Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name Hydrochloric Acid 0.0100N **Product Code** VW3237

Manufacturer
EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.

Effective Date **5/20/2005**

For More Information Call
856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call
800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Synonym None.
Material Uses Laboratory Reagent
Chemical Family Inorganic acid solution

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Hydrochloric acid	7647-01-0	<1
Water	7732-18-5	>99

+Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview CAUTION !
MAY CAUSE SKIN IRRITATION.

Routes of Entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes No known effect on eye contact, rinse with water for a few minutes.

Skin May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation No known acute effects of this product resulting from inhalation.

Ingestion No known acute effects of this product resulting from ingestion.

Potential Chronic Health Effects

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure: Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

+Section 5. Fire Fighting Measures

Flammability of the Product Non-flammable.

Auto-ignition Temperature Not applicable.

Flash Points Not applicable.

Flammable Limits Not applicable.

Products of Combustion Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of static discharge: No.

Risks of explosion of the product in presence of mechanical impact: No.

Fire Fighting Media and Instructions	Not applicable.
Protective Clothing (Fire)	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

+Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
Spill Kit Information	No specific spill kit required for this product.

Section 7. Handling and Storage

Handling	Do not ingest. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.
Personal Protection	
Eyes	Splash goggles.
Body	Lab coat.
Respiratory	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Hands	Gloves.
Feet	No special recommendations.
Protective Clothing (Pictograms)	
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name	Exposure Limits
Hydrochloric acid	**BMWA_MAK (Austria, 2001).** Spitzenbegrenzung: 16 mg/m3 8 times per shift, 5 minute(s). Spitzenbegrenzung: 10 ppm 8 times per shift, 5 minute(s). TWA: 8 mg/m3 8 hour(s). TWA: 5 ppm 8 hour(s). **NOHSC (Australia, 2002). Notes: Documentation for the substances with this footnote can be found in the 5th Edition of the ACGIH documentation of the threshold limit values and biological exposure indices.1 For all other substances with 'H' in Column 7 the documentation can be found i n the 6th Edition of the ACGIH documentation of the threshold limit values and biological exposure indices.2** AMP: 7.5 mg/m3 15 minute(s). AMP: 5 ppm 15 minute(s). **Lijst Grenswaarden (Belgium, 2002).** VCD: 15 mg/m3 15 minute(s). VCD: 10 ppm 15 minute(s). VL: 8 mg/m3 8 hour(s). VL: 5 ppm 8 hour(s). **SUVA (Switzerland, 2001).** Kurzzeitsgrenzwerte: 7.5 mg/m3 15 minute(s). Kurzzeitsgrenzwerte: 5 ppm 15 minute(s). MAK: 7.5 mg/m3 8 hour(s). MAK: 5 ppm 8 hour(s). **178/2001 (CZ, 2001).** STEL: 15 mg/m3 10 minute(s). STEL: 10.185 ppm 10 minute(s). TWA: 8 mg/m3 8 hour(s). TWA: 5.432 ppm 8 hour(s). **BAUA (Germany, 1997).** Spitzenbegrenzung: 8 mg/m3 TWA: 8 mg/m3 8 hour(s). **MAK-Werte Liste (Germany, 2000).** Spitzenbegrenzung: 7.6 mg/m3 15 minute(s). Spitzenbegrenzung: 5 ML/M3 15 minute(s). TWA: 7.6 mg/m3 8 hour(s). TWA: 5 ML/M3 8 hour(s). **TRGS900 MAK (Germany, 2002).** Spitzenbegrenzung: 8 mg/m3 TWA: 8 mg/m3 8 hour(s). **Arbejdstilsynet (Denmark, 2000).** Loftværdi: 7 mg/m3 Loftværdi: 5 ppm GV: 7 mg/m3 8 hour(s). GV: 5 ppm 8 hour(s). **DK-Arbejdstylsinet (Denmark, 1996).** Loftværdi: 7 mg/m3 Loftværdi: 5 ppm GV: 7 mg/m3 8 hour(s).

GV: 5 ppm 8 hour(s).
INSHT (Spain, 2002).
STEL: 15 mg/m3 15 minute(s).
STEL: 10 ppm 15 minute(s).
TWA: 7.6 mg/m3 8 hour(s).
TWA: 5 ppm 8 hour(s).
80/1107/EEC (Europe, 1996).
STEL: 10 mg/m3 15 minute(s).
STEL: 15 ppm 15 minute(s).
TWA: 5 mg/m3 8 hour(s).
TWA: 8 ppm 8 hour(s).
EU OEL (Europe, 2000). Notes: Indicative
STEL: 15 mg/m3 15 minute(s).
STEL: 10 ppm 15 minute(s).
TWA: 8 mg/m3 8 hour(s).
TWA: 5 ppm 8 hour(s).
Työterveyslaitos (Finland, 2002).
STEL: 7.6 mg/m3 15 minute(s).
STEL: 5 ppm 15 minute(s).
INRS (France, 1999). Notes: Advisory
VLE: 7.5 mg/m3 15 minute(s).
VLE: 5 ppm 15 minute(s).
NAOSH (Ireland, 2002).
STEL: 14 mg/m3 15 minute(s).
STEL: 10 ppm 15 minute(s).
OEL: 7 mg/m3 8 hour(s).
OEL: 5 ppm 8 hour(s).
JSOH (Japan, 1996).
CEIL: 7.5 mg/m3
CEIL: 5 ppm
Ministry of Labor (KR, 1997).
CEIL: 7 mg/m3
CEIL: 5 ppm
Nationale MAC-lijst (Netherlands, 2003). Notes: Administrative
TGG 15 min: 15 mg/m3 15 minute(s).
TGG 15 min: 10 ppm 15 minute(s).
TGG 8 uur: 8 mg/m3 8 hour(s).
TGG 8 uur: 5 ppm 8 hour(s).
Arbeidstilsynet (Norway, 2001).
Takverdi: 7 mg/m3
Takverdi: 5 ppm
AN: 7 mg/m3 8 hour(s).
AN: 5 ppm 8 hour(s).
NZ OSH (NZ, 1994).
CEIL: 7.5 mg/m3
CEIL: 5 ppm
AFS (Sweden, 2000).
TGV: 8 mg/m3
TGV: 5 ppm
KTV: 8 mg/m3 15 minute(s).

	KTV: 5 ppm 15 minute(s). **EH40-OES (United Kingdom (UK), 2002).** STEL: 8 mg/m3 15 minute(s). STEL: 5 ppm 15 minute(s). TWA: 2 mg/m3 8 hour(s). TWA: 1 ppm 8 hour(s). **ACGIH (United States, 2003).** CEIL: 2 ppm **NIOSH REL (United States, 2001).** CEIL: 7 mg/m3 CEIL: 5 ppm **OSHA Final Rule (United States, 1989).** CEIL: 7 mg/m3 CEIL: 5 ppm **OSHA PEL (United States, 1974).** CEIL: 7 mg/m3 CEIL: 5 ppm **OSHA PEL 1989 (United States, 1989).** CEIL: 7 mg/m3 CEIL: 5 ppm
Water	Not available.

Section 9. Physical and Chemical Properties

Odor	Characteristic. (Slight.)
Color	Clear. Colorless.
Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not available.
Boiling/Condensation Point	The lowest known value is 99.9°C (211.8°F) (Water).
Melting/Freezing Point	May start to solidify at -0.1°C (31.8°F) based on data for: Water.
Specific Gravity	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Odor Threshold	Not available.
Evaporation Rate	0.36 (Water) compared to(n-Butyl Acetate =1)
LogKow	Not available.
Solubility	Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.

Conditions of Instability	Not available.
Incompatibility with Various Substances	Highly reactive with organic materials, metals.
Rem/Incompatibility	Incompatable with Strong Bases Incompatible with phosphides, acetylides, borides, carbides, silicates, vinyl acetate, formaldehyde, cyanides, sulphides, metal oxides, hydroxides, amines, and carbonates.
Hazardous Decomposition Products	HCl gas
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

	Hydrochloric Acid	MW4025000
	Water	ZC0110000

RTECS Number:	
Toxicity	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	Not available.
Acute Effects on Humans	May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Synergetic Products (Toxicologically)	Not available.
Irritancy	Draize Test: Not available.
Sensitization	Slightly hazardous in case of inhalation (lung sensitizer).
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.
Toxicity to Reproductive System	Not available.
Teratogenic Effects	Not available.
Mutagenic Effects	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are more toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number	D002

Treatment	Specified technology- Neutralize to pH 6-9. Contact your local permitted waste disposal site (TSD) for permissible treatments sites. ALWAYS CONTACT PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

Section 14. Transport Information

DOT Classification	Not available.
TDG Classification	Not available.
IMO/IMDG Classification	Not available.
ICAO/IATA Classification	Not available.

+Section 15. Regulatory Information

U.S. Federal Regulations	TSCA 8(b) inventory: Hydrochloric acid; Water SARA 302/304/311/312 extremely hazardous substances: Hydrochloric acid SARA 302/304 emergency planning and notification: Hydrochloric acid SARA 302/304/311/312 hazardous chemicals: Hydrochloric acid SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hydrochloric acid: Sudden Release of Pressure, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: Hydrochloric Acid 0.0100N Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: Hydrochloric acid Clean air act (CAA) 112 accidental release prevention: Hydrochloric acid Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: Hydrochloric acid
WHMIS (Canada)	Not controlled under WHMIS (Canada). CEPA DSL: Hydrochloric acid; Water This product has been classifed in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.
International Regulations	
EINECS	Hydrochloric acid 231-595-7 Water 231-791-2
DSCL (EEC)	This product is not classified according to the EU regulations.
International Lists	Australia (NICNAS): Hydrochloric acid; Water Japan (MITI): Hydrochloric acid; Water Korea (TCCL): Hydrochloric acid; Water Philippines (RA6969): Hydrochloric acid; Water China: No products were found.

State Regulations	Pennsylvania RTK: Hydrochloric acid: (environmental hazard, generic environmental hazard) Massachusetts RTK: Hydrochloric acid New Jersey: Hydrochloric Acid 0.0100N California prop. 65: No products were found.

Section 16. Other Information

National Fire Protection Association (U.S.A.)

Health 0 0 0 **Fire Hazard**

Reactivity

Specific Hazard

Changed Since Last Revision +

Notice to Reader

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