ALUMINIUM (AL) ICP STANDARD SOLUTION 1 GM/L IN DILUTE HCL TRACEABLE TO NIST MSDS



CAS No: MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

| SECTION 1: Identificatio | n of the substance/mixture and of the company/undertaking |
|---|---|
| 1.1. Product identifie | er |
| Product form | : Mixture |
| Product code | : : I100H |
| 1.2. Relevant identif | ied uses of the substance or mixture and uses advised against |
| 1.2.1. Relevant identif | ied uses |
| Use of the substance/mixt | ure : Laboratory chemicals, Manufacture of substances |
| 1.2.2. Uses advised ag No additional information a | - |
| 1.3. Details of the su | ipplier of the safety data sheet |
| Ludhiana Pb. (141007) +91 9316777775, +91 770 sales@labogens.com - \ | India, Guru Vihar , Rahon Road, 07855700 www.Labogens.com |
| 1.4. Emergency tele | |
| Emergency number SECTION 2: Hazards ide | : +91 7707855700 (9:00am - 6:00 pm) ntification |
| 2.1. Classification of | f the substance or mixture |
| Classification according | to Regulation (EC) No. 1272/2008 [CLP] |
| Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2 Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H315 H319 H335 |
| Full text of classification ca | ategories and H statements : see section 16 |

Adverse physicochemical, human health and environmental effects No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

| Hazard pictograms (CLP) | |
|--------------------------------|--|
| | GHS07 |
| Signal word (CLP) | : Warning |
| Hazard statements (CLP) | H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation |
| Precautionary statements (CLP) | : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |

2.3. Other hazards

No additional information available

| SECTIO | SECTION 3: Composition/information on ingredients | | | |
|---------|---|--|--|--|
| | | | | |
| 3.1. | Substance | | | |
| Not app | licable | | | |

3.2. Mixture

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------------------------|---|----------|---|
| Water | (CAS No) 7732-18-5 (EC no) 231-791-2 | 75 - 99 | Not classified |
| Hydrochloric acid | (CAS No) 7647-01-0 (EC no) 231-595-7 (EC index no) 017-002-01-X | 1 - 5 | Skin Corr. 1B, H314 STOT SE 3, H335 |
| ALUMINIUM CHLORIDE (HEXAHYDRATE) | (CAS No) 7784-13-6 (EC no) 231-208-1 (EC index no) 013-003-00-7 | 0.01 - 1 | Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335 |

Full text of H-phrases: see section 16

| SECTION 4: First aid measures | | |
|---------------------------------------|---|------------|
| | | |
| 4.1. Description of first aid measure | 95 | |
| First-aid measures after inhalation | : Assure fresh air breathing. If breathing is difficult, remove victim to fresh ai at rest in a position comfortable for breathing. | r and keep |
| www.l.ahagana.com | 05/10/0016 | 2/10 |

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|--|---|
| First-aid measures after skin contact | : Wash with plenty of soap and water. Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present |
| | and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth. Get medical advice/attention. |
| 4.2. Most important symptoms and | effects, both acute and delayed |
| Symptoms/injuries after inhalation | : May cause respiratory irritation. |
| Symptoms/injuries after skin contact | : Causes skin irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |
| 4.3. Indication of any immediate me | edical attention and special treatment needed |
| Treat symptomatically. | |
| SECTION 5: Firefighting measures | |
| | |
| 5.1. Extinguishing media | |
| Suitable extinguishing media | : Carbon dioxide. Dry powder. Foam. Water spray. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |
| 5.2. Special hazards arising from th | e substance or mixture |
| No additional information available | |
| | |
| 5.3. Advice for firefighters | |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| SECTION 6: Accidental release measure | es |
| 6.1. Personal precautions, protectiv | ve equipment and emergency procedures |
| 6.1.1. For non-emergency personnel | |
| Emergency procedures | : Evacuate unnecessary personnel. |
| | |
| 6.1.2. For emergency responders | |
| Protective equipment | : Use personal protective equipment as required. |
| 6.2. Environmental precautions | |
| Avoid release to the environment. | |
| | |
| 6.3. Methods and material for conta | |
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. |
| 6.4. Reference to other sections | |
| No additional information available | |
| SECTION 7: Handling and storage | |
| | |
| 7.1. Precautions for safe handling | Avoid contact with align and avon. Do not breathe venerum. Dravide good ventilation |
| Precautions for safe handling | : Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour. |
| Hygiene measures | Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |
| 7.2. Conditions for safe storage, inc | cluding any incompatibilities |
| Storage conditions | : Store in a well-ventilated place. Keep container tightly closed. Store in original |
| 5 | container. |
| 7.3. Specific end use(s) | |
| 7.3. Specific end use(s) No additional information available | |
| | |

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

| 8.2. Exposure controls | |
|--|---|
| Hand protection | : protective gloves |
| Eye protection | : Chemical goggles or safety glasses |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection | : Wear respiratory protection |
| SECTION 9: Physical and chemical prop | perties |
| 9.1. Information on basic physical a | |
| Physical state | : Liquid |
| Colour | : Clear colourless. |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| | |
| Viscosity, kinematic | : No data available |
| Viscosity, kinematic Viscosity, dynamic | No data availableNo data available |

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|--|-------------------------------------|
| Oxidising properties | : No data available |
| Explosive limits | : No data available |
| 9.2. Other information | |
| No additional information available | |
| SECTION 10: Stability and reactivity | |
| 10.1. Reactivity | |
| No additional information available | |
| | |
| 10.2. Chemical stability | |
| Stable under normal conditions. | |
| 10.3. Possibility of hazardous react | ions |
| No additional information available | |
| 10.4. Conditions to avoid | |
| Direct sunlight. Air contact. | |
| 10.5. Incompatible materials | |
| No additional information available | |
| | |
| 10.6. Hazardous decomposition pro | ducts |
| No additional information available | |
| | |
| SECTION 11: Toxicological information | 1 |
| 11.1. Information on toxicological e | |
| Acute toxicity | : Not classified |
| | |
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| 5 | |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single | : May cause respiratory irritation. |
| exposure) | |
| | |
| Specific target organ toxicity (repeated | : Not classified |
| exposure) | |
| | |
| Aspiration hazard | : Not classified |
| | |

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| | SECTION 12: Ecol | ogical information |
|--|-------------------------|--------------------|
|--|-------------------------|--------------------|

12.1. Toxicity

No additional information available

| 12.2. Persistence and degradability |
|-------------------------------------|
|-------------------------------------|

No additional information available

| | 12.3. | Bioaccumulative potential |
|--|-------|---------------------------|
|--|-------|---------------------------|

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

| 12.6. | Other adverse effects | |
|-------|-----------------------|--|
| | | |

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| : 1789 |
|--|
| : 1789 |
| : 1789 |
| : 1789 |
| : 1789 |
| |
| |
| : HYDROCHLORIC ACID |
| : UN 1789 HYDROCHLORIC ACID, 8, III, (E) |
| : UN 1789 HYDROCHLORIC ACID, 8, III |
| : UN 1789 HYDROCHLORIC ACID, 8, III |
| : UN 1789 HYDROCHLORIC ACID, 8, III |
| : UN 1789 HYDROCHLORIC ACID, 8, III |
| |

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14.3. Transport hazard class(es)

ADR

| Transport hazard class(es) (ADR) | |
|----------------------------------|--|
| Danger labels (ADR) | |



: 8 : 8

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IMDG

Transport hazard class(es) (IMDG) Danger labels (IMDG)



ΙΑΤΑ

Transport hazard class(es) (IATA) Hazard labels (IATA)

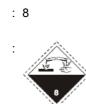


ADN

Transport hazard class(es) (ADN) Danger labels (ADN)

RID

Transport hazard class(es) (RID) Danger labels (RID)



| 14.4. Packing group | | | |
|----------------------|-------|--|--|
| Packing group (ADR) | : 111 | | |
| Packing group (IMDG) | : 111 | | |
| Packing group (IATA) | : 111 | | |
| Packing group (ADN) | : 111 | | |

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|---|--|
| Packing group (RID) | : III |
| 14.5. Environmental hazards | |
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |
| 14.6. Special precautions for user | |
| - Overland transport | |
| Classification code (ADR) | : C1 |
| Special provision (ADR) | : 520 |
| Limited quantities (ADR) | : 5L |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (ADR) | : MP19 |
| Portable tank and bulk container | : T4 |
| instructions (ADR) | |
| Portable tank and bulk container special provisions (ADR) | : TP1 |
| Tank code (ADR) | : L4BN |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Packages (ADR) | : V12 |
| Hazard identification number (Kemler No.) | : 80 |
| Orange plates | 80 1789 |
| Tunnel restriction code (ADR) | : E |
| EAC code | : 2R |
| - Transport by sea | |
| Special provision (IMDG) | : 223 |
| Limited quantities (IMDG) | : 5L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T4 |
| Tank special provisions (IMDG) | : TP1 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-B |
| | : C |
| Stowage category (IMDG) | . C |

- Air transport

| PCA Excepted quantities (IATA) | : | E1 |
|--|---|------|
| PCA Limited quantities (IATA) | : | Y841 |
| PCA limited quantity max net quantity (IATA) | : | 1L |
| PCA packing instructions (IATA) | : | 852 |
| PCA max net quantity (IATA) | : | 5L |
| CAO packing instructions (IATA) | : | 856 |

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| - | | |
|---|---|-------------------------|
| CAO max net quantity (IATA) | : | 60L |
| Special provision (IATA) | : | A3 |
| ERG code (IATA) | : | 8L |
| - Inland waterway transport | | |
| Classification code (ADN) | : | C1 |
| Special provisions (ADN) | : | 520 |
| Limited quantities (ADN) | : | 5 L |
| Excepted quantities (ADN) | : | E1 |
| Carriage permitted (ADN) | : | Т |
| Equipment required (ADN) | : | PP, EP |
| Number of blue cones/lights (ADN) | : | 0 |
| - Rail transport | | |
| Classification code (RID) | | C1 |
| Special provision (RID) | - | 520 |
| Limited quantities (RID) | : | 5L |
| Excepted quantities (RID) | : | E1 |
| Packing instructions (RID) | : | P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID) | : | MP19 |
| Portable tank and bulk container instructions (RID) | : | T4 |
| Portable tank and bulk container special provisions (RID) | : | TP1 |
| Tank codes for RID tanks (RID) | : | L4BN |
| Transport category (RID) | : | 3 |
| Special provisions for carriage – Packages (RID) | : | W12 |
| Colis express (express parcels) (RID) | : | CE8 |
| Hazard identification number (RID) | : | 80 |
| | | |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference

: Water hazard class (WGK) 3, strongly hazardous to water (Classification according to AwSV, Annex 1)

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12th Ordinance Implementing the Federal : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance) Immission Control Act - 12.BlmSchV

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment No additional information available

SECTION 16: Other information

Full text of H- and EUH-phrases:

| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 | |
|---------------|--|--|
| Skin Corr. 1B | Skin Corr. 1B Skin corrosion/irritation, Category 1B | |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 | |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | |
| H314 | Causes severe skin burns and eye damage | |
| H315 | Causes skin irritation | |
| H319 | Causes serious eye irritation | |
| H335 | May cause respiratory irritation | |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product