RADCHEM

LABORATORY CHEMICALS AND CONSUMABLES

MATERIAL SAFETY DATA SHEET

HYDROCHLORIC ACID 0.1N

1. Chemical Product and Company information.

Product name: Hydrochloric acid 0.1N

Contact Information:
Radchem cc
PO Box 166982
Brackendowns
Alberton 1454
Telephone : **011 867 3726 / 2864**

2. Hazard Identification

Hazardous in case of eye contact (irritant). Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

3. Composition / information on ingredients

CAS #: Mixture

Synonym: Hydrochloric Acid, 0.1 N Aqueous Solution

Chemical Name: Hydrochloric Acid

Chemical Formula: Not applicable

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.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

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

Serious Inhalation: Not available

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.

Serious Ingestion: Not available.

5. Fire-fighting measures

Flammability of the Product: Non-flammable

Fire Hazards in Presence of Various Substances: Not applicable

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available

Special Remarks on Explosion Hazards: Not available

6. Accidental release measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Neutralize the residue with a dilute solution of sodium carbonate. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and storage

Precautions: Do not breathe gas/fumes/ vapour/spray. Never add water to this product. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls/personal protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value.

Personal Protection: Splash goggles. Lab coat. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

9. Physical and chemical properties

Physical state and appearance: Liquid	**Odour Threshold:** 0.25 to 10 ppm
Odour: Not available	**Ionicity (in Water):** Not available.
Taste: Not available	**Dispersion Properties:** See solubility in water,

Colour: Clear Colourless **Boiling Point:** The lowest known value is 100°C (Water) **Melting Point:** Not available **Critical Temperature:** Not available **Specific Gravity:** The only known value is 1 (Water = 1) (Water)	diethyl ether **Solubility:** Easily soluble in cold water. Soluble in hot water, diethyl ether. **Vapour Density:** The highest known value is 0.62 (Air = 1) (Water) **Volatility:** Not available

10. Stability and reactivity

Stability: The product is stable

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Slightly reactive to reactive with alkalis.

Corrosivity: Slightly corrosive in presence of glass

Special Remarks on Reactivity: Reacts violently (moderate reaction with heat of evolution) with water especially when water is added to the product. Isolate hydrogen chloride from heat, direct, alkalise (reacts vigorously), organic materials, and oxidizers (especially nitric acid and chlorates), amines, copper and alloys (e.g. brass), hydroxides, zinc (galvanized materials). Hydrogen chloride causes
aldehydes and epoxides to violently polymerize. It reacts with oxidizers releasing chlorine gas. (Hydrogen chloride)

Special Remarks on Corrosivity: Not available

Polymerization: Will not occur.

11. Toxicological information

Routes of Entry: Absorbed through skin. Eye contact.

Toxicity to Animals: Hydrochloric Acid: Acute oral toxicity (LD50): 900 mg/kg [Rabbit]. Acute toxicity of the vapour (LC50): 1108 ppm, 1 hour [Mouse]. Acute toxicity of the vapour (LC50): 3124 ppm, 1 hour [Rat].

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride]. Contains material which may cause damage to the following organs: kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, and teeth.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Hydrochloric Acid Lowest Published Lethal Doses (LDL/LCL) LDL [Man] -Route: Oral; 2857 ug/kg LCL [Human] - Route: Inhalation; Dose: 1300 ppm/30M LCL [Rabbit] - Route: Inhalation; Dose: 4413 ppm/30M

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects (fetoxicity). May affect genetic material. (Hydrochloric Acid)

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: May cause slight

skin irritation. Eyes: Causes eye irritation. Inhalation: May cause respiratory tract irritation. It is expected to be a low hazard for usual industrial handling. Ingestion: Ingestion of large doses may cause gastrointestinal tract disturbances with nausea, vomiting and diarrhoea. May affect behaviour, the cardiovascular system, and urinary system (kidneys). Chronic Potential Health Effects: Prolonged or repeated inhalation or ingestion may affect liver, respiratory tract (chronic bronchitis), teeth (yellowing of teeth and erosion of tooth enamel), kidneys, and behaviour, Prolonged or repeated skin contact may cause dermatitis.

12. Ecological information

Ecotoxicity: Not available

BOD5 and COD: Not available

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available

13. Disposal considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

DOT Classification: Not a DOT controlled material

Identification: : Not applicable

Special Provisions for Transport: Not available

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