



## Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: 011090  
Product name: PQQ (PIRROLOCHINOLINA CHINONE)  
CAS number: 122628-50-6

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use: Integratore alimentare

#### 1.3. Details of the supplier of the safety data sheet

Name: ACEF S.p.A.  
Full address: Via Umbria 8/14  
District and Country: 29017 FIORENZUOLA D'ARDA (PC)  
Italia  
Tel.: +39 0523 241911  
Fax: +39 0523 241929 - 241968  
e-mail address of the competent person responsible for the Safety Data Sheet: [sicurezza@pec.acef.it](mailto:sicurezza@pec.acef.it)

#### 1.4. Emergency telephone number

For urgent inquiries refer to:

- Centro Antiveleni, Policlinico "Umberto I", Tossicologia d'urgenza, Roma - Tel. +39 06-49978000
- Centro Antiveleni, Az. Osp. Niguarda Cà Grande, Milano - Tel. +39 02-66101029
- Centro Antiveleni, Az. Osp. "Antonio Cardarelli", Napoli - Tel. +39 081-5453333
- Centro Antiveleni, Az. Osp. "Papa Giovanni XXIII", Bergamo - Tel. 800883300
- Centro Antiveleni, IRCCS Fondazione Salvatore Maugeri, Pavia - Tel. +39 0382-24444
- Centro Antiveleni, Az. Osp. Careggi, U.O. Tossicologia medica, Firenze - Tel. +39 055-7947819
- Centro antiveleni del Policlinico "Agostino Gemelli", Roma - Tel. +39 06-3054343
- Centro Antiveleni, Az. Osp. Foggia - Tel. 800183459
- Centro Antiveleni, Ospedale pediatrico Bambino Gesù, Roma; Tel. +39 06-68593726
- Centro Antiveleni dell'Az. Osp. universitaria integrata (AOUI) di Verona, Verona - Tel. 800011858

### SECTION 2. Hazards identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:  
Acute toxicity, category 4 H302 Harmful if swallowed.

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



**SECTION 2. Hazards identification ... / >>**

Signal words:	Warning
Hazard statements: <b>H302</b>	Harmful if swallowed.
Precautionary statements: <b>P270</b> <b>P301+P312</b> <b>P302+P352</b>	Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER / doctor / . . . / if you feel unwell. IF ON SKIN: wash with plenty of water / . . .
<b>Contains:</b>	Pyrroloquinoline quinone disodium salt
CAS	122628-50-6

**2.3. Other hazards**

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

The substance does not have endocrine disrupting properties.

**SECTION 3. Composition/information on ingredients****3.1. Substances**

Contains:

Identification	Conc. %	Classification (EC) 1272/2008 (CLP)
<b>Pyrroloquinoline quinone disodium salt</b> <i>INDEX</i> <i>EC</i> CAS	100	<b>Acute Tox. 4 H302</b> <b>ATE Oral: 500 mg/kg</b>
122628-50-6		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

**SECTION 4. First aid measures****4.1. Description of first aid measures**

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice.

Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

Information not available

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

If symptoms occur, whether acute or delayed, consult a doctor.



### SECTION 4. First aid measures ... / >>

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

### SECTION 5. Firefighting measures

#### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

#### 5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

### SECTION 6. Accidental release measures

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

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

### SECTION 7. Handling and storage

#### 7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Conservare in contenitori ben sigillati, in un luogo buio, a temperatura tra 1-30 ° C. Conservare lontano da materiali che potrebbero

**SECTION 7. Handling and storage ... / >>**

contaminare questo prodotto.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for particulate not otherwise classified (PNOC respirable fraction: 3 mg/m<sup>3</sup>; PNOC inhalable fraction: 10 mg/m<sup>3</sup>). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment. The above values are not TLVs, but guide values, to be used for particles that do not have their own TLV and that are insoluble or poorly soluble in water and have low toxicity.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

**HAND PROTECTION**

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**EYE PROTECTION**

Wear airtight protective goggles (see standard EN ISO 16321).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**RESPIRATORY PROTECTION**

Use a type P filtering facemask, whose class (1, 2 or 3) and effective filtering need, must be defined according to the outcome of risk assessment (see standard EN 149).

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Properties	Value	Information
Appearance	powder	
Colour	reddish brown	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	> 572 °C	
pH	3,5 circa	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not available	
Particle characteristics	not available	

**SECTION 9. Physical and chemical properties** ... / >>**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

Explosive properties	non determinato
Oxidising properties	non determinato

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

Può reagire violentemente con forti materiali ossidanti.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

Stabile in condizioni normali.

**10.3. Possibility of hazardous reactions**

The powders are potentially explosive when mixed with air.

Può reagire violentemente con forti materiali ossidanti.

**10.4. Conditions to avoid**

Avoid environmental dust build-up.

Evitare alte temperature, luce solare e umidità.

**10.5. Incompatible materials**

Forti materiali ossidanti.

**10.6. Hazardous decomposition products**

Non previsto in normali condizioni d'uso.

**SECTION 11. Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Test subcronico a 12 settimane: nessuna tossicità a 100 mg / kg / giorno  
Test di tossicità umana a 4 settimane: nessun effetto avverso a 20 o 60 mg / die.

Interactive effects

Information not available

ACUTE TOXICITY

**SECTION 11. Toxicological information ... / >>**

Pyrroloquinoline quinone disodium salt  
ATE (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP  
Acute toxicity, category 4. Harmful if swallowed.

LD50 orale acuto (ratto) - 1000-2000 mg / kg  
Celiaco acuto LD50 (topo) - 80 mg / kg.

**SKIN CORROSION / IRRITATION**

Does not meet the classification criteria for this hazard class

**SERIOUS EYE DAMAGE / IRRITATION**

Does not meet the classification criteria for this hazard class

Può causare lieve irritazione agli occhi a causa di un'azione meccanica.

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

Mutagenicità (test di Ames) - negativo  
Mutagenicità (test di anormalità cromosomica) - negativo  
Mutagenicità (test del micronucleo) - negativo.

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

Questo prodotto non ha effetti cancerogeni. Questo prodotto (o componente) non è elencato nelle Monografie IARC, nel rapporto NTP corrente sugli agenti cancerogeni o negli attuali TLV ACGIH come cancerogeno o potenziale cancerogeno. L'OSHA non lo regola come cancerogeno.

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**STOT - SINGLE EXPOSURE**

Does not meet the classification criteria for this hazard class

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

**ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

essun dato disponibile.

**12.2. Persistence and degradability**

**SECTION 12. Ecological information ... / >>**

essun dato disponibile.

**12.3. Bioaccumulative potential**

essun dato disponibile.

**12.4. Mobility in soil**

essun dato disponibile.

**12.5. Results of PBT and vPvB assessment**

Non classificato come PBT / vPvB secondo gli attuali criteri UE.

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

**12.6. Endocrine disrupting properties**

Nessuno conosciuto.

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information**

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

not applicable

**14.3. Transport hazard class(es)**

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

not applicable





**SECTION 16. Other information ... / >>**

- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
24. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise



### SECTION 16. Other information ... / >>

in Section 12.

Changes to previous review:  
The following sections were modified:  
02 / 03 / 04 / 09 / 11 / 12 / 16.