



Safety Data Sheet dated 28/9/2023, version 6

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. Product identifier  
Trade name: PM-132 FORTIUS
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Recommended use:  
Pool cleaner product.  
Uses advised against:  
No uses advised against.
- 1.3. Details of the supplier of the safety data sheet  
Company:  
BONET ESPECIALITATS HIDROQUÍMIQUES, S.L.U.  
C/Holanda, 41. P.I. Pla de Llerona  
Les Franqueses del Vallès (08520) (Spain)  
Telf: (+34) 900 82 87 81, 93 846 53 36  
Fax: (+34) 93 846 78 21  
info@behqsl.com  
Competent person responsible for the safety data sheet:  
regulatory@behqsl.com
- 1.4. Emergency telephone number  
In case of poisoning call the Spanish National Institute of Toxicology: +34 91 562 04 20

## SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
EC regulation criteria 1272/2008 (CLP)
  -  Warning, Met. Corr. 1, May be corrosive to metals.
  -  Warning, Skin Irrit. 2, Causes skin irritation.
  -  Warning, Eye Irrit. 2, Causes serious eye irritation.
  -  Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:  
No other hazards

- 2.2. Label elements  
Hazard pictograms:



Warning

Hazard statements:

- H290 May be corrosive to metals.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Precautionary statements:

- P102+P405 Keep out of reach of children. Store locked up.
- P260 Do not breathe vapours.

## Safety Data Sheet PM-132 FORTIUS

P280 Wear protective gloves and eye/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501 Dispose of contents/container by delivery to an authorized collection point for hazardous waste in your town.

Special Provisions:

None

Contains

hydrogen chloride

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

Other Hazards:

No other hazards

### SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

| Qty               | Name              | Ident. Number                        | Classification                                                                                                  |
|-------------------|-------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| >= 15% -<br>< 20% | hydrogen chloride | Index                                |  2.16/1 Met. Corr. 1 H290  |
|                   |                   | number:                              |  3.2/1A Skin Corr. 1A H314 |
|                   |                   | CAS:                                 |  3.3/1 Eye Dam. 1 H318     |
|                   |                   | EC:                                  |  3.8/3 STOT SE 3 H335      |
|                   |                   | REACH No.: 01-21194848<br>62-27-XXXX |                                                                                                                 |

### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Remove contaminated clothing immediately and dispose off safely.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show the packing or label.

4.2. Most important symptoms and effects, both acute and delayed

None

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: None

### SECTION 5: Firefighting measures

5.1. Extinguishing media

## Safety Data Sheet PM-132 FORTIUS

Suitable extinguishing media:

Water. Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

### SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

No smoking. Keep away from food, drink and animal feed.

Use appropriate personal protective equipment. Refer to paragraph 8.

Prevent entry of unauthorized persons.

Advice on general occupational hygiene:

Follow legislation on safety and health at work.

7.2. Conditions for safe storage, including any incompatibilities

As a general storage conditions, it should be avoided sources of heat, radiation, electricity and food contact. Store according to local legislation.

Store between 5 and 35 °C in a dry and well ventilated place.

None in particular.

Store into the original container. Keep the container properly sealed and labeled.

Keep away from incompatible materials: see paragraph 10.

7.3. Specific end use(s)

None in particular

### SECTION 8: Exposure controls/personal protection

8.1. Control parameters

hydrogen chloride - CAS: 7647-01-0

EU - TWA(8h): 8 mg/m<sup>3</sup>, 5 ppm - STEL: 15 mg/m<sup>3</sup>, 10 ppm

ACGIH - STEL: Ceiling 2 ppm - Notes: A4 - URT irr

## Safety Data Sheet PM-132 FORTIUS

### DNEL Exposure Limit Values

hydrogen chloride - CAS: 7647-01-0

Worker Professional: 8 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

### PNEC Exposure Limit Values

hydrogen chloride - CAS: 7647-01-0

Target: Fresh Water - Value: 0.036 mg/l

Target: Marine water - Value: 0.036 mg/l

### 8.2. Exposure controls

#### Eye protection:

Use close fitting safety goggles, don't use eye lens.

#### Protection for skin:

Chemical protection clothing.

Safety shoes.

#### Protection for hands:

Protective gloves according to regulation EN 374.

#### Respiratory protection:

Filter mask for protection against gases and particles.

Full-/Half-/quarter-face masks (DIN EN 136/140).

A/P2 filter mask.

#### Thermal Hazards:

None

#### Environmental exposure controls:

None

#### Appropriate engineering controls:

None

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties                                                | Value                     | Method: | Notes:                                                                    |
|-----------------------------------------------------------|---------------------------|---------|---------------------------------------------------------------------------|
| Physical state:                                           | Liquid                    | --      | --                                                                        |
| Colour:                                                   | colourless to pale yellow | --      | --                                                                        |
| Odour:                                                    | Acidic                    | --      | --                                                                        |
| Melting point/freezing point:                             | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| Boiling point or initial boiling point and boiling range: | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| Flammability:                                             | Non-flammable             | --      | --                                                                        |
| Lower and upper explosion limit:                          | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| Flash point:                                              | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| Auto-ignition temperature:                                | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| Decomposition temperature:                                | Not available             | --      | Not available/Not applicable due to the nature/properties of the product. |
| pH:                                                       | < 1                       | --      | --                                                                        |
| Kinematic viscosity:                                      | Not available             | --      | Not available/Not applicable due                                          |

## Safety Data Sheet PM-132 FORTIUS

|                                                    |                                     |    |                                                                           |
|----------------------------------------------------|-------------------------------------|----|---------------------------------------------------------------------------|
|                                                    |                                     |    | to the nature/properties of the product.                                  |
| Solubility in water:                               | Soluble in water in all proportions | -- | --                                                                        |
| Solubility in oil:                                 | Not available                       | -- | Not available/Not applicable due to the nature/properties of the product. |
| Partition coefficient n-octanol/water (log value): | Not applicable                      | -- | Not available/Not applicable due to the nature/properties of the product. |
| Vapour pressure:                                   | Not available                       | -- | Not available/Not applicable due to the nature/properties of the product. |
| Density and/or relative density:                   | 1.095 - 1.120 (20 °C)               | -- | --                                                                        |
| Relative vapour density:                           | Not available                       | -- | Not available/Not applicable due to the nature/properties of the product. |
| Particle characteristics:                          |                                     |    |                                                                           |
| Particle size:                                     | Not applicable                      | -- | Not available/Not applicable due to the nature/properties of the product. |

### 9.2. Other information

No other relevant information

## SECTION 10: Stability and reactivity

- 10.1. Reactivity
  - Stable under normal conditions
- 10.2. Chemical stability
  - Stable under normal conditions
- 10.3. Possibility of hazardous reactions
  - None
- 10.4. Conditions to avoid
  - Stable under normal conditions.
- 10.5. Incompatible materials
  - Oxidising materials. Metals.
- 10.6. Hazardous decomposition products
  - None.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

hydrogen chloride - CAS: 7647-01-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2222 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 45.6 mg/l

Test: LD50 - Route: Skin - Species: Rabbit > 5010 mg/kg - Notes: sol. 31.5%

b) skin corrosion/irritation:

Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive - Duration: 4h - Source: OECD 404

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Positive - Source: OECD 405

## Safety Data Sheet PM-132 FORTIUS

- d) respiratory or skin sensitisation:  
Species: Guinea pig Negative
- e) germ cell mutagenicity:  
Negative
- f) carcinogenicity:  
Negative
- g) reproductive toxicity:  
Negative
- h) STOT-single exposure:  
Route: Inhalation Positive

If not differently specified, the information required in Regulation (EU)2020/878 listed below must be considered as N.A.:

- a) acute toxicity;
  - b) skin corrosion/irritation;
  - c) serious eye damage/irritation;
  - d) respiratory or skin sensitisation;
  - e) germ cell mutagenicity;
  - f) carcinogenicity;
  - g) reproductive toxicity;
  - h) STOT-single exposure;
  - i) STOT-repeated exposure;
  - j) aspiration hazard.
- 11.2. Information on other hazards
- Endocrine disrupting properties:  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$

### SECTION 12: Ecological information

- 12.1. Toxicity  
Adopt good working practices, so that the product is not released into the environment.  
hydrogen chloride - CAS: 7647-01-0
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: *Lepomis macrochirus* = 20.5 mg/l - Duration h: 24  
Endpoint: EC50 - Species: *Daphnia* = 0.45 mg/l - Duration h: 48 - Notes: OECD 202  
Endpoint: EC50 - Species: Algae = 0.73 mg/l - Duration h: 72 - Notes: OECD 201  
Endpoint: EC50 - Species: Bacteria = 0.23 mg/l - Duration h: 3
- 12.2. Persistence and degradability  
N.A.
- 12.3. Bioaccumulative potential  
hydrogen chloride - CAS: 7647-01-0  
Bioaccumulation: Not bioaccumulative
- 12.4. Mobility in soil  
hydrogen chloride - CAS: 7647-01-0  
Mobility in soil: Not mobile
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Endocrine disrupting properties  
No endocrine disruptor substances present in concentration  $\geq 0.1\%$
- 12.7. Other adverse effects  
None

### SECTION 13: Disposal considerations

- 13.1. Waste treatment methods  
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.  
Waste should not be disposed of through the sewer.

## Safety Data Sheet PM-132 FORTIUS

### SECTION 14: Transport information

- |                                                               |                          |
|---------------------------------------------------------------|--------------------------|
| 14.1. UN number or ID number                                  |                          |
| ADR-UN number:                                                | 1789                     |
| IATA-Un number:                                               | 1789                     |
| IMDG-Un number:                                               | 1789                     |
| 14.2. UN proper shipping name                                 |                          |
| ADR-Shipping Name:                                            | Hydrochloric acid, 8, II |
| IATA-Shipping Name:                                           | Hydrochloric acid, 8, II |
| IMDG-Shipping Name:                                           | Hydrochloric acid, 8, II |
| 14.3. Transport hazard class(es)                              |                          |
| ADR-Class:                                                    | 8                        |
| ADR-Label:                                                    | 8                        |
| IATA-Class:                                                   | 8                        |
| IATA-Label:                                                   | 8                        |
| IMDG-Class:                                                   | 8                        |
| 14.4. Packing group                                           |                          |
| ADR-Packing Group:                                            | II                       |
| IATA-Packing group:                                           | II                       |
| IMDG-Packing group:                                           | II                       |
| 14.5. Environmental hazards                                   |                          |
| Marine pollutant:                                             | No                       |
| 14.6. Special precautions for user                            |                          |
| IMDG-Shipping Name:                                           | Hydrochloric acid, 8, II |
| 14.7. Maritime transport in bulk according to IMO instruments |                          |
| No                                                            |                          |

### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
  - Dir. 2000/39/EC (Occupational exposure limit values)
  - Regulation (EC) n. 1907/2006 (REACH)
  - Regulation (EC) n. 1272/2008 (CLP)
  - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
  - Regulation (EU) n. 2020/878
  - Regulation (EU) n. 286/2011 (ATP 2 CLP)
  - Regulation (EU) n. 618/2012 (ATP 3 CLP)
  - Regulation (EU) n. 487/2013 (ATP 4 CLP)
  - Regulation (EU) n. 944/2013 (ATP 5 CLP)
  - Regulation (EU) n. 605/2014 (ATP 6 CLP)
  - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
  - Regulation (EU) n. 2016/918 (ATP 8 CLP)
  - Regulation (EU) n. 2016/1179 (ATP 9 CLP)
  - Regulation (EU) n. 2017/776 (ATP 10 CLP)
  - Regulation (EU) n. 2018/669 (ATP 11 CLP)
  - Regulation (EU) n. 2018/1480 (ATP 13 CLP)
  - Regulation (EU) n. 2019/521 (ATP 12 CLP)
  - Regulation (EU) n. 2020/217 (ATP 14 CLP)
  - Regulation (EU) n. 2020/1182 (ATP 15 CLP)
  - Regulation (EU) n. 2021/643 (ATP 16 CLP)
  - Regulation (EU) n. 2021/849 (ATP 17 CLP)
  - Regulation (EU) n. 2022/692 (ATP 18 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
- Restrictions related to the product:
    - Restriction 3
  - Restrictions related to the substances contained:

## Safety Data Sheet PM-132 FORTIUS

### Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

## SECTION 16: Other information

Full text of phrases referred to in Section 3:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

| Hazard class and hazard category | Code   | Description                                                  |
|----------------------------------|--------|--------------------------------------------------------------|
| Met. Corr. 1                     | 2.16/1 | Substance or mixture corrosive to metals, Category 1         |
| Skin Corr. 1A                    | 3.2/1A | Skin corrosion, Category 1A                                  |
| Skin Irrit. 2                    | 3.2/2  | Skin irritation, Category 2                                  |
| Eye Dam. 1                       | 3.3/1  | Serious eye damage, Category 1                               |
| Eye Irrit. 2                     | 3.3/2  | Eye irritation, Category 2                                   |
| STOT SE 3                        | 3.8/3  | Specific target organ toxicity - single exposure, Category 3 |

This safety data sheet has been completely updated in compliance to Regulation 2020/878.

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking

SECTION 2: Hazards identification

SECTION 3: Composition/information on ingredients

SECTION 4: First aid measures

SECTION 8: Exposure controls/personal protection

SECTION 9: Physical and chemical properties

SECTION 11: Toxicological information

SECTION 12: Ecological information

SECTION 14: Transport information

SECTION 15: Regulatory information

SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure |
|-----------------------------------------------------------|--------------------------|
| Met. Corr. 1, H290                                        | On basis of test data    |
| Skin Irrit. 2, H315                                       | Calculation method       |
| Eye Irrit. 2, H319                                        | Calculation method       |
| STOT SE 3, H335                                           | Calculation method       |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

## Safety Data Sheet PM-132 FORTIUS

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date.  
It refers solely to the product indicated and constitutes no guarantee of particular quality.  
It is the duty of the user to ensure that this information is appropriate and complete with respect to  
the specific use intended.

This MSDS cancels and replaces any preceding release.

|             |                                                                                      |
|-------------|--------------------------------------------------------------------------------------|
| ADR:        | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| ATE:        | Acute Toxicity Estimate                                                              |
| ATEmix:     | Acute toxicity Estimate (Mixtures)                                                   |
| CAS:        | Chemical Abstracts Service (division of the American Chemical Society).              |
| CLP:        | Classification, Labeling, Packaging.                                                 |
| DNEL:       | Derived No Effect Level.                                                             |
| EINECS:     | European Inventory of Existing Commercial Chemical Substances.                       |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany.                                          |
| GHS:        | Globally Harmonized System of Classification and Labeling of Chemicals.              |
| IATA:       | International Air Transport Association.                                             |
| IATA-DGR:   | Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  |
| ICAO:       | International Civil Aviation Organization.                                           |
| ICAO-TI:    | Technical Instructions by the "International Civil Aviation Organization" (ICAO).    |
| IMDG:       | International Maritime Code for Dangerous Goods.                                     |
| INCI:       | International Nomenclature of Cosmetic Ingredients.                                  |
| KSt:        | Explosion coefficient.                                                               |
| LC50:       | Lethal concentration, for 50 percent of test population.                             |
| LD50:       | Lethal dose, for 50 percent of test population.                                      |
| PNEC:       | Predicted No Effect Concentration.                                                   |
| RID:        | Regulation Concerning the International Transport of Dangerous Goods by Rail.        |
| STEL:       | Short Term Exposure limit.                                                           |
| STOT:       | Specific Target Organ Toxicity.                                                      |
| TLV:        | Threshold Limiting Value.                                                            |
| TWA:        | Time-weighted average                                                                |
| WGK:        | German Water Hazard Class.                                                           |