Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier: **Hydrochloric Acid**
Synonyms: Hydrochloric Acid, Muriatic Acid, Hydrogen chloride
Intended use: Acid, steel, oil & gas, ore & mineral, food processing, pharmaceutical, organic chemical synthesis, neutralization
Uses Advised Against: None known.

Company Identification

DPC Industries, Inc.
DPC Enterprises, LP
DXI Industries, Inc.
DX Terminals
PO Box 24600
Houston , TX 77229-4600

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. (281) 457-4888
www.dxgroup.com

2. Hazard identification of the product

Physical hazards	Corrosive to metals.	Category 1
Health hazards	May be harmful if swallowed Harmful if inhaled Causes severe skin burns and eye damage. Causes serious eye damage May cause respiratory irritation	Category 5 Category 4 Category 1B Category 1 Category 3

Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Signal Word	**Danger**
Hazard Statements	May be harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.
Precautionary Statements	
Prevention	Do not breathe mist / vapors / spray. Wash thoroughly after handling. Use only outdoors or in a well ventilated area. Wear protective gloves / eye protection / face protection.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Immediately call a POISON CENTER or doctor / physician..
Storage	Store in a well ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

Substance classified with a health or environmental hazard. Substance with a workplace exposure limit.
Synonyms: Hydrochloric Acid, Muriatic Acid, Hydrogen chloride

Ingredient	CAS Number:	Weight %
Hydrochloric Acid	7647-01-0	15 - 35

4. First Aid Measures

General	Move victim to fresh air. Call 911 or emergency medical service. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Move victim to fresh air. Call emergency medical care. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one- way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Eyes	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses if present and easy to do - continue rinsing. Seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Get medical attention if irritation persists.
Ingestion	If accidentally swallowed obtain IMMEDIATE MEDICAL ATTENTION. Keep at rest. Rinse mouth. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	
Overview	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
Indication of immediate medical attention and special treatment needed	Harmful if inhaled. May cause respiratory irritation. Causes serious eye damage. Causes severe skin burns and eye damage. Harmful if swallowed.

5. Fire-fighting measures

Recommended Extinguishing media	Regular dry chemical, carbon dioxide, fine water spray, regular foam.
Unsuitable extinguishing media	High volume water jet.
Special hazards arising from the substance or mixture	Thermal decomposition releases toxic and corrosive gas (Hydrogen chloride, Chlorine). Reacts with metal producing flammable/explosive hydrogen gas. Heating can cause expansion or decomposition leading to violent rupture of containers. Do not breathe mist / vapors / spray.

5. Fire-fighting measures (Cont.)

Advice for fire-fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars etc.). Substance may react with water (some violently), releasing corrosive and/or toxic gases and runoff. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated or if contaminated with water. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters **ERG Guide No. 157**

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Evacuate all unprotected personnel and keep people away from and upwind of spill/leak. Put on protective equipment (see Section 8). Avoid direct contact with skin, eyes and clothing. Do not breathe vapor or fumes. Ensure adequate ventilation.
Environmental precautions	Do not allow spills to enter drains or watercourses.
Methods and material for containment and cleaning up	CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number in Section 1. Shut off the source of the leak if conditions are safe. Neutralize with lime or soda ash or absorb with dry earth, sand or other non-combustible material, and dispose waste appropriately. Wash area down with excess water to remove residual material.

7. Handling and storage

Precautions for safe handling	Use protective equipment. Provide adequate ventilation. Do NOT add water to acid. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Storage facilities must be properly designed and diked to contain any spillage. Store tightly closed in a dry, cool and well-ventilated place. Protect containers from heat, physical damage, ignition sources and incompatible materials.

8. Exposure controls and personal protection

Exposure Control parameters

CAS No.	Material	Source	Value
7647-01-0	Hydrochloric acid	OSHA	Ceiling: 5 ppm (7 mg/m3)
		ACGIH	Ceiling: 2 ppm
		NIOSH	Ceiling: 5 ppm (7 mg/m3)

Individual protection measures, such as personal protective equipment

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.
Skin	Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical impervious gloves. Emergency eyewash station should be in close proximity.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

9. Physical and chemical properties

Appearance:	Water-White to Straw Yellow Liquid
Odor:	Pungent
Odor threshold:	Not Measured
pH:	1
Melting point / freezing point:	-51 F to -22 F
Initial boiling point and boiling range:	158 to 183 F
Flash Point:	Not Applicable
Evaporation rate (Ether = 1):	< 1
Flammability (solid, gas):	Not Applicable
Upper/lower flammability or explosive limits:	**Lower Explosive Limit:** Not Measured
	Upper Explosive Limit: Not Measured
Vapor pressure (mmHg):	16 - 70 (@77F)
Vapor Density:	1.26
Specific Gravity:	1.05 - 1.17
Solubility in Water:	Complete
Partition coefficient n-octanol/water (Log Kow):	Not Measured
Auto-ignition temperature (°C):	Not Measured
Decomposition temperature:	Not Measured
Viscosity (cSt):	Not Measured
VOC %:	Not Measured
Other information:	No other relevant information.

10. Stability and reactivity

Reactivity	Hazardous polymerization will not occur.
Chemical stability	Stable under normal circumstances.
Possibility of hazardous reactions	Exothermic reaction with incompatible materials.
Conditions to avoid	Excessive heat and open flame.
Incompatible materials	Strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials, concentrated sulfuric acid, strong oxidizing agents, perchlorates, nitrates, peroxides, carbides, hydrides, cyanides, sulfides, sulfites, permanganates, salts of oxyhalogenic acids, semimetallic oxide, semimetallic hydrogen compounds, aldehydes, vinylmethyl ether.
Hazardous decomposition products	High temperatures produce toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LC50, ppm/1hr
Hydrochloric acid (7647-01-0)	900.00, Rabbit	5,010.00, Rabbit	781.00, Mouse	No data available	3,124.00, Rat

11. Toxicological information (Cont.)

Item	Hazard
Acute Toxicity (mouth)	May be harmful if swallowed.
Acute Toxicity (skin)	Not Applicable
Acute Toxicity (inhalation)	Harmful if inhaled.
Skin corrosion/irritation	Causes severe skin burns and ulceration.
Eye damage/irritation	Causes serious eye damage.
Sensitization (respiratory)	Not Applicable
Sensitization (skin)	Not Applicable
Germ toxicity	Not Applicable
Carcinogenicity	Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity	Not expected to cause reproductive or developmental effects.
Specific target organ systemic toxicity	May cause respiratory irritation.
Aspiration hazard	Not Applicable

12. Ecological information

Toxicity - Toxic to aquatic life. Acidic substance leading to a lower pH.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	EC50 algae, mg/l
Hydrochloric acid (7647-01-0)	282.00 Gambusia affinis	260.00 Crangon crangon	Not Available

Persistence and degradability:	There is no data available on the preparation itself.
Bioaccumulative potential:	Not Measured
Mobility in soil:	No data available.
Results of PBT and vPvB assessment:	This product contains no PBT/vPvB chemicals.
Other adverse effects:	No data available.

13. Disposal considerations

Waste treatment methods:	Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Waste from material:	The waste determination should be made in discussion between the user and the waste disposal company**.**
Container Management:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

UN number:	UN1789
UN proper shipping name:	Hydrochloric acid
Transport hazard class(es)	
DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Hydrochloric acid
DOT Hazard Class **DOT Label:**	8 8
UN / NA Number:	UN1789
DOT Packing Group:	II
CERCLA/DOT RQ:	5000-lbs.
Environmental hazards:	IMDG Marine Pollutant: No
Special precautions for user:	Not Applicable

15. Regulatory information

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.			
WHMIS Classification:	D2B E			
OSHA REGULATORY STATUS:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)			
US EPA Tier II Hazards:	**Fire:**	No	**Immediate (Acute):**	Yes
	Sudden Release of Pressure:	No	**Delayed (Chronic):**	Yes
	Reactive:	No		
SARA 302 Extremely Hazardous Substance / RQs (lbs) :	Yes (5000-lbs)			
SARA 311/312 Chemicals and RQs (lbs) (>0.1%) :	Yes (5,000.00)			
SARA 313 (TRI)	Yes			
OSHA PSM (29 cfr 1910.119):	No			
TSCA:	Hydrochloric Acid			

State Regulations:	**N.J. RTK Substances (>1%)**	Listed	**Penn RTK Substances (>1%)**	Listed	**California Prop 65**	Not listed

16. Other information

Revision Information: This is the first revision of this SDS format, changes from previous revision not applicable.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.