

Plasma CAL – Custom Standard

Revision date: 01/29/2024

Product code: AC18.09230

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2. Hazard(s) identification

Classification of the chemical

Regulation (EC) No 1272/2008

Met. Corr. 1; H290

Full text of hazard statements: see SECTION 16.

Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H290 May be corrosive to metals

Precautionary statements

P234 Keep only in original container.
 P390 Absorb spillage to prevent material damage.
 P406 Store in corrosive resistant container with a resistant inner liner.

Hazards not otherwise classified

No data available

3. Composition/information on ingredients

Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

| CAS No | Components | | | Quantity |
|-----------|---|--------------|------------------|------------|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 7647-01-0 | Hydrochloric acid | | | 5 - < 10 % |
| | 231-595-7 | 017-002-01-X | 01-2119484862-27 | |
| | Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335 | | | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Components | Quantity |
|-----------|--|-------------------|------------|
| | Specific Conc. Limits, M-factors and ATE | | |
| 7647-01-0 | 231-595-7 | Hydrochloric acid | 5 - < 10 % |
| | Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100 | | |

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

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4. First-aid measures

Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Irritant — skin irritation and eye damage
Cough
Dyspnoea

Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

Specific hazards arising from the chemical

Non-combustible liquids
Hazardous combustion products
In case of fire may be liberated:
Hydrochloric gas

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Use water spray jet to protect personnel and to cool endangered containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

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For non-emergency personnel

- Provide adequate ventilation.
- Use personal protection equipment.
- Avoid contact with skin, eyes and clothes.
- Remove persons to safety.
- Emergency procedures
- Consult an expert
- Do not breathe dust/fume/gas/mist/vapors/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment (PPE): see section 8

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up
For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Reference to other sections

- Safe handling: see section 7
- Personal protection equipment (PPE): see section 8
- Disposal: see section 13

7. Handling and storage
Precautions for safe handling
Advice on safe handling

- If handled uncovered, arrangements with local exhaust ventilation have to be used.
- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Provide adequate ventilation. Do not inhale fog/steam/aerosol.
- Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of the protective agents should be clarified with their suppliers.

Further information on handling

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.

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Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.
Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Take national regulations into account.

Further information on storage conditions

Unsuitable container/equipment material: Metal

Specific end use(s)

Laboratory chemicals

8. Exposure controls/personal protection

Control parameters

Exposure limits

| CAS No | Substance | ppm | mg/m ³ | Category | Origin |
|-----------|-------------------|-----|-------------------|----------|------------|
| 7647-01-0 | Hydrogen chloride | C 5 | C 7 | Ceiling | PEL |
| | | C 5 | C 7 | Ceiling | REL |
| | | 2 | | Peak | ACGIH-2025 |

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|-------------------|----------------|--------|----------------------|
| 7647-01-0 | Hydrochloric acid | | | |
| Worker DNEL, long-term | | inhalation | local | 8 mg/m ³ |
| Worker DNEL, acute | | inhalation | local | 15 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | local | 8 mg/m ³ |
| Consumer DNEL, acute | | inhalation | local | 15 mg/m ³ |

Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapor/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:

Face protection shield

goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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Skin protection

Wear suitable protective clothing.
Protective clothing acid-resistant

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. A respiratory protection program that meets OSHA's 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

| | | |
|---|-------------------|-------------------------|
| Physical state: | Liquid | |
| Color: | colorless | |
| Odor: | stinging | |
| Odour threshold: | No data available | |
| Melting point/freezing point: | | No data available |
| Boiling point or initial boiling point and boiling range: | | No data available |
| Flammability: | | No data available |
| Lower explosion limits: | | No data available |
| Upper explosion limits: | | No data available |
| Flash point: | | X |
| Auto-ignition temperature: | | No data available |
| Decomposition temperature: | | No data available |
| pH-Value (at 20 °C): | | acidic |
| Viscosity / kinematic: | | No data available |
| Water solubility: | | easily soluble |
| Solubility in other solvents | | |
| not determined | | |
| Dissolution rate: | | No data available |
| Partition coefficient n-octanol/water: | | No data available |
| Dispersion stability: | | No data available |
| Vapor pressure: | | No data available |
| Vapor pressure: | | No data available |
| Density (at 22,9 °C): | | 1,012 g/cm ³ |
| Relative density: | | No data available |
| Bulk density: | | No data available |
| Relative vapour density: | | No data available |
| Particle characteristics: | | No data available |

Other information

Information with regard to physical hazard classes

| | |
|---------------------------|-------------------|
| Explosive properties | |
| No data available | |
| Sustained combustibility: | No data available |
| Self-ignition temperature | |

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Solid: not applicable
 Gas: not applicable
 Oxidizing properties
 No data available

Other safety characteristics

Evaporation rate: No data available
 Solvent separation test: No data available
 Solvent content: 0%
 Solid content: 0%
 Sublimation point: No data available
 Softening point: No data available
 Pour point: No data available
 No data available:
 Viscosity / dynamic: No data available
 Flow time: No data available

Further Information

Corrosive to metals

10. Stability and reactivity

Reactivity

Corrosive to metals.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Alkali (lye)

Conditions to avoid

Heat

Incompatible materials

Keep away from: Metal.

The product develops hydrogen in an aqueous solution in contact with metals.

Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Fire fighting measures

Further information

No data available

11. Toxicological information

Information on toxicological effects

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Route(s) of Entry

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

Irritant — skin irritation and eye damage

Cough

Dyspnoea

12. Ecological information

Ecotoxicity

Based on available data, the classification criteria are not met.

| CAS No | Components | | | | | |
|-----------|---------------------|------|-----------|---------|----------------|--------|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 7647-01-0 | Hydrochloric acid | | | | | |
| | Acute fish toxicity | LC50 | 862 mg/l | 96 h | Leuciscus idus | |

Persistence and degradability

There are no data available on the mixture itself.

Bioaccumulative potential

There are no data available on the mixture itself.

Mobility in soil

There are no data available on the mixture itself.

Results of PBT and vPvB assessment

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The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

- Discharge into the environment must be avoided.
- Harmful effect due to pH shift.
- Forms corrosive mixtures with water even if diluted.

Further information

Do not empty into drains.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

- Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
- Send to a physico-chemical treatment facility under observation of official regulations .
- Do not empty into drains.

Contaminated packaging

- Handle contaminated packages in the same way as the substance itself.
- Waste codes/waste designations according to EWC/AVV

14. Transport information

Land transport (ADR/RID)

| | |
|---|---|
| <u>UN number or ID number:</u> | UN 3264 |
| <u>UN proper shipping name:</u> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <u>Transport hazard class(es):</u> | 8 |
| <u>Packing group:</u> | III |
| Hazard label: | 8 |
| Classification Code: | C1 |
| Special Provisions: | 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|---|---|
| <u>UN number or ID number:</u> | UN 3264 |
| <u>UN proper shipping name:</u> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <u>Transport hazard class(es):</u> | 8 |
| <u>Packing group:</u> | III |
| Hazard label: | 8 |
| Classification Code: | C1 |
| Special Provisions: | 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |

Marine transport (IMDG)

| | |
|---|---|
| <u>UN number or ID number:</u> | UN 3264 |
| <u>UN proper shipping name:</u> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <u>Transport hazard class(es):</u> | 8 |
| <u>Packing group:</u> | III |

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| | |
|---------------------|-----------|
| Hazard label: | 8 |
| Special Provisions: | 223 274 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| EmS: | F-A, S-B |
| Segregation group: | 1 - acids |

Air transport (ICAO-TI/IATA-DGR)

| | |
|--|---|
| UN number or ID number: | UN 3264 |
| UN proper shipping name: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| Transport hazard class(es): | 8 |
| Packing group: | III |
| Hazard label: | 8 |
| Special Provisions: | A3 A803 |
| Limited quantity Passenger: | 1 L |
| Passenger LQ: | Y841 |
| Excepted quantity: | E1 |
| IATA-packing instructions - Passenger: | 852 |
| IATA-max. quantity - Passenger: | 5 L |
| IATA-packing instructions - Cargo: | 856 |
| IATA-max. quantity - Cargo: | 60 L |

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

15. Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information

 Restrictions on use (REACH, annex XVII):
 Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

16. Other information
Abbreviations and acronyms

Met. Corr. 1: Corrosive to metals
 Skin Corr. 1B: Skin corrosion
 Eye Dam. 1: Eye damage
 STOT SE 3: Specific target organ toxicity single exposure
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%

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Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008

| Classification | Classification procedure |
|--------------------|--------------------------|
| Met. Corr. 1; H290 | On basis of test data |

Relevant H statements (full text)

- H290 May be corrosive to metals
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H335 May cause respiratory irritation

Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. Provide appropriate information, instructions and training to users.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)