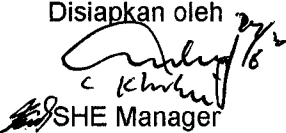





PT. SULFINDO ADIUSAHA

MATERIAL SAFETY DATA SHEET

HYDROCHLORIC ACID

Disiapkan oleh  SHE Manager	Disahkan oleh  Collective GM	NO. DOKUMEN : TBL-QSE-SHE-003 NO. REVISI : 1 TGL. BERLAKU : 25 Juni 2020 HALAMAN : 1/5
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1. Identification of the substance/preparation and the company / undertaking :

Identification of the product

Product Name : Hydrochloric Acid
Other Name : Hydrogen Chloride, Muriatique Acid, Dilute Hydrochloric Acid.
Manufacturer / Supplier identification
Company : PT. Sulfindo Adiusaha, Serang – Banten, Indonesia
Contact for information : Telp : **+6221 525 8300**
Fax : **+6221 525 8399**
Emergency phone no : **+62254 575 0035 ext 1205**

2. Information on ingredients

CAS-No : 7647-01-0
Molar mass : 36.46
Molecular formula : HCl
Form : Liquid 33% concentration

3. Hazard identification :

Pictogram



Signal Word

DANGER

Hazard identification :

Hydrochloric Acid very corrosive, toxic and irritating to respiratory system.

Skin : singe and dermatitis
Eye : irritation and blindness
Swallowed : causing mucous membranes singe in the mouth, esophagus and stomach.
Inhaled : bronchitis

Toxic and irritating vapors are generated when heated.

If contact with metal will yield flammable hydrogen gas.

Precautionary Statement :

Wear appropriate personal protection to prevent if contact with HCl with Self-contained breathing equipment, air-line mask, or industrial canister-type gas mask; rubber or rubber-coated gloves, apron, coat, and shoes. Do not handle until all safety precaution have been reed and understood
Obtain special instruction before used and Avoid release to the environment



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4. First aid measured

After inhalation

Remove person to fresh air; keep him warm and quiet and get medical attention immediately; start artificial respiration if breathing stops.

After skin contact

Immediately flush skin while removing contaminated clothing; get medical attention promptly; use soap and wash area for at least 15 min.

After eye contact

Immediately flush with plenty of water for at least 15 min. and get medical attention; continue flushing for another 15 min. with water. If physician does not arrive promptly.

After swallowing

Rinse the mouth with water, if consciousness give to drink 1-2 glass irrigate for thinning. don't give to

5. Fire fighting measure :

Nature of material :

Non combustible

Suitable extinguishing media :

Can be conducted with extinction of ordinary fire. Place of which is exposure heat can be sprayed with water to be cold, but water may not come into the place.

Special risk :

If contact with metal will yield flammable hydrogen gas.

Special protective equipment for fire fighting :

Can be conducted with extinction of ordinary fire.

Place of which exposure heat can be sprayed with water to be cold, but water may not come into the place. Wearing personal protective clothing and appliance protector of exhalation.

6. Accidental release measures :

Spilling and small leakage :

If leakage is not big or small, cover with dry soil, dry sand or other material which do not burn to be followed with plastic sheet to avoid contact or spreading with rainwater.

Spilling and big leakage :

Handling of leakage of gas or spilled of HCL have to wear appliance personal protective equipment, especially protector of respiration, skin (body) and eye. Vapour can be sprayed with water. Spilled which do not be taken safety to be neutralized with caustic soda solution or CaCO_3 low grade, powdered limestone . Sprinkle with water.

Personal Protective Equipment used:

Self-contained breathing equipment, air-line mask, or industrial canister-type gas mask; rubber or



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7. Handling and storage :

Handling :

Work with vapour or gas of HCL have to in sour cupboard. Alert leakage of gas.

Prevention to exposure :

Use SCBA and protective clothing.

Storage :

Keep in the cold place, ventilating and building floor have to acid proof.

Requirements for storage rooms and containers :

Avoid from oxidator materials, as well as alkali materials, cyanide, sulfide, formaldehyd, metal of natrium, sulphate merkuri and hydroxide amonium. Check leakage of place of acid.

8. Exposure control / personal protection :

Technical control :

Neutralize with dilute base.

Personal protective equipment :

Self-contained breathing equipment, air-line mask, or industrial canister-type gas mask; rubber or rubber-coated gloves, apron, coat, overalls, shoes.

9. Physical and chemical properties :

Form		liquid
Colour		Clear to rather yellow
Odor		stinging (1-35 ppm)
pH value		strong acid (<1)
Melting temperature		-144.8°C (gas)
		-25.4°C (39.17 % b/b)
Boiling temperature		-85°C (gas)
		109°C (Azeotrop, 20.22 %)
Ignition temperature		not available
Flash point		not available
Vapor Pressure	(20°C)	36.5 mm Hg
Explosion limit	lower	not available
	upper	not available
Specific Gravity		1.19 at 68° F
Relative vapor density		not available
Solubility in water	(0°C)	82.3 g/100ml



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10. Stability and reactivity

Reactivity :

Compound of HCl stable at room chamber temperature. By heat influence will ravelled to become hydrogen and chlorine. Condensation in water very reactive with metals and yield explosive hydrogen gas. Reaction with oxidator yield toxic chlor gas.

Stability :

Stable at pressure with normal temperature.

Condition to be avoided :

Heat and damp.

Substances to be avoided :

Reacts exothermically with organic bases (amines, amides) and inorganic bases (oxides and hydroxides of metals). Reacts exothermically with carbonates (including limestone and building materials containing limestone) and hydrogen carbonates to generate carbon dioxide. Reacts with sulfides, carbides, borides, and phosphides to generate toxic or flammable gases. Reacts with many metals (including aluminum, zinc, calcium, magnesium, iron, tin and all of the alkali metals) to generate flammable hydrogen gas. Reacts violently with acetic anhydride, 2-aminoethanol, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, 1,1-difluoroethylene, ethylenediamine, oleum, perchloric acid, γ -propiolactone, propylene oxide, silver perchlorate/carbon tetrachloride mixture, sodium hydroxide, uranium(IV) phosphide, vinyl acetate, calcium carbide, rubidium carbide, cesium acetylide, rubidium acetylide, magnesium boride, mercury(II) sulfate [Lewis].

11. Toxicological information :

Threshold limit value :

5 ppm (7.5 mg/m³) (TLV-C)

After eye contact : can cause eye irritation and blindness.

After skin contact : can generate singe.

LD 50 (rat) : 238 - 277 mg/kg (Hoechst AG 1966)

LD 50 (rabbit) : 900 mg/kg (Loewy and Munzer 1923)

LC 50 (rat) : 23.7 mg/L + 5 min (Hartzellet al. 1987)

Local Effect :

Short explanation (acute):

Breathed in can cause irritation at red lane and nose, respiration system or damage of varvenu.

Chronic:



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12. Ecological information :

Environment effect :

Impureded of HCl in air can cause corrosive dew or rain acid to metal installation.

Environment degradation:

no information available

Bio acumulation :

no information available

13. Disposal Consideration

Before thrown to environment, neutralized first become pH 6 - 9 or to treatment in chemical pit to be neutralized. Neutralizing Agents for Acids and Caustics: Flush with water; apply powdered limestone, slaked lime, soda ash, or sodium bicarbonate.

14. Transport information

International Rules :

DOT rules or your country rules.

Transport over land :

Tank truck with rubber lining

Sea transportation :

Ship tanker

Air transportation :

no available

15. Regulatory Information :

Ministry of Indonesian Man Regulation No. KEP. 187/MEN/1999 about Controlling of Hazardous Chemical Materials in Working Place, section III about Determined of Hazardous Potential of Instalation.

Refer to The Government of Republic Indonesia regulation (number 74 year 2001) For handling of hazardous materials.

16. Other Information

Revison 1, June 2020

The information given corresponds to the current state of our knowledge and experience of the product.