

MATERIAL SAFETY DATA SHEET

HDA- 5600

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER'S NAME: ROCHESTER MIDLAND LIMITED
 MANUFACTURERS ADDRESS: 851 PROGRESS COURT, OAKVILLE, ONTARIO
 EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666
 SUPPLIER IDENTIFIER: NOT AVAILABLE
 SUPPLIER'S ADDRESS: NOT AVAILABLE
 SUPPLIER EMERGENCY PHONE NUMBER: NOT AVAILABLE
 PRODUCT NAME: HDA-5600
 PRODUCT USE: ACID CLEANER
 WHMIS CATEGORY: E
 PREPARED BY: ROCHESTER MIDLAND LIMITED.
 PHONE NUMBER OF PREPARER: (905) 847-3000
 DATE PREPARED: JULY 1, 2012



SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
PHOSPHORIC ACID	15-40	7664-38-2	ACGIH TLV-TWA 1 mg/ m ³ TLV-STEL 3 mg/ m ³ OSHA-TWA 1 mg/ m ³ STEL 3 mg/ m ³ IDLH: 1000 mg/ m ³	ORAL 1250-1530 mg/ Kg (RAT) DERMAL >1260 mg/ Kg (RABBIT)	>850 mg / m ³ 1 HOUR EXPOSURE (RAT)
OTHER INGREDIENTS	%	CAS#	EXPOSURE LEVELS	LD (50), ROUTE, SPECIES	LC(50), ROUTE, SPECIES
AMINOTRIS(METHYLENEPHOSPHONIC ACID)	1-5	6419-19-8	AIHA WEELS 8 HR TWA 10 mg / m ³	ORAL 2910 mg/ Kg (RAT) DERMAL >6310 mg/ Kg (RABBIT)	NOT AVAILABLE

SECTION 03: HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

ROUTE OF ENTRY: EYES, SKIN, INHALATION, INGESTION

SKIN CONTACT: MAY CAUSE SEVERE IRRITATION AND BURNS. SEVERITY OF BURNS IS DEPENDENT ON THE CONCENTRATION OF PRODUCT AND EXPOSURE DURATION.

SKIN ABSORPTION: NOT AVAILABLE.

EYE: WILL CAUSE SEVERE BURNS, PERMANENT EYE DAMAGE EVEN BLINDNESS.

INHALATION: MAY CAUSE IRRITATION, TISSUE DAMAGE TO MUCOUS MEMBRANES OF THE NOSE, THROAT AND ESOPHAGUS. NOT EXPECTED TO PRESENT A SIGNIFICANT INHALATION HAZARD UNDER NORMAL USE CONDITIONS

INGESTION: MAY BE FATAL IF SWALLOWED. WILL CAUSE SEVERE BURNS TO MUCOUS MEMBRANES OF MOUTH, THROAT AND DIGESTIVE TRACT. ASPIRATION OF VOMITED CONTENTS MAY CAUSE CHEMICAL PNEUMONITIS.

ACUTE OVER-EXPOSURE

EFFECTS: AS ABOVE.

CHRONIC OVER EXPOSURE

EFFECTS: DERMATITIS MAY DEVELOP WITH REPEATED OVEREXPOSURE

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SECTION 04: FIRST AID MEASURES

EYES: FLUSH EYES WITH ABUNDANT WATER FOR AT LEAST 20 MINUTES WHILE HOLDING EYELIDS OPEN TO ENSURE COMPLETE IRRIGATION OF THE ENTIRE EYE CAVITY. **GET IMMEDIATE MEDICAL ATTENTION.**

SKIN: WASH SKIN WITH SOAP AND WATER FOR AT LEAST 20 MINUTES. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS PERSIST, GET MEDICAL ATTENTION.

INHALATION: IF SAFE TO ENTER VICTIMS LOCATION, REMOVE VICTIM TO FRESH AIR. ASSIST BREATHING AS NEEDED. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: **DO NOT INDUCE VOMITING.** IF VICTIM CONSCIOUS, GIVE 1 - 2 GLASSES OF WATER TO DILUTE STOMACH CONTENTS. **GET IMMEDIATE MEDICAL ATTENTION.** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SECTION 05: FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD OF DETERMINATION: NONE. TCC

UPPER EXPLOSION LIMIT (% BY VOLUME): NOT AVAILABLE

LOWER EXPLOSION LIMIT (% BY VOLUME): NOT AVAILABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY CLASSIFICATION: NON-FLAMMABLE LIQUID

CONDITIONS OF FLAMMABILITY: NONE

MEANS OF EXTINCTION: AS FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE EQUIPMENT AND USE APPROVED SELF CONTAINED BREATHING APPARATUS. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE RUPTURE. DO NOT SPATTER OR SPLASH PRODUCT. DIKE TO CONTAIN WATER USED IN FIGHTING FIRE. DO NOT ALLOW THIS WATER INTO OPEN WATERWAYS OR SEWERS

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON, NITROGEN AND PHOSPHOROUS.

EXPLOSION DATA: AS WITH ANY STRONGLY ACIDIC SOLUTION, CAN REACT WITH "SOFT" METALS SUCH AS ALUMINUM AND ZINC GENERATING HYDROGEN GAS. THIS GAS IS FLAMMABLE AND/OR EXPLOSIVE IN THE PRESENCE OF AN IGNITION SOURCE. BRIEF INCIDENTAL OVER-SPRAY IS NOT EXPECTED TO CREATE AN EXPLOSION HAZARD.

SENSITIVITY TO STATIC DISCHARGE: NOT SENSITIVE.

SENSITIVITY TO MECHANICAL IMPACT: NOT SENSITIVE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES: EXTINGUISH ALL IGNITION SOURCES. CLEANUP PERSONNEL MUST USE FULL PROTECTIVE EQUIPMENT. REMOVE UNPROTECTED PERSONNEL AWAY FROM SPILL AREA. VENTILATE AREA. CAUTION: SPILL AREA MAY BE SLIPPERY.

SMALL SPILLS: MOP UP, AND FLUSH AREA WITH WATER.

LARGE SPILLS: DIKE SPILL. DO NOT ALLOW SPILL TO ENTER OPEN WATERWAYS OR SEWERS. RECLAIM ALL MATERIAL POSSIBLE. ABSORB REMAINDER WITH INERT MATERIAL AND PLACE IN SUITABLE CONTAINERS FOR NEUTRALIZATION AND DISPOSAL. TRAINED PERSONNEL SHOULD DILUTE AND NEUTRALIZE RESIDUE WITH DILUTED ALKALIS. FLUSH AREA WITH WATER.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT: CORROSIVE PRODUCT- HANDLE WITH CARE. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH SKIN THOROUGHLY AFTER HANDLING. AVOID INHALATION OF MISTS/ SPRAYS. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE RE-USE KEEP CONTAINER CLOSED WHEN NOT IN USE. MIX ONLY WITH WATER; ALWAYS ADD PRODUCT TO WATER: NEVER WATER TO PRODUCT. READ AND FOLLOW LABEL INSTRUCTIONS. DO NOT CONTAMINATE FOOD, WATER OR FEED DURING USE OR STORAGE OF THIS PRODUCT.

STORAGE REQUIREMENTS: KEEP CONTAINER CLOSED WHEN NOT IN USE. STORE INDOORS, IN A COOL WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS AND COMBUSTIBLE MATERIALS. KEEP FROM FREEZING. KEEP OUT OF REACH OF CHILDREN. DO NOT REUSE CONTAINER.

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SECTION 08: EXPOSURE CONTROLS/ PERSONAL PROTECTION

GENERAL ADVICE: THESE RECOMMENDATIONS PROVIDE GENERAL GUIDANCE FOR HANDLING THIS PRODUCT. PERSONAL PROTECTIVE EQUIPMENT SHOULD BE SELECTED FOR INDIVIDUAL APPLICATIONS AND SHOULD CONSIDER FACTORS WHICH AFFECT EXPOSURE POTENTIAL, SUCH AS HANDLING PRACTICES, CHEMICAL CONCENTRATIONS AND VENTILATION. IT IS ULTIMATELY THE RESPONSIBILITY OF THE EMPLOYER TO FOLLOW REGULATORY GUIDELINES ESTABLISHED BY LOCAL AUTHORITIES

EYE PROTECTION: WEAR CHEMICAL SPLASH GOGGLES AND FACE SHIELD TO PROVIDE FULL PROTECTION.

RESPIRATORY PROTECTION: USE NIOSH APPROVED RESPIRATOR IF EXPOSURE LIMITS ARE EXCEEDED OR IRRITATION OCCURS.

GLOVES: WEAR RUBBER OR NITRILE GLOVES OR GAUNTLETS.

OTHER PROTECTIVE EQUIPMENT: AS NEEDED TO PREVENT ALL CONTACT WITH PRODUCT.

SPECIFIC ENGINEERING CONTROLS: USE GENERAL MECHANICAL AND / OR LOCAL EXHAUST. USE CORROSION PROOF EQUIPMENT.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID

ODOUR AND APPEARANCE: CLEAR RED LIQUID, CHARACTERISTIC ODOUR.

ODOUR THRESHOLD: NOT AVAILABLE

SPECIFIC GRAVITY: 1.37-1.39

VAPOUR PRESSURE : NOT AVAILABLE

VAPOUR DENSITY (AIR=1): NOT AVAILABLE

VOC CONTENT (%): 2.375(ARB 310)

EVAPORATION RATE; SLOWER THAN WATER

BOILING POINT; >100° C (212 ° F)

PH: 1.6 (1 % SOLUTION)

FREEZING POINT: NOT AVAILABLE

DENSITY (g/ ml): 1.37-1.39

COEFFICIENT OF WATER/OIL DISTRIBUTION: COMPLETELY WATER SOLUBLE

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE WHEN USED AND STORED AS DIRECTED.

INCOMPATIBLE MATERIALS: AVOID CONTACT ALKALINE OR CHLORINE CONTAINING CHEMICALS, SULFITES, PEROXIDES OR REDUCING AGENTS. REACTIONS CAN GENERATE A GREAT DEAL OF HEAT. AVOID CONTACT WITH ALUMINIUM OR GALVANIZED SURFACES OR OTHER METALS EXCEPT AS DIRECTED ON THE LABEL.

CONDITIONS OF REACTIVITY: AS ANY STRONG ACID SOLUTION CAN REACT WITH METALS ESPECIALLY "SOFT" METALS SUCH AS ALUMINIUM OR ZINC (GALVANIZED) GENERATING HYDROGEN. THIS GAS IS FLAMMABLE AND/OR EXPLOSIVE IN PRESENCE OF IGNITION SOURCE. ALWAYS ADD PRODUCT TO WATER: NEVER WATER TO PRODUCT- THERMAL REACTION MAY BE GENERATED.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON, NITROGEN AND PHOSPHOROUS.

SECTION 11: TOXICOLOGICAL INFORMATION

IRRITANCY OF PRODUCT: CORROSIVE PRODUCT, SEVERE IRRITANT

SENSITIZATION TO MATERIAL: NONE KNOWN.

CARCINOGENICITY: NO KNOWN CARCINOGENS LISTED BY OSHA, IARC OR NTP. AMINOTRIS (METHYLENEPHOSPHONIC ACID COMPONENT IS CLASSED AS AN A4 CARCINOGEN- NOT CLASSIFIABLE FOR HUMAN OR ANIMAL

REPRODUCTIVE EFFECTS: NO KNOWN REPRODUCTIVE EFFECTS.

TERATOGENICITY: PHOSPHORIC ACID COMPONENT IS NOT EXPECTED TO SHOW ADVERSE TERATOGENIC EFFECTS.

MUTAGENICITY: PHOSPHORIC ACID COMPONENT BACTERIA MUTAGENIC TEST RESULTS WERE NEGATIVE. NO REPORTED MUTAGENICITY IN HUMANS OR HUMAN CELL CULTURES.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: NOT AVAILABLE.

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SECTION 12: ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL INFORMATION AVAILABLE FOR PRODUCT. ECOTOXICOLOGICAL INFORMATION TO FOLLOW IS BASED
LARGELY OR COMPLETELY ON INFORMATION FOR COMPONENTS.

AQUATIC TOXICITY:

FISH SPECIES DATA: PHOSPHORIC ACID LC 50 MOSQUITO FISH: 138 mg/ L
PHOSPHORIC ACID LC 50, 96 HR, MOSQUITO FISH: 3-3.5 mg/ L
AMINOTRIS (METHYLENEPHOSPHONIC ACID) NOEC, 96 HR: RAINBOW TROUT: >330 mg/ L
AMINOTRIS (METHYLENEPHOSPHONIC ACID) LC 50, 96 HR, FATHEAD MINNOW: 8132 mg/ L
AMINOTRIS (METHYLENEPHOSPHONIC ACID) LC 50, 96 HR, BLUEGILL: >330 mg/ L STATIC
AMINOTRIS (METHYLENEPHOSPHONIC ACID) LC 50, 96 HR, STEELHEAD TROUT: >330 mg/ L
INVERTEBRATES: AMINOTRIS (METHYLENEPHOSPHONIC ACID) EC 50 48 HR, DAPHNIA MAGNA: 297 mg/ L
AMINOTRIS (METHYLENEPHOSPHONIC ACID) NOEC, 48 HR, DAPHNIA MAGNA: 125 mg/ L
MICROORGANISMS: PHOSPHORIC ACID, EC 50, ACTIVATED SLUDGE: 270 mg/ L
PHOSPHORIC ACID, EC 50, OTHER PROTOZOANS: 240 mg/ L
(GROWTH INHIBITION) PLANTS: AMINOTRIS (METHYLENEPHOSPHONIC ACID) EC 50, 96 HR, ALGAE: 19.6 mg/ L
AMINOTRIS (METHYLENEPHOSPHONIC ACID) EC 50, 96 HR, ALGAE: 12.4 mg/ L

TOXICITY OF PHOSPHORIC ACID AND AMINOTRIS (METHYLENEPHOSPHONIC ACID) COMPONENTS IS RELATED TO PH. THEY ARE
HARMFUL TO AQUATIC LIFE AT LOW CONCENTRATIONS

BIODEGRADABILITY: PHOSPHORIC ACID IS INORGANIC AND THEREFORE NOT AMENABLE TO BIODEGRADATION. IT HAS NO BOD.
AMINOTRIS (METHYLENEPHOSPHONIC ACID) COMPONENT IS NOT READILY BIODEGRADABLE

MOBILITY: PHOSPHORIC ACID COMPONENT WHEN RELEASED IN THE SOIL MAY LEACH INTO GROUNDWATER. WHEN
RELEASED TO WATER, ACIDITY MAY BE READILY REDUCED BY NATURAL WATER HARDNESS MINERALS.

PERSISTENCE: THE PHOSPHOROUS COMPONENT OF THE AMINOTRIS (METHYLENEPHOSPHONIC ACID) AND PHOSPHORIC ACID
COMPONENTS MAY PERSIST INDEFINITELY.

BIOACCUMULATIVE: AMINOTRIS (METHYLENEPHOSPHONIC ACID) AND PHOSPHORIC ACID COMPONENTS ARE NOT EXPECTED TO
BIOACCUMULATE.

CHEMICAL FATE INFORMATION: NOT AVAILABLE

OTHER INFORMATION: NOT AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

TDG PHOSPHORIC ACID, LIQUID
8
UN 1805
PACKING GROUP III
ADDITIONAL INFORMATION: NOT AVAILABLE
MARINE POLLUTANT: NO

SECTION 15: REGULATORY INFORMATION:

DSL STATUS: LISTED
HMIS CLASSIFICATION (H, F, R, PE): 3,0,1, C
WHMIS CLASSIFICATION: E

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED
PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

PRODUCT CONCENTRATE CONTAINS <17.6% PHOSPHOROUS AS P.

SECTION 16: OTHER INFORMATION

DISCLAIMER: THIS INFORMATION WAS COMPILED FROM CURRENT, RELIABLE SOURCES AND IS BELIEVED TO BE CORRECT. AS
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