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MATERIAL SAFETY DATA SHEET:  
HYDROCHLORIC ACID 1N  
CATALOG NUMBER: AB00830

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SECTION I – PRODUCT INFORMATION

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PRODUCT NAME: HYDROCHLORIC ACID  
GRADE: ULTRA PURE  
PHYSICAL DESCRIPTION: COLORLESS LIQUID  
FORMULA: HCl  
FORMULA WEIGHT: 36.46

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SECTION II – COMPOSITION/INFORMATION ON INGREDIENT

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SUBSTANCE NAME: HYDROCHLORIC ACID  
CAS NUMBER: 7647-01-0  
SARA 313: NO  
SYNONYMS: ACIDE CHLORHYDRIQUE (FRENCH) \* ACIDO CLORIDRICO (ITALIAN) \*  
ANHYDROUS HYDROCHLORIC ACID \* CHLOORWATERSTOF (DUTCH) \* CHLOROHYDRIC  
ACID \* CHLOROWODOR (POLISH) \* CHLORWASSERSTOFF (GERMAN) \* HYDROCHLORIDE \*  
HYDROGEN CHLORIDE (ACGIH: OSHA)

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SECTION III – HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW

TOXIC.

TOXIC BY INHALATION. CAUSES BURNS. IRRITATING TO RESPIRATORY SYSTEM.

**HMIS RATING**

HEALTH: 3

FLAMMABILITY: 2

SPECIAL HAZARDS: WATER REACTIVE

**NFPA RATING**

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 2

SPECIAL HAZARDS: WATER REACTIVE

FOR ADDITIONAL INFORMATION ON TOXICITY, PLEASE REFER TO SECTION XI.

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SECTION IV – FIRST AID MEASURES

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ORAL EXPOSURE: IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

INHALATION EXPOSURE: IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT CALL A PHYSICIAN.

DERMAL EXPOSURE: IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.

EYE EXPOSURE: IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

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#### SECTION V – FIRE FIGHTING MEASURES

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FLASH POINT: N/A

AUTOIGNITION TEMP: N/A

FLAMMABILITY: N/A

EXTINGUISHING MEDIA: SUITABLE: CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM. **DO NOT USE WATER.**

FIREFIGHTING: PROTECTIVE EQUIPMENT: WEAR SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. SPECIFIC HAZARDS: EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

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#### SECTION VI – ACCIDENTAL RELEASE MEASURES

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PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL: EVACUATE AREA

PROCEDURES OF PERSONAL PRECAUTIONS: WEAR SELF CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP: ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

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#### SECTION VII – HANDLING AND STORAGE

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HANDLING: USER EXPOSURE: DO NOT BREATHE VAPOR. DO NOT GET IN EYES, ON SKIN, ON COTHING.

STORAGE: SUITABLE: KEEP TIGHTLY CLOSED.

SPECIAL REQUIREMENTS: MAY DEVELOP PRESSURE. OPEN CAREFULLY.

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#### SECTION VIII – EXPOSURE CONTROLS/PPE

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ENGINEERING CONTROLS: SAFETY SHOWER AND EYE BATH. USE ONLY IN A CHEMICAL FUME HOOD.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: GOVERNMENT APPROVED RESPIRATOR IN NONVENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE TLV OR PEL.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

OTHER: FACESHIELD (8 INCH MINIMUM).

GENERAL HYGIENE MEASURES

WASH CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES.

WASH THOROUGHLY AFTER HANDLING.

EXPOSURE LIMITS, RTECS

**COUNTRY: USA**

SOURCE: ACGIH

TYPE: CEILING O2

VALUE: PPM

**COUNTRY: USA**

SOURCE: MSHA STANDARD

TYPE: CEILING O5

VALUE: PPM (7MG/M3)

**COUNTRY: USA**

SOURCE: OSHA

TYPE: PEL

VALUE: CL5 PPM (7MG/M3)

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**SECTION IX – PHYSICAL/CHEMICAL PROPERTIES**

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**APPEARANCE**

PHYSICAL STATE: LIQUID

COLOR: FAINTLY YELLOW CLEAR

ODOR: PUNGENT

MOLECULAR WEIGHT: 36.46

MP/MP RANGE: -114°C

VAPOR PRESSURE: 166.991 MMHG AT TEMPERATURE: 21.1°C

VAPOR DENSITY: 1.3 G/L

SG/DENSITY: 1.2 G/CM<sup>3</sup>

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**SECTION X – STABILITY AND REACTIVITY**

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STABILITY: STABLE

CONDITIONS TO AVOID: DO NOT ALLOW WATER TO ENTER CONTAINER.

MATERIALS TO AVOID: BASES, AMINES, ALKALI METALS COPPER, COPPER ALLOYS, ALUMINUM.

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE GAS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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**SECTION XI – TOXICOLOGICAL INFORMATION**

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**ROUTE OF EXPOSURE**

SKIN CONTACT: CAUSES BURNS.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN

EYE CONTACT: CAUSES BURNS

INHALATION: MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. MAY BE HARMFUL IF INHALED.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

**SIGNS AND SYMPTOMS OF EXPOSURE**

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN. INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS, AND PULMONARY EDEMA. SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, AND VOMITING.

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**SECTION XII – ECOLOGICAL INFORMATION**

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NO DATA AVAILABLE

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**SECTION XIII – TRANSPORT CONSIDERATIONS**

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APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

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**SECTION XIV – TRANSPORT INFORMATION**

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**DOT**

PROPER SHIPPING NAME: HYDROCHLORIC ACID

UN NUMBER: 1789

CLASS: 8

PACKING GROUP: II

HAZARD LABEL: CORROSIVE

PIH: NOT PIH

**IATA**

PROPER SHIPPING NAME: HYDROCHLORIC ACID

IATA UN NUMBER: 1789

HAZARD CLASS: 8

PACKING GROUP: II

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SECTION XV – REGULATORY INFORMATION

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**EU DIRECTIVES CLASSIFICATION**

SYMBOL OF DANGER: C

INDICATION OF DANGER: CORROSIVE.

R: 34 37

RISK STATEMENTS: CAUSES BURNS. IRRITATING TO RESPIRATORY SYSTEM

S: 26 36/37/39 45

SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES, AND EYE/FACE PROTECTION. IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

**US CLASSIFICATION AND LABEL TEXT**

INDICATION OF DANGER: TOXIC.

RISK STATEMENTS: TOXIC BY INHALATION. CAUSES BURNS. IRRITATING TO RESPIRATORY SYSTEM.

SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY. (SHOW LABEL WHERE POSSIBLE).

UNITED STATES REGULATORY INFORMATION

SARA LISTED: NO

TSCA INVENTORY: YES

**CANADA REGULATORY INFORMATION**

WHMIS CLASSIFICATION: 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.

DSL: YES

NDSL: NO

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SECTION XVI – OTHER INFORMATION

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