SYSTEMS. POST "DO NOT USE WATER" SIGNS. GOOD HOUSEKEEPING IS IMPORTANT TO PREVENT ACCUMULATIONS OF DUST. DRY SWEEPING IS NOT RECOMMENDED. CONTACT WITH WATER FORMS SULPHURIC ACID.

STORAGE NEEDS..... STORE IN A COOL, DRY, WELL VENTILATED AREA. KEEP CONTAINERS TIGHTLY CLOSED. PLACE AWAY FROM INCOMPATIBLE MATERIALS. STORE IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICES.

Section 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

GLOVES/ TYPE..... NEOPRENE GLOVES. PVC GLOVES. VINYL GLOVES. RUBBER GLOVES.
 RESPIRATORY/TYPE..... A NIOSH/MSHA APPROVED DUST MASK, FOR DUST CONCENTRATIONS OF UP TO 10 MG/M3. A NIOSH/MSHA APPROVED AIR-PURIFYING RESPIRATOR EQUIPPED WITH ACID GAS/FUME, MIST CARTRIDGES FOR CONCENTRATIONS UP TO 20 MG/M3. AN AIR-SUPPLIED RESPIRATOR IF CONCENTRATIONS ARE HIGHER OR UNKNOWN.

EYE/TYPE..... CHEMICAL GOGGLES; ALSO WEAR A FACE SHIELD IF SPLASHING HAZARD EXISTS.

FOOTWEAR/TYPE..... SEE BELOW.
 CLOTHING/TYPE..... SKIN CONTACT SHOULD BE PREVENTED THROUGH USE OF SUITABLE PROTECTIVE CLOTHING, GLOVES AND FOOTWEAR, SELECTED WITH REGARD FOR USE CONDITIONS AND EXPOSURE POTENTIAL. CONSIDERATION MUST BE GIVEN BOTH TO DURABILITY AS WELL AS PERMEATION RESISTANCE.

OTHER/TYPE..... ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE PROXIMAL TO THE WORK-STATION LOCATION.

ENGINEERING CONTROLS..... IF USER OPERATIONS GENERATE DUST, FUME OR MIST, USE VENTILATION TO KEEP EXPOSURE TO AIRBORNE CONTAMINANTS BELOW THE EXPOSURE LIMIT.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... SOLID WHITE TO OFF WHITE GRANULES OR POWDER.
 ODOUR..... ODOURLESS.
 ODOUR THRESHOLD..... N.AV.
 VAPOUR PRESSURE (MMHG)..... N.AP.
 VAPOUR DENSITY (AIR=1)..... N.AP.
 BY VOLUME..... N.AV.
 BY WEIGHT..... N.AV.
 EVAPORATION RATE..... N.AP.
 BOILING POINT..... N.AP.
 FREEZING/MELTING POINT..... 86 °C / 186 °F.

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Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PH..... > 2.9 @ 5%.
 SPECIFIC GRAVITY (WATER=1)..... 1.61.
 SOLUBILITY IN WATER (% W/W)..... SOLUBLE IN WATER.
 COEFFICIENT OF WATER/OIL DIST..... N.AV.

Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:..... STABLE.
 CONDITIONS TO AVOID..... TEMPERATURES OVER 760 °C. CONTACT WITH WATER FORMS SULPHURIC ACID.
 MATERIALS TO AVOID..... STRONG BASES. STRONG OXIDIZING AGENTS. ALKALIS. WATER-REACTIVE MATERIALS SUCH AS OLEUM CAUSE EXOTHERMIC REACTIONS.
 REACTIVITY CONDITIONS:..... CONTACT WITH INCOMPATIBLES. MAY CORRODE FERROUS METALS AND MILD STEEL IN PRESENCE OF MOISTURE.
 HAZARDOUS PRODUCTS OF DECOMPOSITION AT TEMPERATURES ABOVE 760°C, SULFUR OXIDE GASES ARE RELEASED WHICH ARE TOXIC, CORROSIVE AND ARE OXIDIZERS. THE REMAINING RESIDUE IS CAUSTIC. THE TRIOXIDE IS ALSO A FIRE HAZARD. OXIDES OF ALUMINUM.
 HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL..... FOR ALUMINUM SULFATE HYDRATE: EXPOSURE LIMIT - ACGIH IS 2 MG/M3 TLV-TWA, FORM AS ALUMINUM (SOLUBLE SALTS); EXPOSURE LIMIT - OSHA IS 2 MG/M3 PEL-TWA, FORM AS ALUMINUM (SOLUBLE SALTS).
 LC 50 OF MATERIAL, SPECIES & ROUTE.. N.AV.
 LD 50 OF MATERIAL, SPECIES & ROUTE.. FOR ALUMINUM SULFATE HYDRATE (16828-12-9): 99 LD50 >9000 MG/KG (RAT); LD50 >9000 MG/KG (MOUSE).
 CARCINOGENICITY OF MATERIAL..... NOT LISTED BY IARC OR ACGIH.
 REPRODUCTIVE EFFECTS..... N.AV.
 IRRITANCY OF MATERIAL..... INGESTION: MAY IRRITATE THE GASTROINTESTINAL TRACT AND CAUSE NAUSEA, VOMITING AND PURGING. ACUTE EXPOSURE CAN CAUSE INCOORDINATION, MUSCLE SPASMS AND KIDNEY EFFECTS. SKIN CONTACT: MAY CAUSE SKIN IRRITATION, ESPECIALLY UNDER REPEATED OR PROLONGED CONTACT OR WHEN MOISTURE IS PRESENT. ALUMINUM IS VERY POORLY ABSORBED THROUGH THE SKIN AND TOXIC EFFECTS WOULD NOT BE EXPECTED FOLLOWING SHORT-TERM SKIN CONTACT. PROLONGED AND REPEATED EXPOSURE TO DILUTE SOLUTIONS OFTEN CAUSES IRRITATION, REDNESS, PAIN AND DRYING AND CRACKING OF THE SKIN. INHALATION: DUST OR MIST INHALATION MAY IRRITATE NOSE, THROAT AND LUNGS. EYE CONTACT: MAY IRRITATE OR BURN EYES. SIMILAR FOR THE AQUEOUS SOLUTION. THE DUST BECOMES ACIDIC FOLLOWING CONTACT WITH MOISTURE IN THE EYE AND MAY RESULT IN MODERATE TO SEVERE IRRITATION TO EYES. ADDITIONAL INFORMATION: ALUMINUM SULPHATE HAS BEEN SHOWN TO CAUSE LIVER, KIDNEY AND NERVOUS SYSTEM TOXICITY WHEN TESTED IN LABORATORY ANIMALS. REPEATED INGESTION MAY CAUSE PHOSPHATE DEFICIENCY, WHICH CAN WEAKEN BONES. ALUMINUM SULPHATE HAS BEEN SHOWN TO CAUSE AN INCREASE IN CHROMOSOMAL BREAKS WHEN TESTED IN RAT SOMATIC CELLS IN VIVO AND TO INDUCE SISTER CHROMATID EXCHANGES, CHROMOSOMAL ABERRATIONS AND MICRONUCLEI IN HUMAN LEUKOCYTES UNDER IN VITRO CONDITIONS. SKIN IRRITATION MAY BE AGGRAVATED IN INDIVIDUALS WITH EXISTING SKIN LESIONS. BREATHING OF DUST MAY AGGRAVATE ACUTE OR CHRONIC ASTHMA AND CHRONIC PULMONARY DISEASE SUCH AS EMPHYSEMA AND BRONCHITIS.
 SENSITIZING CAPABILITY OF MATERIAL..... N.AV.
 SYNERGISTIC MATERIALS..... N.AV.
 MUTAGENICITY..... N.AV.
 TERATOGENICITY..... N.AV.

Section 12: ECOLOGICAL CONSIDERATIONS

ECOLOGICAL INFORMATION..... PRODUCTS OF DEGRADATION: THESE PRODUCTS ARE CARBON AND SULFUR OXIDES (CO₂, CO, SO₃ & SO₄). TOXICITY IS PRIMARILY ASSOCIATED WITH ACIDIC PH. ACIDIC SOIL CONDITIONS CAN DEVELOP WITH THE MATERIAL PRESENT LEADING TO RELEASE OF SOME TRACE METALS.

Section 13: DISPOSAL CONSIDERATIONS

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

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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..... D2B.

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.