

BEBBINGTON INDUSTRIES SAFETY DATA SHEET

ALUMINUM SULPHATE 48% SOL

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER PRODUCT NAME CHEMICAL FORMULA CHEMICAL FAMILY MATERIAL USE EMERGENCY NUMBER	BEBBINGTON INDUSTRIES 44 WRIGHT AVENUE DARTMOUTH, NOVA SCOTIA, CANADA B3B 1G6 ALUMINUM SULPHATE 48% SOL 48%AL ₂ (SO ₄) ₃ .14H ₂ O (IN WATER) INORGANIC REFER TO TECHNICAL LITERATURE CANUTEC 1 613 996 6666
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SECTION 02: HAZARDS IDENTIFICATION



SIGNAL WORD..... HAZARD CLASSIFICATION..... HAZARD STATEMENT..... PRECAUTIONARY STATEMENT..... OTHER HAZARDS.....	DANGER. CORROSIVE TO METALS — CATEGORY 1. SKIN CORROSION — CATEGORY 1A. SERIOUS EYE DAMAGE — CATEGORY 1. H290 MAY BE CORROSIVE TO METALS. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. H318 CAUSES SERIOUS EYE DAMAGE. H402 HARMFUL TO AQUATIC LIFE. P234 KEEP ONLY IN ORIGINAL CONTAINER. P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOURS/SPRAY. P264 WASH... THOROUGHLY AFTER HANDLING. P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING. P303+P361+P353 IF ON SKIN (OR HAIR): REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. P304+P340 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P310 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P363 WASH CONTAMINATED CLOTHING BEFORE REUSE. P390 ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE. P501 DISPOSE OF CONTENTS/CONTAINER ACCORDING TO ALL APPLICABLE REGULATIONS. NOT ASSESSED.
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SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
ALUMINUM SULPHATE	10043-01-3	48

SECTION 04: FIRST AID MEASURES

GENERAL ADVICE:..... IF INHALED:..... IN CASE OF SKIN CONTACT:..... IN CASE OF EYE CONTACT:.....	MOVE OUT OF DANGEROUS AREA. CONSULT A PHYSICIAN. SHOW THE SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE. IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION AND GET MEDICAL ATTENTION. TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER FOR AT LEAST 20 MINUTES. CONSULT A PHYSICIAN. CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL. RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.
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SECTION 04: FIRST AID MEASURES

IF SWALLOWED:..... DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN. DO NOT LEAVE VICTIM UNATTENDED.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY..... NOT COMBUSTIBLE/NOT FLAMMABLE.
 SUITABLE EXTINGUISHING MEDIA..... SUITABLE FOR SURROUNDING FIRE. DOES NOT BURN. USE MEDIA SUITABLE FOR SURROUNDING FIRE, SUCH AS WATER SPRAY, DRY CHEMICAL, FOAM.
 HAZARDOUS COMBUSTION PRODUCTS. SULPHURIC ACID DECOMPOSITION MAY RESULT IN THE RELEASE OF TOXIC GASES (SULPHURIC ACID FUMES, SULPHUR DIOXIDE, CARBON MONOXIDE).
 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL. EVOLUTION OF EXPLOSIVE HYDROGEN GAS ON CONTACT WITH MOST METALS. TOXIC GASES (SULPHURIC ACID FUMES, SULPHUR DIOXIDE AND CARBON MONOXIDE) MAY BE RELEASED DUE TO THERMAL DECOMPOSITION.
 SPECIAL PROCEDURES..... EVACUATE HAZARD AREA. USE WATER ON COMBUSTIBLE BURNING IN THE VICINITY OF THIS MATERIAL BUT USE CARE AS WATER APPLIED DIRECTLY TO ACID CAUSES SPATTERING OF THE ACID. DO NOT GET WATER INSIDE CONTAINER. WEAR FULL PROTECTIVE EQUIPMENT INCLUDING A SELF-CONTAINED BREATHING APPARATUS. NOTE... RUN OFF FROM FIRE CONTROL MAY BE A POLLUTION HAZARD. CAUTION..... CORROSIVE MATERIAL. NEUTRALIZE WITH LIME, SODA ASH, ETC., TO PREVENT CORROSION OF METALS AND FORMATION OF HYDROGEN.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:..... USE PERSONAL PROTECTIVE EQUIPMENT. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS.
 ENVIRONMENTAL PRECAUTIONS:..... DO NOT ALLOW PRODUCT TO ENTER DRAINS.
 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP:..... SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING..... HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING MIST OR VAPOUR. WEAR PROTECTIVE EQUIPMENT DURING HANDLING. USE ADEQUATE VENTILATION. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. WHEN DILUTING, ALWAYS ADD THE ACID TO WATER, NEVER ADD WATER TO THE ACID. FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.
 CONDITIONS FOR SAFE STORAGE..... KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. PROTECT CONTAINER FROM PHYSICAL DAMAGE. KEEP THE CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE AWAY FROM INCOMPATIBLE MATERIALS. STORE IN A COOL AND WELL-VENTILATED AREA. KEEP AWAY FROM FLAMES AND SPARKS. STORE AWAY FROM STRONG OXIDIZERS.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
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ALUMINUM SULPHATE 2 MG/M3

EXPOSURE LIMIT OF MATERIAL..... 1 MG/M3 (0.25 PPM).
 ENGINEERING CONTROLS..... USE GOOD VENTILATION. LOCAL EXHAUST SUGGESTED FOR ENCLOSED SPACES.
 SKIN AND BODY PROTECTION..... ACID-PROOF GAUNTLET GLOVES SUCH AS: PVC, NEOPRENE OR NITRILE. COMPLETE SUIT PROTECTING AGAINST CHEMICALS. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE. ACID PROOF BOOTS.
 RESPIRATORY PROTECTION..... USE NIOSH APPROVED SUPPLIED-AIR RESPIRATOR.
 EYE/FACE PROTECTION..... SPLASH PROOF CHEMICAL GOGGLES. FACE SHIELD.
 OTHER/TYPE..... EYE WASH STATION AND SAFETY SHOWER SHOULD BE LOCATED NEAR THE WORK STATION.

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SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

NOTE..... IN CASE OF EMERGENCY OR WHERE THERE IS A STRONG POSSIBILITY OF CONSIDERABLE EXPOSURE, WEAR A COMPLETE ACID SUIT WITH HOOD, BOOTS, AND GLOVES. IF ACID VAPOUR OR MIST ARE PRESENT AND EXPOSURE LIMITS MAY BE EXCEEDED, WEAR APPROPRIATE NIOSH RESPIRATORY PROTECTION.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... LIGHT PINK TO COLOURLESS LIQUID, CLEAR.
 ODOUR..... NO ODOUR.
 ODOUR THRESHOLD..... LITTLE OR NO ODOUR.
 PH..... 2.5.
 MELTING POINT/FREEZING POINT (C)..... -15.
 BOILING POINT..... 101 (C) 214 (F).
 FLASH POINT (C), METHOD..... N.A.P.
 EVAPORATION RATE..... NOT AVAILABLE.
 FLAMMABILITY (SOLIDS AND GASES)..... DOES NOT BURN.
 UPPER FLAMMABLE LIMIT (% BY VOL.)..... NOT APPLICABLE.
 LOWER FLAMMABLE LIMIT (% BY VOL.)..... NOT APPLICABLE.
 VAPOUR PRESSURE..... N.A.V.
 VAPOUR DENSITY (AIR=1)..... N.A.V.
 SPECIFIC GRAVITY (WATER=1)..... 1.335.
 SOLUBILITY IN WATER (% W/W)..... COMPLETE.
 AUTO IGNITION TEMPERATURE..... NOT AVAILABLE.
 PARTITION COEFFICIENT:..... -3.7.
 N-OCTANOL/WATER
 DECOMPOSITION TEMPERATURE..... 150 C (320 F) WITH DECOMPOSITION.
 VISCOSITY..... NOT AVAILABLE.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY..... MAY CORRODE FERROUS METALS AND MILD STEEL IN PRESENCE OF MOISTURE.
 CHEMICAL STABILITY..... STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
 POSSIBILITY OF HAZARDOUS REACTIONS..... SEE REACTIVITY.
 CONDITIONS TO AVOID..... TEMPERATURES ABOVE 760 (C) CAUSES DECOMPOSITION TO CORROSIVE AND TOXIC SULPHURIC TRIOXIDE GAS.
 INCOMPATIBLE MATERIALS :..... ALKALIS AND WATER-REACTIVE MATERIALS SUCH AS OLEUM CAUSE EXOTHERMIC REACTIONS.
 HAZARDOUS 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.
 PRODUCTS

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
ALUMINUM SULPHATE	N.A.V.	6207 MG/KG (ORL-MSE)
ACUTE TOXICITY:		
ORAL LD50.....	1930 MG AL/KG (ORAL-RAT).	
INHALATION LC50.....	NO DATA AVAILABLE.	
DERMAL LD50.....	> 2000 MG/KG (RABBIT).	
OTHER INFORMATION ON ACUTE TOXICITY.....	NO DATA AVAILABLE.	
SKIN CORROSION / IRRITATION.....	SKIN - RABBIT - EXTREMELY CORROSIVE AND DESTRUCTIVE TO TISSUE.	
SERIOUS EYE DAMAGE / EYE IRRITATION.....	NO DATA AVAILABLE.	
RESPIRATORY OR SKIN SENSITIZATION.....	NO EVIDENCE WAS FOUND OF RESPIRATORY OR SKIN SENSITIZATION.	
GERM CELL MUTAGENICITY.....	NO EVIDENCE WAS FOUND OF MUTAGENICITY.	
CARCINOGENICITY.....	THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS DETERMINED THAT OCCUPATIONAL EXPOSURE TO STRONG-INORGANIC ACID MISTS CONTAINING SULPHURIC ACID IS CARCINOGENIC TO HUMANS (group 1). THIS PRODUCT DOES NOT CONTAIN ANY INGREDIENT DESIGNATED BY IARC, NTP, ACGIH OR OSHA AS PROBABLE OR SUSPECTED HUMAN CARCINOGENS. ACGIH: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH.	
REPRODUCTIVE TOXICITY.....	NO EVIDENCE FOUND OF REPRODUCTIVE TOXICITY.	
STOT- SINGLE EXPOSURE.....	NO DATA AVAILABLE.	
STOT - REPEAT EXPOSURE.....	NO DATA AVAILABLE.	
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE.....	MAY AGGRAVATE AN EXISTING DERMATITIS, ASTHMA, AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.	

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SECTION 11: TOXICOLOGICAL INFORMATION

ASPIRATION HAZARD..... NO DATA AVAILABLE.
 POTENTIAL HEALTH EFFECTS..... INHALATION - MAY BE FATAL IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. CAUSES RESPIRATORY TRACT IRRITATION. INGESTION - HARMFUL IF SWALLOWED. EYES - CAUSES SEVERE EYE BURNS. MAY CAUSE EYE IRRITATION. SKIN - MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION.
 SIGNS AND SYMPTOMS OF EXPOSURE... MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN, SPASM, INFLAMMATION AND EDEMA OF THE LARYNX, SPASM, INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONIA, PULMONARY EDEMA, BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, VOMITING, EFFECTS MAY BE DELAYED. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATE.

SECTION 12: ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY..... THE METHODS FOR DETERMINING THE BIOLOGICAL DEGRADABILITY ARE NOT APPLICABLE TO INORGANIC SUBSTANCES.
 BIOACCUMULATIVE POTENTIAL..... IS PREDICTED TO BE LOW.
 TOXICITY..... NO DATA AVAILABLE.
 MOBILITY IN SOIL..... NO DATA AVAILABLE.
 OTHER ADVERSE EFFECTS..... NO INFORMATION AVAILABLE.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS..... IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME..... CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ALUMINUM SULFATE).
 UN NUMBER..... 3264.
 TDG CLASSIFICATION..... 8.
 PACKING GROUP..... III.
 SPECIAL SHIPPING INSTRUCTIONS..... REFER TO TRANSPORTATION OF DANGEROUS GOOD REGULATIONS.

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION..... D2B, 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.
 HPR COMPLIANCE..... THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE HPR AND THE SDS CONTAINS ALL THE INFORMATION REQUIRED BY THE HPR.

SECTION 16: OTHER INFORMATION

Prepared by Bebbington Industries

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DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL ONLY BE USED AS A GUIDE. BEBBINGTON INDUSTRIES SHALL NOT BE HELD LIABLE FOR ANY DAMAGE OR INJURY RESULTING FROM THE HANDLING OF, OR FROM CONTACT WITH THE ABOVE PRODUCT. ALL PERSONS USING THIE PRODUCT SHOULD B WHMIS TRAINED.