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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name/designation:

PCR Clean™ Spray

Article No.:

15-2005, 15-2025, 15-2200, 15-2500

Additional information:

Voluntary product information following the Safety Data Sheet format.

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

Use of the substance/mixture:

The product is intended for research, analysis and scientific education.

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Minerva Biolabs GmbH

Schkopauer Ring 13

12681 Berlin

Germany

Telephone: +49 30 2000437 0

E-mail: ehs@minerva-biolabs.com

Website: www.minerva-biolabs.com

1.4. Emergency telephone number

Vergiftungs-Informationen-Zentrale Freiburg, 24h: +49 761 19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2. Label elements

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

According to EC directives or the corresponding national regulations the product does not have to be labelled.

Hazard statements: none

Supplemental hazard information: none

Precautionary statements: none

2.3. Other hazards

No data available



SECTION 3: Composition/information on ingredients**3.2. Mixtures**

Additional information:

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

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Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 7664-38-2 EC No.: 231-633-2 REACH No.: 01-2119485924-24-XXXX	orthophosphoric acid Acute Tox. 4 (H302), Eye Dam. 1 (H318), Met. Corr. 1 (H290), Skin Corr. 1B (H314)  Danger Specific concentration limit (SCL) Skin Corr. 1B; H314: C ≥ 25% Eye Irrit. 2; H319: 10% ≤ C < 25% Skin Irrit. 2; H315: 10% ≤ C < 25% Acute Toxicity Estimate ATE (oral) 1,530 mg/kg ATE (dermal) 2,740 mg/kg	0 – ≤ 2 weight-%
CAS No.: 68439-50-9	Fatty alcohol c12-c14, ethoxylated Aquatic Acute 1 (H400), Aquatic Chronic 3 (H412)  Warning M-factor (acute): 1 Acute Toxicity Estimate ATE (oral) > 2,000 mg/kg	0 – ≤ 1 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information:**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing immediately. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended. Remove contaminated, saturated clothing.

Following inhalation:

Provide fresh air.

In case of skin contact:

Rinse skin with water.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water.

Following ingestion:

Rinse mouth. Let water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

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

No known symptoms to date.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

Dry extinguishing powder, Carbon dioxide (CO₂). Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture**Hazardous combustion products:**

Phosphorus oxides, Carbon dioxide (CO₂)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

The product itself does not burn.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Avoid breathing dust/fume/gas/mist/vapours/spray.

Protective equipment:

Wear protective gloves/protective clothing and eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7, Personal protection equipment: see section 8, Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures**Advices on safe handling:**

Wear personal protection equipment (refer to section 8). Do not breathe vapours and spray.

Fire prevent measures:

Usual measures for fire prevention.

Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Hints on storage assembly:

Do not store together with: strong base.

Storage class (TRGS 510, Germany): 12 – non-combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

No data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE)	orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2	① 2 mg/m ³ ② 4 mg/m ³ ⑤ (einatembare Fraktion) DFG, EU, AGS, Y
IOELV (EU)	orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2	① 1 mg/m ³ ② 2 mg/m ³

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

No data available

* 8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment



Eye/face protection:

Eye glasses with side protection (EN 166).

Skin protection:

Tested protective gloves must be worn (EN ISO 374). In the case of wanting to use the gloves again, clean them before taking off and air them well. Breakthrough times and swelling properties of the material must be taken into consideration. Suitable material: NBR (Nitrile rubber) (0,19 mm), Butyl caoutchouc (butyl rubber) (0,35 mm). Breakthrough time: >8 hour(s),

Respiratory protection:

Usually no personal respirative protection necessary.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Form: Liquid

Colour: colourless

Odour: not determined

flammability: No

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	2.1	20 °C	
Melting point	No data available		
Freezing point	No data available		
Initial boiling point and boiling range	No data available		
Flash point	not applicable		
Evaporation rate	No data available		
Auto-ignition temperature	not applicable		

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Parameter	Value	at °C	① Method ② Remark
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	No data available		
Vapour density	No data available		
Density	No data available		
Bulk density	not applicable		
Water solubility	completely miscible		
Dynamic viscosity	No data available		
Kinematic viscosity	No data available		

9.2. Other information

No data available

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

The product is stable under storage at normal ambient temperatures. The product itself does not burn.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Further information on proper storage: see section 7.

10.5. Incompatible materials

Incompatible materials: Base.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2
LD ₅₀ oral: 1,530mg/kg (Rat)
LD ₅₀ dermal: 2,740mg/kg (Rabbit)
Fatty alcohol c12-c14, ethoxylated CAS No.: 68439-50-9
LD ₅₀ oral: >2,000mg/kg (Rat)

Acute oral toxicity:

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

Acute dermal toxicity:

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

Acute inhalation toxicity:

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

Skin corrosion/irritation:

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

Serious eye damage/irritation:

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

Respiratory or skin sensitisation:

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

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.

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STOT-single exposure:

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

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.

Additional information:

No data available

11.2. Information on other hazards

No data available

SECTION 12: Ecological information**12.1. Toxicity**

orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2
EC₅₀ : >100mg/L 3d (Algae/water plant, Desmodesmus subspicatus (previous name: Scenedesmus subspicatus))
EC₅₀ : >100mg/L 2d (crustaceans, Daphnia magna)
NOEC : 100mg/L 3d (Algae/water plant, Desmodesmus subspicatus (previous name: Scenedesmus subspicatus))
NOEC : 56mg/L 2d (crustaceans, Daphnia magna)
Fatty alcohol c12-c14, ethoxylated CAS No.: 68439-50-9
LC₅₀ : 0.423mg/L 4d (fish, Pimephales promelas) OECD Guideline 203 (Fish, Acute Toxicity Test)
EC₅₀ : 0.044mg/L 3d (Algae/water plant, Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)) OECD Guideline 201 (Alga, Growth Inhibition Test)
EC₅₀ : 0.125mg/L 2d (crustaceans, Daphnia magna) OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
NOEC : <1mg/L (Algae/water plant)
NOEC : 0.037mg/L 3d (Algae/water plant, Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)) OECD Guideline 201 (Alga, Growth Inhibition Test)
NOEC : 0.304mg/L 4d (fish, Pimephales promelas) OECD Guideline 203 (Fish, Acute Toxicity Test)
NOEC : 0.045mg/L 2d (crustaceans, Daphnia magna) OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Fatty alcohol c12-c14, ethoxylated CAS No.: 68439-50-9
Log K_{OW} : 7

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
Fatty alcohol c12-c14, ethoxylated CAS No.: 68439-50-9
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

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

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal**Waste codes/waste designations according to EWC/AVV****Waste code product**

20 01 29 *	Detergents containing hazardous substances
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*: Evidence for disposal must be provided.

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Waste treatment options**Appropriate disposal / Product:**

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU legislation****Other regulations (EU):**

1907/2006 REACH, 1272/2008 CLP GHS, 98/24/EC

15.1.2. National regulations **[DE] National regulations****Restrictions of occupation**

22 JArbSchG., 4 MuSchRiV., 5 MuSchRiV., Betriebssicherheitsverordnung (BetrSichV)

Annex Chemikalien-Verbotsverordnung (ChemVerbotsV)

Hazardous Substances Ordinance (GefStoffV), Chemikaliengesetz (ChemG)

Water hazard class**WGK:**

1 - slightly hazardous to water

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

15.2. Chemical Safety Assessment

No data available

SECTION 16: Other information**16.1. Indication of changes**

8.2.	Exposure controls
16.2.	Abbreviations and acronyms

16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard

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DNEL	derived no-effect level
EC ₅₀	Effective Concentration 50%
ECHA	European Chemicals Agency
EN	European Standard
ES	Exposure scenario
EWC	European Waste Catalogue
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Standards Organisation
LC ₅₀	Lethal (fatal) Concentration 50%
LD ₅₀	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SCL	Specific concentration limit
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3. Key literature references and sources for data

TRGS 510, TRGS 525, TRGS 900, Safety data sheets for the ingredients , 1907/2006 REACH, 1272/2008 CLP GHS

Substance name	Type	source of supply
orthophosphoric acid CAS No.: 7664-38-2 EC No.: 231-633-2	EC ₅₀ ; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/
Fatty alcohol c12-c14, ethoxylated CAS No.: 68439-50-9	LC ₅₀ ; EC ₅₀ ; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

This data sheet was created in accordance with EU regulation (EC) No. 1907/2006 (REACH).

The information is based on the level of knowledge and experience on the date of issue, it do not have the importance of assured properties. The information may not be changed or transferred to other products. Reproduction in the unchanged state is permitted.

* Data changed compared with the previous version.