

Revision: 2.0  
(Replaces revision 1.1 of 16 April 2021)Revision date: 18 June 2021  
Date printed: 16 September 2024**Section 1. Identification**

**1.1 Product Identifier** CHE2710

Product Name ORTHOPHOSPHORIC ACID 85% w/w pure 100ml.

CAS Number 7664-38-2  
REACH Registration No 01-2119485924-24-XXXX

Molecular Formula  $H_3PO_4 = 98.00$

**1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** Scientific Laboratory Supplies

Unit 6, Foresters Avenue  
Fairham Business Park  
Fairham  
Nottingham  
NG11 2AF  
UNITED KINGDOM

Phone 0115 9821111  
Fax 0115 9825275  
Email sales@scientific-labs.com

**1.4 Emergency Telephone** (08:00-17:00) 0115 9821111  
(24hr) 112  
(Have this document to hand)

**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Skin corrosion/irritation, category 1B  
Acute toxicity, category 4 (oral)

H314: Causes severe skin burns and eye damage.  
H302: Harmful if swallowed.

**2.2 Label elements****Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements Causes severe skin burns and eye damage. Harmful if swallowed.

Precautionary Statements    Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

## Section 3. Composition

### 3.1 Substances

| Component            | CAS No.   | EEC No.   | REACH No.             | Conc w/w | CLP Classification (1272/2008/CE)           |
|----------------------|-----------|-----------|-----------------------|----------|---|
| Orthophosphoric acid | 7664-38-2 | 231-633-2 | 01-2119485924-24-XXXX | 85%      | Skin Corr. 1B, Acute Tox. 4 (O), Eye Dam. 1 |

## Section 4. First Aid

### 4.1 Description of first aid measures

|                                      |   |
|--------------------------------------|---|
| Eyes                                 | Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.   |
| Skin                                 | Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.  |
| Inhalation                           | Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Ingestion                            | If conscious give plenty of water to drink. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.   |
| Personal protection for first aiders | Wear protective gloves / eye protection.  |

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

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

|                     |  |
|---------------------|--|
| Extinguishing Media | Water spray, foam, dry powder or carbon dioxide. |
| Unsuitable Media    | Do not use water jet.                            |

### 5.2 Special hazards arising from the substance or mixture

|         |   |
|---------|---|
| Hazards | May evolve toxic fumes if involved in a fire. |
|---------|---|

### 5.3 Advice for firefighters

|                         |  |
|-------------------------|--|
| Advice for firefighters | Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. |
|-------------------------|--|

## Section 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

|                     |  |
|---------------------|--|
| Personal Protection | Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. |
|---------------------|--|

### 6.2 Environmental precautions

|               |  |
|---------------|--|
| Environmental | Keep material out of sewers, storm drains, surface waters and soil. Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. |
|---------------|--|

### 6.3 Methods and material for containment and cleaning up

|                |  |
|----------------|--|
| Major Spillage | Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water. |
| Minor Spillage | Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water.             |

#### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

### 7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sunlight.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

| Component            | CAS No    | Concentration | Workplace Exposure Limits |                         |   |            |
|----------------------|-----------|---------------|---------------------------|-------------------------|---|------------|
|                      |           |               | Long Term (8hr TWA)       | Short Term 15min period |   |            |
| Orthophosphoric acid | 7664-38-2 | 85%           | -                         | 1.0 mg/m-3              | - | 2.0 mg/m-3 |

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

|                        |  |
|------------------------|--|
| Respiratory Protection | Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus. |
| Hand Protection        | Use PVC gauntlets.   |
| Eye Protection         | Use tightly fitting chemical splash proof glasses or goggles.  |
| Skin Protection        | If skin contact or contamination of clothing is likely, protective clothing must be worn.  |
| Special Hazards        | No special precautions required.   |

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

|                       |   |
|-----------------------|---|
| Appearance            | Clear colourless to pale yellow liquid. |
| Odour                 | Odourless.                              |
| pH                    | Not applicable                          |
| Boiling Point         | 158°C                                   |
| Melting Point         | 21°C                                    |
| Flash Point           | Not applicable                          |
| Upper Flammable Limit | Not applicable                          |
| Lower Flammable Limit | Not applicable                          |
| Auto Ignition         | Not applicable                          |
| Explosive Properties  | No.                                     |
| Oxidising Properties  | No.                                     |
| Vapour Pressure       | 2.18mmHg @ 20°C                         |
| Relative Density      | 1.6900                                  |
| Water Solubility      | Completely soluble in water.            |

### 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

|      |                                    |   |
|------|------------------------------------|---|
| 10.1 | Reactivity                         | No data available.  |
| 10.2 | Chemical Stability                 | Stable under normal conditions  |
| 10.3 | Possibility of hazardous reactions | No data available.  |
| 10.4 | Conditions to Avoid                | No specific conditions.   |
| 10.5 | Incompatible Materials             | Alkalis. Reacts with most metals to produce extremely flammable hydrogen gas. Reacts with sulphide, phosphide, cyanide, carbide and silicides producing very toxic gases. |
| 10.6 | Hazardous Decomposition Products   | May produce hazardous fumes if involved in a fire. May liberate phosphorous oxide.  |

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

|                      |  |
|----------------------|--|
| Eyes                 | The liquid is extremely irritating to eyes and can cause chemical eye burns. Damage can range from severe irritation and corneal scarring to permanent blindness.  |
| Skin                 | The liquid will cause burns. Repeated exposure may cause dermatitis.   |
| LD50 Skin            | 2750mg/kg Rabbit   |
| Ingestion            | Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus. Moderately toxic by ingestion.   |
| LD50 Oral            | 301mg/kg Rat   |
| Inhalation           | Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will seriously damage the membranes lining the nose, throat and upper respiratory tract. |
| LD50 Inhalation      | Not available  |
| TCLo                 | Not available  |
| Carcinogenicity      | Not considered to be a carcinogen.   |
| Mutagenicity         | Not considered to be a mutagen.  |
| Reproductive Effects | None identified.   |
| Other Information    | 1ppm of phosphoric acid mist is irritating.  |

## Section 12. Ecological

|      |                                  |   |
|------|----------------------------------|---|
| 12.1 | Toxicity                         | Acidic, nutrient for undesirable algae. While acidity may be reduced by natural water hardness, the phosphate may persist indefinitely. |
|      | LC50 Algal                       | Not available   |
|      | LC50 Crustacea                   | >100mg/l Rabbit (48 hours)  |
|      | LC50 Fish                        | ~3mg/l Bluegill ( <i>Lepomis macrochirus</i> ) (96 hours)   |
| 12.2 | Persistence and degradability    | No data available.  |
| 12.3 | Bioaccumulative potential        | No data available.  |
| 12.4 | Mobility in soil                 | No data available.  |
| 12.5 | Results of PBT & vPvB assessment | Assessment not required.  |
| 12.6 | Other adverse effects            | None known at present.  |

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods Dispose of in a licensed incinerator. Never dispose of into water courses or sewerage systems.  
Contaminated Packaging Very carefully wash out containers with water.

## Section 14. Transport Information

**14.1 UN Number** 1805  
**14.2 Proper Shipping Name** Phosphoric acid, solution  
**14.3 Transport classes**  
UN classification 8  
Subsidiary hazard(s) None  
Transport category 3  
ADR Hazard ID 80  
Tunnel Restriction Code E  
**14.4 Packing Group** III  
**14.5 Environment hazards** See section 12.  
**14.6 Special precautions for user** No special precautions required.  
**14.7 Transport in bulk** Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Skin corrosion/irritation, category 1B; Acute toxicity, category 4 (oral)

Signal word Danger

Hazard Pictograms



Hazard Statements H314, H302  
Causes severe skin burns and eye damage. Harmful if swallowed.

Precautionary Statements P280, P264, P363, P301+P330+P331, P303+P361+P353, P305+P351+P338  
Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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