A 1 ACID PRIVATE LIMITED

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE PRODUCT AND COMPANY

1.1. Product Name : Hydrochloric Acid

1.2. Chemical Formula : HCl

1.3. Use : Manufacture of Chlorinated Organic Chemicals, Dyes, Dyes Intermediates, Leather tanning, Ore refining, Rubber Industry, etc.

1.4. Manufacturer : **GRASIM INDUSTRIES LIMITED**
CHEMICAL DIVISION
BIRLAGRAM, NAGDA (M.P.) INDIA
TEL. No. 07366-245036/248020
FAX NO. 091-7366-246767
E-Mail: grasimng@sancharnet.in

1.5. Supplier : **GRASIM INDUSTRIES LIMITED**
CHEMICAL DIVISION
BIRLAGRAM, NAGDA (M.P.) INDIA

2. COMPOSITION & IDENTIFICATION INGREDIENTS

2.1. Chemical Identity : Hydrochloric Acid

2.2. Ingredients : Hydrogen & Chlorine

3. HAZARD IDENTIFICATION

3.1. Corrosive Substance, Class – 8

4. FIRST – AID MEASURES

4.1. Skin and Eye Contact	:	Flush affected area with plenty of running water & obtain medical attention immediately.
4.2. Inhalation	:	Move the victim to fresh Air. If not breathing, give respiration; obtain medical attention immediately.
4.3. Ingestion	:	Have victim rinse mouth thoroughly with water. Have victim drink large amount of water. Never give anything by mouth to unconscious person. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing Media	:	Not Applicable. (Product is non combustible)
5.2. Special Exposure Hazards	:	Irritation
5.3. Special Protective Equipment	:	Self Contained Breathing Apparatus Set
5.4. Combustion Products	:	Non - combustible, but decomposes at higher temperatures in to Chlorine & Hydrogen.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions	:	Avoid skin & Eye contact, Avoid inhaling fumes. Use appropriate personal protective equipments.
6.2. Environmental Precautions	:	Avoid generating fumes. Prevent material entering sewers or confirmed spaces.
6.3. Clean up procedure	:	Contain the spills. Small Acid spillage should be neutralised by using Soda Ash & or lime & Flushed with large quantity of water. Ample ventilation should be provided at the place.
6.4. Combustion Products	:	Non - combustible, but decomposes at higher temperatures in to Chlorine & Hydrogen.

7. HANDLING AND STORAGE

7.1. Handling Precautions	:	Avoid contact with skin & eye. Wear personal protective equipments. Avoid generating fumes/mists. Proper ventilation is required.
7.2. Storage	:	Store in cool, clean & well-ventilated area. Keep away from direct sun light.
7.3. Incompatible Materials	:	Bases, Alkali, Reducing agents, carbides explosives etc.
7.4. Combustion Products	:	Non - combustible, but decomposes at higher temperatures in to Chlorine & Hydrogen.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Exposure Controls	:	Adequate ventilation. Avoid fumes & mist generation. Use personal protective Equipments.

8.2. Personal Protective Equipment

8.2.1.Respiratory Protection	:	Anti acid fumes respirator
8.2.2. Eye Protection	:	Chemical Goggles. Face shield
8.2.3. Hand Protection	:	Rubber Gloves
8.2.4. Skin Contact	:	Rubber or PVC apron suit along with Gum Boots.
8.2.5. Hygiene Measures	:	Avoid direct contact or vapour inhalation. Wash hands thoroughly before eating, drinking or toilet. Do not eat or smoke at work area.

9. PHYSICAL AND CHEMICAL PROPERTIES 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Appearance

9.1.1. Form	:	Liquid
9.1.2. Colour	:	Colourless
9.1.3. Odour	:	Pungent

9.2. Safety Data

9.2.1. pH	:	Acidic
9.2.2. Boiling Point	:	108 degree C
9.2.3. Freezing Point	:	42 degree C
9.2.4. Flash Point (Closed Cup)	:	Not Applicable
9.2.5. Flammability (Solid, Gas)	:	Not Applicable
9.2.6. Explosive Properties	:	Not Applicable
9.2.7. Solubility in water	:	Miscible

9.3. Other Data

9.3.1. Vapour Density	:	'1.27
9.3.2. Evaporation Rata	:	Not Applicable
9.3.3. Conductivity	:	Not Known
9.3.4. Volatiles	:	Non Volatile

10. STABILITY AND REACTIVITY

10.1. Stability	:	The product is separated into chlorine and Hydrogen if heated around 1000 degree C
10.2. Reactivity	:	Reactive with most metals and their alloys, Bases Alkali, unsaturated organic products, Reducing Agents, Carbides, Explosives, etc.
10.3. Hazardous decomposition	:	Chlorine librates
10.4. Combustion Products	:	Non - combustible, but decomposes at higher temperatures in to Chlorine & Hydrogen.

11. TOXICOLOGICAL INFORMATION

11.1. Health Effects

11.1.1. Skin & Eye	:	May cause irritation & burns. May cause severe damages in case splashes in eyes.
11.1.2. Inhalation	:	Inhalation of vapours or mist may produce severe Irritation of the upper respiratory tract.
11.1.3. Ingestion	:	Can burn mouth & digestive tract.
11.2. LD_{50} Oral (Rabbit)	:	900 mg/kg.

12. ECOLOGICAL INFORMATION 12. ECOLOGICAL INFORMATION

12.1. Mobility	:	No
12.2. Persistence and Degradability	:	Not determined
12.3. Bioaccumulative Potential	:	Not determined
12.4. Ecotoxicity	:	Toxic
12.5. Behaviour in Sewage	:	Not Known
12.6. Combustion Products	:	Non - combustible, but decomposes at higher temperatures in to Chlorine & Hydrogen.

13. DISPOSAL CONSIDERATIONS

13.1. Product Disposal	:	Neutralization with alkaline material is usually required before disposal. However, Federal, provincial & local regulations should be reviewed for its disposal.

14. TRANSPORT INFORMATION

14.1. UN No. & Symbols	:	1789, "Corrosive Substance"
14.2. Road and Rail Transport (ADR/RID)	:	Not Known
14.3. GGVE / GGVS	:	Not Known
14.4. IMDG Code	:	Not Known
14.5. Air Transport (ICAO/IATA)	:	Not Known

14.6. P Phrases	:	Not Known
14.7. S Phrases	:	Not Known

15. REGULATORY INFORMATION

15.1. Health and Safety Information on Labels	:	Corrosive substance Class - 8
15.2. RTECS	:	Not Known

16. OTHER INFORMATION

The information & date contained in the "Material Safety Date Sheet" is drawn from following sources:

1. CIS of Indian Chemical Manufactures Association
2. IS 6164 – 1971 Code Safety for Hydrochloric Acid.
3. CHEMINFO of Canadian Centre of Occupational Health & Safety.
4. Our own experience.
5. ITC Classification: 28061000
6. UN No. 1789
7. IMDG No. 8102

NOTE:

Above "Material Safety Date Sheet" is for information only. GRASIM INDUSTRIES LIMITED, Chemical Division does not take any guarantee or legal liability under any circumstances for the same. The Physical data presented herein does not purport to be the specifications.