Cette section présente les différents flacons présents dans le kit. Les fiches de sécurité de tous ces composants sont disponibles dans la langue choisie à la suite du document.

This section shows all the vials in the kit. The Safety Datasheets are available in the selected language in the next part of the document.

Nomenclature of the product

<table>
<thead>
<tr>
<th>Description</th>
<th>Component</th>
<th>Nb of vials</th>
<th>pH</th>
<th>Color</th>
<th>Physical state</th>
</tr>
</thead>
<tbody>
<tr>
<td>P53 phospho-S15 kit - 10,000 tests d2 conj</td>
<td>64P53TDA</td>
<td>1</td>
<td>7</td>
<td>Blue</td>
<td>Liquid</td>
</tr>
<tr>
<td>P53 phospho-S15 kit - 10,000 tests Eu conj</td>
<td>64KL1FDF</td>
<td>1</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>P53 phospho-S15 kit control lysate</td>
<td>64KB1AAC</td>
<td>3</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein lysis buffer #1 - 130 mL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phospho-total protein blocking reagent - 2 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phospho-total protein detection buffer - 50 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name: Phospho-total protein blocking reagent - 2 ml 64KB1AAC
CAS No.: Index No.: EC No.: REACH No.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;
Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 Details of the supplier of the safety data sheet:
Supplier:
Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 EMERGENCY TELEPHONE NUMBER:
France - Numéro ORFILA (INRS) : + 33 (0)1 45 42 59 59
Ce numéro permet d'obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d’appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation - Eye Irrit. 2 - H319</td>
<td>Eye Irrit. 2</td>
<td>H319</td>
<td>P264 P280 P305 + P351 + P338 P337 + P313</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Product identifier:
Designation / Commercial name: Phospho-total protein blocking reagent - 2 ml 64KB1AAC

Substances contained in this product:
Hazard pictograms
GHS07-exclam

Signal word:
Warning

Hazard and precautionary statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>P264</td>
<td>Wash ... thoroughly after handling.</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves/protective clothing/eye protection/face protection.</td>
</tr>
<tr>
<td>P305 + P351 + P338</td>
<td>If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P337 + P313</td>
<td>If eye irritation persists: Get medical advice/attention.</td>
</tr>
</tbody>
</table>

2.3 Other hazards
The mixture does not contain substances classified as ‘Substances of Very High Concern’ (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article57 of REACH. The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.; Adverse human health effects and symptoms:
Section 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium dihydrogenpyrophosphate</td>
<td>7758-16-9</td>
<td></td>
<td>231-835-0</td>
<td>Serious eye damage/eye irritation - Eye Irrit. 2 - H319</td>
<td>&lt; 25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>trisodium tetraoxovanadate</td>
<td>13721-39-6</td>
<td></td>
<td>237-287-9</td>
<td>Acute toxicity - Acute Tox. 4 - H302 - Oral</td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information: Do not leave affected person unattended.
Following inhalation: In case of respiratory tract irritation, consult a physician.
Following skin contact: After contact with skin, wash immediately with water.
Following eye contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Following ingestion: Do NOT induce vomiting.
Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.
Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Section 5: Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:

5.3 Advice for fire-fighters

Wear Protective clothing.
Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Emergency procedures: Provide adequate ventilation.

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 cleaning up: Suitable material for taking up: Absorbing material, organic
Other information:

6.4 Reference to other sections

Additional information:

Section 7: Handling and storage

7.1 Precautions for safe handling
Protective measures:
Advice on safe handling: Avoid contact with skin, eyes and clothes.
Fire precautions:
Do not eat, drink or smoke in areas where reagents are handled.
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice;

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed.
Hints on storage assembly:
Materials to avoid:
Further information on storage conditions:

7.3 Specific end uses:
Recommendations on specific end uses: Observe technical data sheet.

Section 8: Exposure controls/personal protection

8.1 Control parameters
Preliminary remark:

8.1.1 Occupational exposure limits:
- France
**Safety Data Sheet**

according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name: Phospho-total protein blocking reagent - 2 ml 64KB1AAC

Version: UK, Page 5 of 13, Revision date: 10/06/2019

---

### Source: Informations relatives à la réglementation VME (France): ED 984, 07.2012

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLE (mg/m³)</th>
<th>VLE (ppm)</th>
<th>VME (mg/m³)</th>
<th>VME (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-16-9/231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Spain

---

### Source: Limites de Exposicion Profesional para Agentes Quimicos en Espana

Instituto Nacional de Seguridad e Higiene en el Trabajo

June 2015

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLA-EC (mg/m³)</th>
<th>VLA-EC (ppm)</th>
<th>VLA-ED (mg/m³)</th>
<th>VLA-ED (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-16-9/231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Germany

---

### Source: TRGS 900, June 2015, BAuA

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>AGW (mg/m³)</th>
<th>AGW (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-16-9/231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Italia
- Greece
- UK

---

### OSHA (USA)

Source: Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (mg/m³)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13721-39-6/237-287-9</td>
<td>237-287-9</td>
<td>13721-39-6</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
### 8.1.2 Biological limit values (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BLV (mg/m³)</th>
<th>BLV (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.3 Exposure limits at intended use (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.4 DNEL/PNEC-values:

- **DNEL worker**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Acute – inhalation, systemic effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, systemic effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13721-39-6 / 237-287-9</td>
<td>237-287-9</td>
<td>13721-39-6</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
</tr>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **DNEL consumer**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Acute – inhalation, systemic effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, systemic effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13721-39-6 / 237-287-9</td>
<td>237-287-9</td>
<td>13721-39-6</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
<td>2.79</td>
</tr>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DNEL remark:**

- **PNEC**
Source: INERIS

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intermittent release</td>
<td>fresh water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: INERIS

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>PNEC soil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
</tr>
<tr>
<td>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</td>
<td></td>
</tr>
</tbody>
</table>

PNEC remark:
Control parameters remark:

8.2 Exposure controls
8.2.1 Appropriate engineering controls:
8.2.2 Personal protective equipment:
Eye / Face protection: Safety glasses with side-shields;
Skin protection: Gloves;
Respiratory protection: Ensure adequate ventilation;
Thermal hazards:
8.2.3 Environmental exposure controls;

Section 9 : Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Value</th>
<th>Concentration (mol/L)</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Colorless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Safety Data Sheet according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name: Phospho-total protein blocking reagent - 2 ml 64K81AAC
Version: UK, Page 8 of 13, Revision date: 10/06/2019

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td></td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
</tr>
<tr>
<td>Flammability (type : %)</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper explosive limit (%)</td>
<td></td>
</tr>
<tr>
<td>Lower explosive limit (%)</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td></td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Relative density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Bulk density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Critical density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Solubility (Type : g/L)</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (log Pow)</td>
<td></td>
</tr>
<tr>
<td>n-octanol/water at pH:</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td></td>
</tr>
<tr>
<td>Decomposition energy (kJ)</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
</tr>
<tr>
<td>Viscosity, cinematic (cm³/s)</td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information:
No other relevant data available

Section 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

10.6 Hazardous decomposition products:
Does not decompose when used for intended uses.

Section 11: Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:
**Acute dermal toxicity:**

**Acute inhalative toxicity:**

**Practical experience / human evidence:**

**Assessment / Classification:**

**General Remark:**

- **Skin corrosion/irritation**

**Animal data:**

**In-vitro skin test method:**

**In-vitro skin test result:**

**Assessment / Classification:**

- **Eye damage/irritation**

**Animal data:**

**In vitro eye test method:**

**In vitro eye test result:**

**Assessment / Classification:**

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - Germ cell mutagenicity:

**Animal data:**

**Assessment / Classification:**

- Carcinogenicity

**Practical experience / human evidence:**

**Animal data:**

**Other information:**

**Assessment / Classification:**

- Reproductive toxicity

**Practical experience / human evidence:**

**Animal data:**
Other information:
Assessment / Classification:

- **Specific target organ toxicity (single exposure)**
  - STOT SE 1 and 2

Animal data:
Other information:

- STOT SE 3

Practical experience / human evidence:
Other information:
Assessment / Classification:

- **Specific target organ toxicity (repeated exposure)**

Practical experience / human evidence:
Animal data:
Assessment / Classification:

- **Aspiration hazard**

Experimental data: viscosity data: see SECTION 9.
Assessment / Classification:
Remark:

11.1.1 **Mixtures**
No toxicological information is available for the mixture itself

**Section 12 : Ecological information**
In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for mixture classification has to be used (calculation method). In this case the toxicological data of the ingredients are shown.

**12.1 Aquatic toxicity:**

**Acute (short-term) fish toxicity**

**Chronic (long-term) fish toxicity**

**Acute (short-term) toxicity to crustacea**
Chronic (long-term) toxicity to crustacea

Acute (short-term) toxicity to algae and cyanobacteria

Toxicity to microorganisms and other aquatic plants / organisms

Assessment / Classification:

12.2 Persistence and degradability

Biodegradation:

Abiotic Degradation:

Assessment / Classification:

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:

Additional ecotoxicological information:

Section 13 : Disposal considerations

13.1 Waste treatment methods

Waste treatment options: Dispose of waste according to applicable legislation.

Section 14 : Transport information

<table>
<thead>
<tr>
<th>ADR/RID/AND/IMDG/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No.</td>
</tr>
<tr>
<td>UN Proper shipping name</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
</tr>
<tr>
<td>Hazard label(s)</td>
</tr>
<tr>
<td>Packing group</td>
</tr>
</tbody>
</table>
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Land transport (ADR/RID)
Classification code ADR: Special Provisions for ADR/RID:
LIMITED QUANTITIES FOR ADR/RID: Excluded Quantities for ADR/RID:
Packing Instructions for ADR/RID: Special packing provisions for ADR/RID:
Mixed packing provisions:
Portable tanks and bulk containers Instructions:
Portable tanks and bulk containers Special Provisions:
ADR Tank Code: ADR Tank special provisions:
Vehicle for tank carriage:
Special provisions for carriage Packages:
Special provisions for carriage Bulk:
Special provisions for carriage loading, unloading and handling:
Special provisions for carriage Operation:
Hazard identification No: Transport category (Tunnel restriction code):

Sea transport (IMDG)
Marine Pollutant: Subsidiary risk(s) for IMDG:
Packing provisions for IMDG: Limited quantities for IMDG:
Packing instructions for IMDG: IBC Instructions:
IBC Provisions: IMO tank instructions:
UN tank instructions: Tanks and bulk Provisions:
EmS: Stowage and segregation for IMDG:
Properties and observations:

Inland waterway transport (ADN)
Classification Code ADN: Special Provisions ADN:
LIMITED QUANTITIES ADN: Excluded quantities ADN:
Carriage permitted: Equipment required:
Provisions concerning loading and unloading: Provisions concerning carriage:
Number of blue cones/lights: Remark:

Air transport (ICAO-TI / IATA-DGR)
Subsidiary risk for IATA: Excluded quantity for IATA:
Passenger and Cargo Aircraft Limited Quantities Packing Instructions:
Passenger and Cargo Aircraft Limited Quantities Maximal Net Quantity:
Passenger and Cargo Aircraft Packaging Instructions:
Passenger and Cargo Aircraft Maximal Net Quantity:
Cargo Aircraft only Packaging Instructions:
Cargo Aircraft only Maximal Net Quantity:
ERG code: Special Provisions for IATA:

Section 15 : Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Authorisations and/or restrictions on use:

Authorisations:
Restrictions on use:
SVHC:
Other EU regulations:

- Directive 2010/75/EC on industrial emissions

Not relevant

National regulations

15.2 Chemical Safety Assessment:
For this mixture, no chemical safety assessment has been carried out

Section 16: Other information

16.1 Indication of changes
Date of the previous version: 05/06/2019
Modifications:

16.2 Other informations

16.3 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:
See SECTION 2.1 (classification).

16.4 Relevant R-, H- and EUH-phrases (number and full text):

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>
**Section 1: Identification of the substance/mixture and of the company/undertaking**

1.1 **Product identifier:**

Designation / Commercial name: Phospho-total protein lysis buffer #1 - 130 mL 64KL1FDF

CAS No.: Index No.: EC No.: REACH No.: 

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

Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;

Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 **Details of the supplier of the safety data sheet:**

Supplier:

Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 **Emergency telephone number:**

France - Numéro ORFILA (INRS): + 33 (0)1 45 42 59 59
Ce numéro permet d'obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d'appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

**Section 2: Hazards identification**

2.1 **Classification of the substance or mixture:**

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The substance or mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 **Label elements**

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

Product identifier:
Designation / Commercial name: Phospho-total protein lysis buffer #1 - 130 mL 64KL1FDF

Substances contained in this product:
Hazard and precautionary statements:

2.3 Other hazards
The mixture contains substances classified as ‘Substances of Very High Concern’ (SVHC) published by the European Chemicals Agency (ECHA) under article 57 of REACH at levels of 0.1% or higher. This substance or mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Adverse human health effects and symptoms:
Section 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td></td>
<td>&lt; 10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylenediamine-N,N,N1,N1-tetraacetic acid</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td>Acute toxicity - Acute Tox. 4 - H332 - Inhalation</td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous to the aquatic environment - Aquatic Chronic 2 - H411</td>
<td></td>
<td></td>
<td></td>
<td>Serious eye damage/eye irritation - Eye Dam. 1 - H318</td>
<td>&lt; 1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]ω-hydroxy-</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td>Acute toxicity - Acute Tox. 4 - H302 - Oral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hazardous to the aquatic environment - Aquatic Chronic 2 - H411</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serious eye damage/eye irritation - Eye Dam. 1 - H318</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin corrosion/Irritation - Skin Irrit. 2 - H315</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Full text of H- and EUH--phrases: see SECTION 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information: Do not leave affected person unattended.

Following inhalation: In case of respiratory tract irritation, consult a physician.

Following skin contact: After contact with skin, wash immediately with water.

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

Following ingestion: Do NOT induce vomiting.

Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.

Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:
Section 5: Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.

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

5.3 Advice for fire-fighters
Wear Protective clothing.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Emergency procedures: Provide adequate ventilation.

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 cleaning up: Suitable material for taking up: Absorbing material, organic; Other information:

6.4 Reference to other sections
Additional information:

Section 7: Handling and storage

7.1 Precautions for safe handling
Protective measures:
Advice on safe handling: Avoid contact with skin, eyes and clothes; Fire preventions:
Do not eat, drink or smoke in areas where reagents are handled.
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice;

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed; Hints on storage assembly:
Materials to avoid:
Further information on storage conditions:

7.3 Specific end uses:
Recommendations on specific end uses: Observe technical data sheet;
Section 8: Exposure controls/personal protection

8.1 Control parameters

Preliminary remark:

8.1.1 Occupational exposure limits:

- France

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLE (mg/m3)</th>
<th>VLE (ppm)</th>
<th>VME (mg/m3)</th>
<th>VME (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Spain

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLA-EC (mg/m3)</th>
<th>VLA-EC (ppm)</th>
<th>VLA-ED (mg/m3)</th>
<th>VLA-ED (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Germany

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>AGW (mg/m3)</th>
<th>AGW (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Italia

- Greece

- UK

- OSHA (USA)
### Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name : Phospho-total protein lysis buffer #1 - 130 mL  64KL1FDF

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---

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (mg/m³)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.1.2 **Biological limit values (Germany):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BLV (mg/m³)</th>
<th>BLV (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td>1.5-1.5</td>
<td>6381-92-6</td>
<td>1.5-1.5</td>
</tr>
</tbody>
</table>

8.1.3 **Exposure limits at intended use (Germany):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
</tr>
</tbody>
</table>

8.1.4 **DNEL/PNEC-values:**

- **DNEL worker**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/kg/day)</th>
<th>Acute – inhalation, systemic effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, systemic effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td>1.5-1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7365-45-9/230-907-9</td>
<td>230-907-9</td>
<td>7365-45-9</td>
<td>23.5-23.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **DNEL consumer**

Source : Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000

Source : List of recommended health-based biological limit values (BLVs) and biological guidance values (BGVs), June 2014

Source : TRGS 903, November 2015, BAuA

Source : GESTIS – substance database

Source : GESTIS – substance database

DNEL remark:
- **PNEC**
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name : Phospho-total protein lysis buffer #1 - 130 mL 64KL1FD
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<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intermittent release</td>
<td>freshwater</td>
</tr>
<tr>
<td>Substances: 6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PNEC remark:
Control parameters remark:

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

8.2.2 Personal protective equipment:
Eye / Face protection: Safety glasses with side-shields;
Skin protection: Gloves;
Respiratory protection: Ensure adequate ventilation;

8.2.3 Environmental exposure controls:

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odour</td>
<td></td>
</tr>
</tbody>
</table>
### Section 10: Stability and reactivity

**10.1 Reactivity**  This material is considered to be non-reactive under normal use conditions.

**10.2 Chemical stability**

**10.3 Possibility of hazardous reactions**

**10.4 Conditions to avoid:**

**10.5 Incompatible materials:**

**10.6 Hazardous decomposition products:**
Does not decompose when used for intended uses.

### Section 11: Toxicological information

Toxicokinetics, metabolism and distribution

**11.1 Information on toxicological effects**

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:
Acute dermal toxicity:

Acute inhalative toxicity:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>LD50 (mg/kg)</th>
<th>Species</th>
<th>Method</th>
<th>Symptoms / delayed effects</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>1800-1800</td>
<td>Rat</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Practical experience / human evidence:

Assessment / Classification:

- **Skin corrosion/irritation**

Animal data:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Species</th>
<th>Method</th>
<th>Exposure time</th>
<th>Result/evaluation</th>
<th>Score</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In-vitro skin test method:

Assessment / Classification:

- **Eye damage/irritation**

Animal data:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Species</th>
<th>Method</th>
<th>Exposure time</th>
<th>Result/evaluation</th>
<th>Score</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>Rabbit</td>
<td></td>
<td></td>
<td>Eye irritation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In vitro eye test method:

Assessment / Classification:

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity**

Animal data:

Assessment / Classification:

- **Carcinogenicity**

Practical experience / human evidence:

Animal data:
Other information:
Assessment / Classification:
  o Reproductive toxicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:
  • **Specific target organ toxicity (single exposure)**
    o STOT SE 1 and 2

Animal data:

Other information:
  o STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:
  • **Specific target organ toxicity (repeated exposure)**

Practical experience / human evidence:
Animal data:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>NOEC</th>
<th>Exposure time</th>
<th>Species</th>
<th>Organs Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment / Classification:
Other information
  • **Aspiration hazard**

Practical experience / human evidence:
Experimental data: viscosity data: see SECTION 9.
Assessment / Classification:
Remark:

11.1.1 **Mixtures**
No toxicological information is available for the mixture itself

**Section 12 : Ecological information**
In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for
### 12.1 Aquatic toxicity:

#### Acute (short-term) fish toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>LC50 (mg/L)</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>8.9</td>
<td>96</td>
<td>Pimephales promelas (fathead minnow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Chronic (long-term) fish toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>NOEC (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Acute (short-term) toxicity to crustacea

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>26</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Chronic (long-term) toxicity to crustacea

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>NOEC (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Acute (short-term) toxicity to algae and cyanobacteria

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Toxicity to microorganisms and other aquatic plants / organisms

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>EC50 (mg/L)</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability

#### Biodegradation:
**Safety Data Sheet**
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name: Phospho-total protein lysis buffer #1 - 130 mL 64KL1FDF
Version: UK, Page 12 of 14, Revision date: 21/06/2019

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>Inoculum</th>
<th>Biodegradation parameter</th>
<th>Degradation rate (%)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>BOD (% of COD)</td>
<td>36-36</td>
<td>In accordance with the required stability the product is poorly biodegradable.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abiotic Degradation:

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>Abiotic degradation test type</th>
<th>Half-life time (j)</th>
<th>Temperature (°C)</th>
<th>pH</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment / Classification:

12.3 Bioaccumulative potential
Bioconcentration factor (BCF):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>Species</th>
<th>Result</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC n°</th>
<th>CAS n°</th>
<th>Distribution</th>
<th>Transport type</th>
<th>Henry’s law constant (Pa.m3/mol)</th>
<th>Log KOC</th>
<th>Half-life time in soil (j)</th>
<th>Half-life time in fresh water (j)</th>
<th>Half-life time in sea water (j)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:

Additional ecotoxicological information:

**Section 13: Disposal considerations**

13.1 Waste treatment methods

Waste treatment options: Dispose of waste according to applicable legislation.
**Section 14: Transport Information**

<table>
<thead>
<tr>
<th>ADR/RID/AND/IMDG/IATA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No.</td>
<td></td>
</tr>
<tr>
<td>UN Proper shipping name</td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td></td>
</tr>
</tbody>
</table>

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**Land transport (ADR/RID)**

- Classification code ADR: [Special Provisions for ADR/RID:
- Limited quantities for ADR/RID: [Excepted Quantities for ADR/RID:
- Packing Instructions for ADR/RID: [Special packing provisions for ADR/RID:
- Mixed packing provisions:
- Portable tanks and bulk containers Instructions:
- Portable tanks and bulk containers Special Provisions:
- ADR Tank Code: [ADR Tank special provisions:
- Vehicle for tank carriage:
- Special provisions for carriage Packages:
- Special provisions for carriage Bulk:
- Special provisions for carriage for loading, unloading and handling:
- Special Provisions for carriage Operation:
- Hazard identification No: [Transport category (Tunnel restriction code):

**Sea transport (IMDG)**

- Marine Pollutant: [Subsidiary risk(s) for IMDG:
- Packing provisions for IMDG: [Limited quantities for IMDG:
- Packing instructions for IMDG: [IBC Instructions:
- IBC Provisions: [IMO tank instructions:
- UN tank instructions: [Tanks and bulk Provisions:
- EmS: [Stowage and segregation for IMDG:
- Properties and observations:

**Inland waterway transport (ADN)**

- Classification Code ADN: [Special Provisions ADN:
- Limited quantities ADN: [Excepted quantities ADN:
- Carriage permitted: [Equipment required:
- Provisions concerning loading and unloading: [Provisions concerning carriage:
- Number of blue cones/lights: [Remark:

**Air transport (ICAO-TI / IATA-DGR)**

- Subsidiary risk for IATA: [Excepted quantity for IATA:
- Passenger and Cargo Aircraft Limited Quantities Packing Instructions:
- Passenger and Cargo Aircraft Limited Quantities Maximal Net Quantity:
- Passenger and Cargo Aircraft Packaging Instructions:
- Passenger and Cargo Aircraft Maximal Net Quantity:
- Cargo Aircraft only Packaging Instructions: [Cargo Aircraft only Maximal Net Quantity:
- ERG code: [Special Provisions for IATA:

**Section 15: Regulatory Information**
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Authorisations and/or restrictions on use:

  Authorisations: 9002-93-1
  Restrictions on use:
  SVHC: 9002-93-1

  - Other EU regulations:

  - Directive 2010/75/EC on industrial emissions

Not relevant

National regulations

15.2 Chemical Safety Assessment:
For this mixture, no chemical safety assessment has been carried out

Section 16 : Other information

16.1 Indication of changes
Date of the previous version: 12/06/2019
Modifications:

16.2 Other informations

16.3 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:
See SECTION 2.1 (classification).

16.4 Relevant R-, H- and EUH-phrases (number and full text):

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name: P53 phospho-S15 kit control lysate 64P53TDA
CAS No.: Index No.: EC No.: REACH No.: 

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;
Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 Details of the supplier of the safety data sheet:
Supplier:
Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 EMERGENCY TELEPHONE NUMBER:
France - Numéro ORFILA (INRS) : + 33 (0)1 45 42 59 59
Ce numéro permet d'obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d’appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The substance or mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Product identifier:
Designation / Commercial name: P53 phospho-S15 kit control lysate 64P53TDA

Substances contained in this product:
2.3 Other hazards

The mixture contains substances classified as ‘Substances of Very High Concern’ (SVHC) published by the European Chemicals Agency (ECHA) under article 57 of REACH at levels of 0.1% or higher. This substance or mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher;

Adverse human health effects and symptoms:
Section 3: Composition/information on ingredients

3.2 Mixtures
Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td>Acute toxicity - Acute Tox. 4 - H302 - Oral Hazardous to the aquatic environment - Aquatic Chronic 2 - H411&lt;br&gt;Serious eye damage/eye irritation - Eye Dam. 1 - H318&lt;br&gt;SKIN corrosion/Irritation - Skin Irrit. 2 - H315</td>
<td>&lt; 1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information: Do not leave affected person unattended. ;
Following inhalation: In case of respiratory tract irritation, consult a physician. ;
Following skin contact: After contact with skin, wash immediately with water ;
Following eye contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. ;
Following ingestion: Do NOT induce vomiting. ;
Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: No known symptoms to date. ;
Effects:

4.3 Indication of any immediate medical attention and special treatment needed
Notes for the doctor:

Section 5: Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire;

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products /

5.3 Advice for fire-fighters
Wear Protective clothing ;
Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Emergency procedures: Provide adequate ventilation.;

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 cleaning up: Suitable material for taking up: Absorbing material, organic;
Other information:

6.4 Reference to other sections
Additional information:

Section 7: Handling and storage

7.1 Precautions for safe handling
Protective measures:
Advice on safe handling: Avoid contact with skin, eyes and clothes.;
Fire precautions:
Do not eat, drink or smoke in areas where reagents are handled.;
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice;

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed.;
Hints on storage assembly:
Materials to avoid:
Further information on storage conditions:

7.3 Specific end uses:
Recommendations on specific end uses: Observe technical data sheet.;

Section 8: Exposure controls/personal protection

8.1 Control parameters
Preliminary remark:

8.1.1 Occupational exposure limits:

- France
8.1.2 Biological limit values (Germany):

8.1.3 Exposure limits at intended use (Germany):

8.1.4 DNEL/PNEC-values:
- DNEL worker
- DNEL consumer

DNEL remark:
- PNEC

PNEC remark:
Control parameters remark:

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

8.2.2 Personal protective equipment:
Eye / Face protection: Safety glasses with side-shields;
Skin protection: Gloves;
Section 9 : Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Concentration (mol/L)</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Colorless;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Melting point (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Freezing point (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flash point (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Initial boiling point/boiling range (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapour pressure (kPa)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapour density (g/cm³)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Densities</strong></td>
<td>Density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flash point (°C)</strong></td>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapour pressure (kPa)</strong></td>
<td>Lower explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapour density (g/cm³)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solubility (Type : ) (g/L)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Partition coefficient (log Pow)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Octanol/water at pH :</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature (°C)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition energy : kJ</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 9.2 Other information:

No other relevant data available
Section 10 : Stability and reactivity

10.1 Reactivity  This material is considered to be non-reactive under normal use conditions.;

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

10.6 Hazardous decomposition products:
Does not decompose when used for intended uses.;

Section 11 : Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>LD50 (mg/kg)</th>
<th>Species</th>
<th>Method</th>
<th>Symptoms / delayed effects</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>1800-1800</td>
<td>Rat</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acute dermal toxicity:

Acute inhalative toxicity:

Practical experience / human evidence:
Assessment / Classification:
General Remark:

- Skin corrosion/irritation

Animal data:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Species</th>
<th>Method</th>
<th>Exposure time</th>
<th>Result/evaluation</th>
<th>Score</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In-vitro skin test method:
In-vitro skin test result:
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name: P53 phospho-S15 kit control lysate 64P53TDA
Version: UK, Page 8 of 13, Revision date: 11/06/2019

Assessment / Classification:

- **Eye damage/irritation**

Animal data:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Species</th>
<th>Method</th>
<th>Exposure time</th>
<th>Result/evaluation</th>
<th>Score</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>Rabbit</td>
<td>Eye irritation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In vitro eye test method:

In vitro eye test result:

Assessment / Classification:

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - Germ cell mutagenicity:

Animal data:

Assessment / Classification:

  - Carcinogenicity

Practical experience / human evidence:

Animal data:

Other information:

Assessment / Classification:

  - Reproductive toxicity

Practical experience / human evidence:

Animal data:

Other information:

Assessment / Classification:

Overall assessment on CMR properties:

- **Specific target organ toxicity (single exposure)**
  - STOT SE 1 and 2

Animal data:

Other information:

  - STOT SE 3

Practical experience / human evidence:

Other information:

Assessment / Classification:

  - Specific target organ toxicity (repeated exposure)
Practical experience / human evidence:

Animal data:

Assessment / Classification:

- Aspiration hazard

Practical experience / human evidence:

Experimental data: viscosity data: see SECTION 9.
Assessment / Classification:
Remark:

11.1.1 Mixtures
No toxicological information is available for the mixture itself

Section 12 : Ecological information

In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for mixture classification has to be used (calculation method) in this case the toxicological data of the ingredients are shown.

12.1 Aquatic toxicity:

Acute (short-term) fish toxicity

Source : Informations relatives à la réglementation VME (France) : ED 984, 07.2012

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>LC50 (mg/L)</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/ Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>8.9</td>
<td></td>
<td></td>
<td>96</td>
<td>Pimephales promelas (fathead minnow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic (long-term) fish toxicity

Source : Informations relatives à la réglementation VME (France) : ED 984, 07.2012

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>NOEC (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acute (short-term) toxicity to crustacea

Source : Informations relatives à la réglementation VME (France) : ED 984, 07.2012

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/ Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>26</td>
<td></td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic (long-term) toxicity to crustacea

Source : Informations relatives à la réglementation VME (France) : ED 984, 07.2012

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>NOEC (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Acute (short-term) toxicity to algae and cyanobacteria

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Result/ Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Toxicity to microorganisms and other aquatic plants / organisms

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Test duration</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment / Classification:

**12.2 Persistence and degradability**

**Biodegradation:**

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Inoculum</th>
<th>Biodegradation parameter</th>
<th>Degradation rate (%)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td>BOD (% of COD)</td>
<td>36-36</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In accordance with the required stability the product is poorly biodegradable.

**Abiotic Degradation:**

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Inoculum</th>
<th>Biodegradation parameter</th>
<th>Degradation rate (%)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment / Classification:

**12.3 Bioaccumulative potential**

**Bioconcentration factor (BCF):**

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Inoculum</th>
<th>Biodegradation parameter</th>
<th>Degradation rate (%)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**12.4 Mobility in soil**

<table>
<thead>
<tr>
<th>Substance EC-No.</th>
<th>EC50 (mg/L)</th>
<th>Inoculum</th>
<th>Biodegradation parameter</th>
<th>Degradation rate (%)</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:

Additional ecotoxicological information:

Section 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment options: Dispose of waste according to applicable legislation.

Section 14: Transport information

<table>
<thead>
<tr>
<th>ADR/RID/AND/IMDG/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No.</td>
</tr>
<tr>
<td>UN Proper shipping name</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
</tr>
<tr>
<td>Hazard label(s)</td>
</tr>
<tr>
<td>Packing group</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Land transport (ADR/RID)

Classification code ADR: Special Provisions for ADR/RID:
Limited quantities for ADR/RID: Excepted Quantities for ADR/RID:
Packing Instructions for ADR/RID: Special packing provisions for ADR/RID:
Mixed packing provisions:
Portable tanks and bulk containers Instructions:
Portable tanks and bulk containers Special Provisions:
ADR Tank Code: ADR Tank special provisions:
Vehicle for tank carriage:
Special provisions for carriage Packages:
Special provisions for carriage Bulk:
Special provisions for carriage for loading, unloading and handling:
Special Provisions for carriage Operation:
Hazard identification No: Transport category (Tunnel restriction code):

Sea transport (IMDG)

Marine Pollutant: Subsidiary risk(s) for IMDG:
Packing provisions for IMDG: Limited quantities for IMDG:
Packing instructions for IMDG: IBC Instructions:
IBC Provisions: IMO tank instructions:
UN tank instructions: Tanks and bulk Provisions:
EmS: Stowage and segregation for IMDG:
Properties and observations:
Section 15 : Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Authorisations and/or restrictions on use:

Authorisations: 9002-93-1
Restrictions on use:
SVHC :9002-93-1

- Other EU regulations:

- Directive 2010/75/EC on industrial emissions

Not relevant

National regulations

15.2 Chemical Safety Assessment:
For this mixture, no chemical safety assessment has been carried out

Section 16 : Other information

16.1 Indication of changes

Date of the previous version:06/06/2019
Modifications:

16.2 Other informations
16.3 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:
See SECTION 2.1 (classification).

16.4 Relevant R-, H- and EUH-phrases (number and full text):

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name: P53 phospho-S15 kit - 10,000 tests d2 conj

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;
Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 Details of the supplier of the safety data sheet:
Supplier:
Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 Emergency telephone number:
France - Numéro ORFILA (INRS) : + 33 (0)1 45 42 59 59
Ce numéro permet d’obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d’appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The substance or mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Product identifier:
Designation / Commercial name: P53 phospho-S15 kit - 10,000 tests d2 conj

Substances contained in this product:
2.3 Other hazards
The mixture does not contain substances classified as ‘Substances of Very High Concern’ (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH. The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

Adverse human health effects and symptoms:
Section 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(2-hydroxyethyl)piperazine-1-ylethanesulfonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td></td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information: Do not leave affected person unattended.
Following inhalation: In case of respiratory tract irritation, consult a physician.
Following skin contact: After contact with skin, wash immediately with water.
Following eye contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Following ingestion: Do NOT induce vomiting.
Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.
Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Section 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:

5.3 Advice for fire-fighters

Wear Protective clothing.
Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Emergency procedures: Provide adequate ventilation.;

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 cleaning up: Suitable material for taking up: Absorbing material, organic;
Other information:

6.4 Reference to other sections

Additional information:

Section 7: Handling and storage

7.1 Precautions for safe handling
Protective measures:
Advice on safe handling: Avoid contact with skin, eyes and clothes.;
Fire precautions:
Do not eat, drink or smoke in areas where reagents are handled.;
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice;

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed.;
Hints on storage assembly:
Materials to avoid:
Further information on storage conditions:

7.3 Specific end uses:
Recommendations on specific end uses: Observe technical data sheet.;

Section 8: Exposure controls/personal protection

8.1 Control parameters
Preliminary remark:

8.1.1 Occupational exposure limits:

- France
<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLE (mg/m³)</th>
<th>VLE (ppm)</th>
<th>VME (mg/m³)</th>
<th>VME (ppm)</th>
</tr>
</thead>
</table>

**Spain**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLA-EC (mg/m³)</th>
<th>VLA-EC (ppm)</th>
<th>VLA-ED (mg/m³)</th>
<th>VLA-ED (ppm)</th>
</tr>
</thead>
</table>

**Germany**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>AGW (mg/m³)</th>
<th>AGW (ppm)</th>
</tr>
</thead>
</table>

**Italia**

**Greece**

**UK**

**OSHA (USA)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) 8-hour TWA (mg/m³)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (ppm)</th>
<th>OSHA Permissible Exposure Limit (PEL) STEL (mg/m³)</th>
</tr>
</thead>
</table>

### 8.1.2 Biological limit values (Germany):

**Source:** List of recommended health-based biological limit values (BLVs) and biological guidance values (BGVs), June 2014
### Substance EC-No. CAS-No BLV (mg/m³) BLV (ppm)

#### 8.1.3 Exposure limits at intended use (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
</table>

#### 8.1.4 DNEL/PNEC-values:

- **DNEL worker**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, systemic effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Acute – inhalation, systemic effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, systemic effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7365-45-9/230-907-9</td>
<td>230-907-9</td>
<td>7365-45-9</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
<td>23.5-23.5</td>
</tr>
</tbody>
</table>

- **DNEL consumer**

#### DNEL remark:

- **PNEC**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(ppm)</td>
<td>(ppm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC soil</th>
<th>PNEC sewage treatment plant</th>
<th>PNEC air</th>
<th>PNEC secondary poisoning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(ppm)</td>
<td>(ppm)</td>
<td>(ppm)</td>
<td>(ppm)</td>
</tr>
</tbody>
</table>
Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**
- **Physical state:** Liquid;
- **Colour:** Blue;
- **Odour:** 
- **Odour threshold (ppm):** 

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Concentration mol/L</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (type : %)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility (Type : %)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (log Pow) v-octanol/water at pH:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition energy (kJ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, cinematic (cm³/s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 10 : Stability and reactivity

10.1 Reactivity This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

10.6 Hazardous decomposition products:
Does not decompose when used for intended uses.

Section 11 : Toxicological information

Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:

Acute dermal toxicity:

Acute inhalative toxicity:

Practical experience / human evidence:
Assessment / Classification:
General Remark:

- Skin corrosion/irritation

Animal data:

In-vitro skin test method:
In-vitro skin test result:
Assessment / Classification:

- Eye damage/irritation
Animal data:

In vitro eye test method:
In vitro eye test result:
Assessment / Classification:

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - Germ cell mutagenicity:

Animal data:

Assessment / Classification:

- Carcinogenicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

- Reproductive toxicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:

- **Specific target organ toxicity (single exposure)**
  - STOT SE 1 and 2

Animal data:

Other information:

- STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:

- **Specific target organ toxicity (repeated exposure)**

Practical experience / human evidence:
Animal data:

Assessment / Classification:

Other information

- Aspiration hazard
Practical experience / human evidence:
Experimental data: viscosity data: see SECTION 9.
Assessment / Classification:
Remark:

11.1.1 Mixtures
No toxicological information is available for the mixture itself

Section 12: Ecological information
In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for mixture classification has to be used (calculation method) in this case the toxicological data of the ingredients are shown.

12.1 Aquatic toxicity:
Acute (short-term) fish toxicity
Chronic (long-term) fish toxicity

Acute (short-term) toxicity to crustacea
Chronic (long-term) toxicity to crustacea

Acute (short-term) toxicity to algae and cyanobacteria

Toxicity to microorganisms and other aquatic plants / organisms

Assessment / Classification:

12.2 Persistence and degradability
Biodegradation:

Abiotic Degradation:

Assessment / Classification:

12.3 Bioaccumulative potential
Bioconcentration factor (BCF):

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:
Section 13 : Disposal considerations

13.1 Waste treatment methods

Waste treatment options: Dispose of waste according to applicable legislation.

Section 14 : Transport information

<table>
<thead>
<tr>
<th>ADR/RID/AND/IMDG/IATA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No.</td>
<td></td>
</tr>
<tr>
<td>UN Proper shipping name</td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Hazard label(s)</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td></td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Land transport (ADR/RID)

Classification code ADR: Special Provisions for ADR/RID:

Limited quantities for ADR/RID: Excepted Quantities for ADR/RID:

Packing Instructions for ADR/RID: Special packing provisions for ADR/RID:

Mixed packing provisions:
Portable tanks and bulk containers Instructions:
Portable tanks and bulk containers Special Provisions:
ADR Tank Code: ADR Tank special provisions:

Vehicle for tank carriage:
Special provisions for carriage Packages:
Special provisions for carriage Bulk:
Special provisions for carriage for loading, unloading and handling:
Special Provisions for carriage Operation:

Hazard identification No: Transport category (Tunnel restriction code):

Sea transport (IMDG)

Marine Pollutant: Subsidiary risk(s) for IMDG:

Packing provisions for IMDG: Limited quantities for IMDG:

Packing instructions for IMDG: IBC Instructions:

IBC Provisions: IMO tank instructions:

UN tank instructions: Tanks and bulk Provisions:

EmS : Stowage and segregation for IMDG:

Properties and observations:

Inland waterway transport (ADN)

Classification Code ADN: Special Provisions ADN:

Limited quantities ADN: Excepted quantities ADN:

Carriage permitted: Equipment required:

Provisions concerning loading and unloading: Provisions concerning carriage:

Number of blue cones/lights: Remark:
Section 15 : Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Authorisations and/or restrictions on use:

Authorisations:
Restrictions on use:
SVHC:

- Other EU regulations:

- Directive 2010/75/EC on industrial emissions

Not relevant

National regulations

15.2 Chemical Safety Assessment:
For this mixture, no chemical safety assessment has been carried out

Section 16 : Other information

16.1 Indication of changes

Date of the previous version: 11/06/2019
Modifications:

16.2 Other informations

16.3 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:
See SECTION 2.1 (classification).

16.4 Relevant R-, H- and EUH-phrases (number and full text):
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Designation / Commercial name: P53 phospho-S15 kit - 10,000 tests Eu conj
CAS No.: Index No: EC No: REACH No:

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

Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;
Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 Details of the supplier of the safety data sheet:

Supplier:
Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 Emergency telephone number:

France - Numéro ORFILA (INRS) : + 33 (0)1 45 42 59 59
Ce numéro permet d’obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d’appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The substance or mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements

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

Product identifier:
Designation / Commercial name: P53 phospho-S15 kit - 10,000 tests Eu conj

Substances contained in this product:
Hazard pictograms

Signal word:

Hazard and precautionary statements:

2.3 Other hazards
The mixture does not contain substances classified as ‘Substances of Very High Concern’ (SVHC) >= 0.1% published by the European Chemicals Agency (ECHA) under article 57 of REACH. The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.
Adverse human health effects and symptoms:
Section 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(2-hydroxyethyl)piperazin-1-ylethanesulphonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td>&lt; 3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

Section 4: First aid measures

4.1 Description of first aid measures

General information: Do not leave affected person unattended.
Following inhalation: In case of respiratory tract irritation, consult a physician.
Following skin contact: After contact with skin, wash immediately with water.
Following eye contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Following ingestion: Do NOT induce vomiting.
Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.
Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Section 5: Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:

5.3 Advice for fire-fighters

Wear Protective clothing.
Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Emergency procedures: Provide adequate ventilation.;

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 cleaning up: Suitable material for taking up: Absorbing material, organic;
Other information:

6.4 Reference to other sections
Additional information:

Section 7: Handling and storage

7.1 Precautions for safe handling
Protective measures:
Advice on safe handling: Avoid contact with skin, eyes and clothes.;
Fire preventions:
Do not eat, drink or smoke in areas where reagents are handled.;
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice;

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed.;
Hints on storage assembly:
Materials to avoid:
Further information on storage conditions:

7.3 Specific end uses:
Recommendations on specific end uses: Observe technical data sheet.;

Section 8: Exposure controls/personal protection

8.1 Control parameters
Preliminary remark:

8.1.1 Occupational exposure limits:
• France
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name :  P53 phospho-S15 kit - 10,000 tests Eu conj
Version: UK, Page 5 of 13, Revision date: 18/06/2019

<table>
<thead>
<tr>
<th>Source</th>
<th>Informations relatives à la réglementation VME (France) : ED 984, 07.2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC-No.</td>
</tr>
</tbody>
</table>

- Spain

Source : Limites de Exposicion Profesional para Agentes Quimicos en Espana
Instituto Nacional de Seguridad e Higiene en el Trabajo
June 2015

<table>
<thead>
<tr>
<th>Source</th>
<th>Limites de Exposicion Profesional para Agentes Quimicos en Espana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC-No.</td>
</tr>
</tbody>
</table>

- Germany

Source : TRGS 900, June 2015, BAuA

<table>
<thead>
<tr>
<th>Source</th>
<th>TRGS 900, June 2015, BAuA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC-No.</td>
</tr>
</tbody>
</table>

- Italia

- Greece

- UK

- OSHA (USA)

Source : Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000

<table>
<thead>
<tr>
<th>Source</th>
<th>Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC-No.</td>
</tr>
</tbody>
</table>

8.1.2 Biological limit values (Germany):

Source : List of recommended health-based biological limit values (BLVs) and biological guidance values (BGVs), June 2014
8.1.3 Exposure limits at intended use (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BLV (mg/m³)</th>
<th>BLV (ppm)</th>
</tr>
</thead>
</table>

Source: TRGS 903, November 2015, BAuA

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
</table>

8.1.4 DNEL/PNEC-values:

- DNEL worker

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7365-45-9/230-907-9</td>
<td>230-907-9</td>
<td>7365-45-9</td>
<td>23.5-23.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: GESTIS – substance database

- DNEL consumer

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
</tr>
</thead>
</table>

DNEL remark:

- PNEC

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Others</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>PNEC soil</td>
<td>PNEC sewage treatment plant</td>
<td>PNEC air</td>
<td>PNEC secondary poisoning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
<td>(ppm)</td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
<td>(ppm)</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

8.2.1 Appropriate engineering controls:

8.2.2 Personal protective equipment:
Eye / Face protection: Safety glasses with side-shields;
Skin protection: Gloves;
Respiratory protection: Ensure adequate ventilation;
Thermal hazards:

8.2.3 Environmental exposure controls:

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Concentration (mol/L)</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Initial boiling point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Flash point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Flammability (type : %)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lower explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Densities</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Density (g/cm³)</td>
<td></td>
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</tr>
<tr>
<td>Relative density (g/cm³)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bulk density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Critical density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility (Type : g/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (log Pow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-octanol/water at pH :</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition energy : kJ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, cinematic (cm²/s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
9.2 Other information:

No other relevant data available

Section 10: Stability and reactivity

10.1 Reactivity This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

10.6 Hazardous decomposition products:
Does not decompose when used for intended uses.

Section 11: Toxicological information

Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

• Acute toxicity

Animal data:
Acute oral toxicity:

Acute dermal toxicity:

Acute inhalative toxicity:

Practical experience/human evidence:
Assessment/Classification:
General Remark:

• Skin corrosion/irritation

Animal data:

In-vitro skin test method:
In-vitro skin test result:
Assessment/Classification:

• Eye damage/irritation
Animal data:

In vitro eye test method:
In vitro eye test result:
Assessment / Classification:

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - Germ cell mutagenicity:

Animal data:

Assessment / Classification:

  - Carcinogenicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

  - Reproductive toxicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:

- **Specific target organ toxicity (single exposure)**
  - STOT SE 1 and 2

Animal data:

Other information:

  - STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:

- **Specific target organ toxicity (repeated exposure)**

Practical experience / human evidence:
Animal data:

Assessment / Classification:

Other information

- **Aspiration hazard**
Section 12 : Ecological information

In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for mixture classification has to be used (calculation method) in this case the toxicological data of the ingredients are shown.

12.1 Aquatic toxicity:
   Acute (short-term) fish toxicity
   Chronic (long-term) fish toxicity
   Acute (short-term) toxicity to crustacea
   Chronic (long-term) toxicity to crustacea
   Acute (short-term) toxicity to algae and cyanobacteria
   Toxicity to microorganisms and other aquatic plants / organisms

   Assessment / Classification:

12.2 Persistence and degradability
   Biodegradation:
   Abiotic Degradation:
   Assessment / Classification:

12.3 Bioaccumulative potential
   Bioconcentration factor (BCF):

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:
Section 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment options: Dispose of waste according to applicable legislation.

Section 14: Transport information

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**Land transport (ADR/RID)**

Classification code ADR: Special Provisions for ADR/RID:
Limited quantities for ADR/RID: Excepted Quantities for ADR/RID:
Packing Instructions for ADR/RID: Special packing provisions for ADR/RID:
Mixed packing provisions:
Portable tanks and bulk containers Instructions:
Portable tanks and bulk containers Special Provisions:
ADR Tank Code: ADR Tank special provisions:
Vehicle for tank carriage:
Special provisions for carriage Packages:
Special provisions for carriage Bulk:
Special provisions for carriage for loading, unloading and handling:
Special Provisions for carriage Operation:
Hazard identification No: Transport category (Tunnel restriction code):

**Sea transport (IMDG)**

Marine Pollutant: Subsidiary risk(s) for IMDG:
Packing provisions for IMDG: Limited quantities for IMDG:
Packing instructions for IMDG: IBC Instructions:
IBC Provisions: IMO tank instructions:
UN tank instructions: Tanks and bulk Provisions:
EmS: Stowage and segregation for IMDG:
Properties and observations:

**Inland waterway transport (ADN)**

Classification Code ADN: Special Provisions ADN:
Limited quantities ADN: Excepted quantities ADN:
Carriage permitted: Equipment required:
Provisions concerning loading and unloading: Provisions concerning carriage:
Number of blue cones/lights: Remark:
Section 15 : Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Authorisations and/or restrictions on use:

Authorisations:
Restrictions on use:
SVHC :

- Other EU regulations:

- Directive 2010/75/EC on industrial emissions

Not relevant

National regulations

15.2 Chemical Safety Assessment:

For this mixture, no chemical safety assessment has been carried out

Section 16 : Other information

16.1 Indication of changes

Date of the previous version: 11/06/2019

Modifications:

16.2 Other informations

16.3 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:

See SECTION 2.1 (classification).

16.4 Relevant R-, H- and EUH-phrases (number and full text):
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name: P53 phospho-S15 kit - 10,000 tests Eu conj
Version: UK, Page 13 of 13, Revision date: 18/06/2019
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name: Phospho-total protein detection buffer - 50 ml

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Use of the substance or mixture for Laboratory Research use only;
Uses advised against: Do not use for diagnostics, therapeutics or other clinical uses.

1.3 Details of the supplier of the safety data sheet:
Supplier:
Name: CISBIO BIOASSAYS - CBBIOA -
Address: Parc Marcel Boiteux - BP 84175 - 30200 Codolet, France
Phone: +33 4 66 9 67 05 - Fax: +33 4 66 79 67 50
E-Mail (competent person): msds@cisbio.com

1.4 Emergency telephone number:
France - Numéro ORFILA (INRS) : +33 (0)1 45 42 59 59
Ce numéro permet d’obtenir les coordonnées de tous les centres Anti-poison Français. Ces centres anti-poison et de toxicovigilance fournissent une aide médicale gratuite (hors coût d’appel), 24 heures sur 24 et 7 jours sur 7.

USA & Canada - Phone: 1-888-963-456 (1)
Other countries - Phone: +33 (0) 466 796 737 (2)
http://www.cisbio.com
(1) Available from Monday to Thursday 8:30 am to 5:30pm GMT-5 and Friday: 8:30 am to 3:00pm GMT-5
(2) Available from Monday to Friday 9:00 am to 5:30 pm GMT+2

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP]</th>
<th>Category code</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The substance or mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Product identifier:
Designation / Commercial name: Phospho-total protein detection buffer - 50 ml

Substances contained in this product:
Hazard and precautionary statements:

2.3 Other hazards

The mixture does not contain substances classified as ‘Substances of Very High Concern’ (SVHC) >= 0.1% published by the European Chemicals Agency (ECHA) under article 57 of REACH. The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annex XIII of the REACH regulations EC 1907/2006.

Adverse human health effects and symptoms:
Section 3 : Composition/information on ingredients

3.2 Mixtures
Hazardous ingredients:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS n°</th>
<th>Index n°</th>
<th>EC n°</th>
<th>Classification according Regulation (EC) No. 1272 [CLP]</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
</table>
| potassium fluoride                          | 7789-23-3 | 009-005-00-2 | 232-151-5 | Acute toxicity - Acute Tox. 3 - H301 - Oral  
Acute toxicity - Acute Tox. 3 - H311 - Dermal  
Acute toxicity - Acute Tox. 3 - H331 - Inhalation                                                                                     | < 3%              |     |          |
| 4-(2-hydroxyethyl)piperazin-1-ylethanesulfonic acid | 7365-45-9 | 230-907-9 |         |                                                                                                                                                   | < 3%              |     |          |

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

Section 4 : First aid measures

4.1 Description of first aid measures
General information: Do not leave affected person unattended. ;
Following inhalation: In case of respiratory tract irritation, consult a physician. ;
Following skin contact: After contact with skin, wash immediately with water ;
Following eye contact: After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately ;
Following ingestion: Do NOT induce vomiting, ;
Self-protection of the first aider:

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: No known symptoms to date. ;
Effects:

4.3 Indication of any immediate medical attention and special treatment needed
Notes for the doctor:

Section 5 : Firefighting measures

5.1 Extinguishing media:
Suitable extinguishing media: This product is not flammable. Use extinguishing agent suitable for type of surrounding fire;

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products /
5.3 **Advice for fire-fighters**

Wear Protective clothing.

---

**Section 6: Accidental release measures**

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

Emergency procedures: Provide adequate ventilation.

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 cleaning up: Suitable material for taking up: Absorbing material, organic.

Other information:

6.4 **Reference to other sections**

Additional information:

---

**Section 7: Handling and storage**

7.1 **Precautions for safe handling**

Protective measures:

Advice on safe handling: Avoid contact with skin, eyes and clothes.

Fire preventions:

Do not eat, drink or smoke in areas where reagents are handled.

Advice on general occupational hygiene

Handle in accordance with good industrial hygiene and safety practice.

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

Technical measures and storage conditions:

Requirements for storage rooms and vessels: Keep container tightly closed.

Hints on storage assembly:

Materials to avoid:

Further information on storage conditions:

7.3 **Specific end uses:**

Recommendations on specific end uses: Observe technical data sheet.

---

**Section 8: Exposure controls/personal protection**

8.1 **Control parameters**

Preliminary remark:
8.1.1 Occupational exposure limits:

- **France**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLE (mg/m3)</th>
<th>VLE (ppm)</th>
<th>VME (mg/m3)</th>
<th>VME (ppm)</th>
</tr>
</thead>
</table>

- **Spain**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>VLA-EC (mg/m3)</th>
<th>VLA-EC (ppm)</th>
<th>VLA-ED (mg/m3)</th>
<th>VLA-ED (ppm)</th>
</tr>
</thead>
</table>

- **Germany**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>AGW (mg/m3)</th>
<th>AGW (ppm)</th>
</tr>
</thead>
</table>

- **Italia**

- **Greece**

- **UK**

- **OSHA (USA)**

Source: 
- Informations relatives à la réglementation VME (France): ED 984, 07.2012
- Limites de Exposicion Profesional para Agentes Quimicos en Espana
- Instituto Nacional de Seguridad e Higiene en el Trabajo
- June 2015
- TRGS 900, June 2015, BAuA
- Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELS) from 29 CFR 1910.1000
### 8.1.2 Biological limit values (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BLV (mg/m³)</th>
<th>BLV (ppm)</th>
</tr>
</thead>
</table>

### 8.1.3 Exposure limits at intended use (Germany):

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
</table>

### 8.1.4 DNEL/PNEC-values:

- **DNEL worker**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Acute – dermal, systemic effects (mg/kg/day)</th>
<th>Long-term – dermal, systemic effects (mg/kg/day)</th>
<th>Acute – inhalation, systemic effects (mg/m³)</th>
<th>Long-term – inhalation, systemic effects (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7365-45-9/230-907-9</td>
<td>230-907-9</td>
<td>7365-45-9</td>
<td>23.5-23.5</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td></td>
</tr>
<tr>
<td>7789-23-3/232-151-5</td>
<td>232-151-5</td>
<td>7789-23-3</td>
<td>23.5-23.5</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
</tr>
</tbody>
</table>

- **DNEL consumer**
DNEL remark:
- PNEC

### PNEC AQUATIC

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intermittent</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>release</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
</tr>
</thead>
</table>

### PNEC Sediment

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>freshwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intermittent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>release</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
<th>(mg/L)</th>
<th>(mg/kg)</th>
<th>(ppm)</th>
</tr>
</thead>
</table>

PNEC remark:

Control parameters remark:

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

8.2.2 Personal protective equipment:
- **Eye / Face protection**: Safety glasses with side-shields;
- **Skin protection**: Gloves;
- **Respiratory protection**: Ensure adequate ventilation;
- **Thermal hazards**:

8.2.3 Environmental exposure controls:

### Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odour</td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td></td>
</tr>
<tr>
<td>Freezing point (°C)</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td></td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
</tr>
<tr>
<td>Flammability (type : %)</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper explosive limit (%)</td>
<td></td>
</tr>
<tr>
<td>Lower explosive limit (%)</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td>Density (g/cm³)</td>
</tr>
<tr>
<td></td>
<td>Relative density (g/cm³)</td>
</tr>
<tr>
<td></td>
<td>Bulk density (g/cm³)</td>
</tr>
<tr>
<td></td>
<td>Critical density (g/cm³)</td>
</tr>
<tr>
<td>Solubility (Type : g/L)</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (log Pow)</td>
<td></td>
</tr>
<tr>
<td>n-octanol/water at pH :</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td></td>
</tr>
<tr>
<td>Decomposition energy : kJ</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Viscosity, dynamic (poiseuille)</td>
</tr>
<tr>
<td></td>
<td>Viscosity, cinematic (cm³/s)</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
</tr>
</tbody>
</table>

**9.2 Other information:**

No other relevant data available

**Section 10 : Stability and reactivity**

**10.1 Reactivity** This material is considered to be non-reactive under normal use conditions.

**10.2 Chemical stability**

**10.3 Possibility of hazardous reactions**

**10.4 Conditions to avoid:**

**10.5 Incompatible materials:**

**10.6 Hazardous decomposition products:**

Does not decompose when used for intended uses.

**Section 11 : Toxicological information**

Toxicokinetics, metabolism and distribution

**11.1 Information on toxicological effects**
Substances

- **Acute toxicity**

**Animal data:**

**Acute oral toxicity:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>LD50 (mg/kg)</th>
<th>Species</th>
<th>Method</th>
<th>Symptoms / delayed effects</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>7789-23-3/232-151-5</td>
<td>245-245</td>
<td>Rat</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Acute dermal toxicity:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>LD50 (mg/kg)</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
</table>

**Acute inhalative toxicity:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>C(E)I50 (mg/L)</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
</table>

**Practical experience / human evidence:**

**Assessment / Classification:**

**General Remark:**

- **Skin corrosion/irritation**

**Animal data:**

In-vitro skin test method:
In-vitro skin test result:

**Assessment / Classification:**

- **Eye damage/irritation**

**Animal data:**

In-vitro eye test method:
In-vitro eye test result:

**Assessment / Classification:**

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - Germ cell mutagenicity:

**Animal data:**

**Assessment / Classification:**

- Carcinogenicity
Practical experience / human evidence:

Animal data:

Other information:
Assessment / Classification:
  - Reproductive toxicity

Practical experience / human evidence:

Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:

- **Specific target organ toxicity (single exposure)**
  - STOT SE 1 and 2

Animal data:

Other information:
  - STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:

- **Specific target organ toxicity (repeated exposure)**

Practical experience / human evidence:
Animal data:

Assessment / Classification:
Other information

- **Aspiration hazard**

Practical experience / human evidence:
Experimental data: viscosity data: see SECTION 9.
Assessment / Classification:
Remark:

11.1.1 Mixtures
No toxicological information is available for the mixture itself

Section 12: Ecological information
In case that test data regarding one endpoint/differentiation exist for the mixture itself, the classification is carried out according to the substance criteria (excluding biodegradation and bioaccumulation). If no test data exist, the criteria for
12.1 **Aquatic toxicity:**

- Acute (short-term) fish toxicity
- Chronic (long-term) fish toxicity
- Acute (short-term) toxicity to crustacea
- Chronic (long-term) toxicity to crustacea
- Acute (short-term) toxicity to algae and cyanobacteria
- Toxicity to microorganisms and other aquatic plants / organisms

Assessment / Classification:

12.2 **Persistence and degradability**

- Biodegradation:
- Abiotic Degradation:

Assessment / Classification:

12.3 **Bioaccumulative potential**

Bioconcentration factor (BCF):

12.4 **Mobility in soil**

12.5 **Results of PBT and vPvB assessment**

12.6 **Other adverse effects:**

Additional ecotoxicological information:

**Section 13 : Disposal considerations**

13.1 **Waste treatment methods**

Waste treatment options: Dispose of waste according to applicable legislation.
Section 14 : Transport information

<table>
<thead>
<tr>
<th>ADR/RID/AND/IMDG/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No.</td>
</tr>
<tr>
<td>UN Proper shipping name</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
</tr>
<tr>
<td>Hazard label(s)</td>
</tr>
<tr>
<td>Packing group</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Land transport (ADR/RID)
- Classification code ADR:
- Special Provisions for ADR/RID:
- Limited quantities for ADR/RID:
- Excepted Quantities for ADR/RID:
- Packing Instructions for ADR/RID:
- Special packing provisions for ADR/RID:
- Mixed packing provisions:
- Portable tanks and bulk containers Instructions:
- Portable tanks and bulk containers Special Provisions:
- ADR Tank Code:
- ADR Tank special provisions:
- Vehicle for tank carriage:
- Special provisions for carriage Packages:
- Special provisions for carriage Bulk:
- Special provisions for carriage for loading, unloading and handling:
- Special Provisions for carriage Operation:
- Hazard identification No:
- Transport category (Tunnel restriction code):

Sea transport (IMDG)
- Marine Pollutant:
- Subsidiary risk(s) for IMDG:
- Packing provisions for IMDG:
- Limited quantities for IMDG:
- Packing instructions for IMDG:
- IBC Instructions:
- IBC Provisions:
- IMO tank instructions:
- UN tank instructions:
- Tanks and bulk Provisions:
- EmS:
- Stowage and segregation for IMDG:
- Properties and observations:

Inland waterway transport (ADN)
- Classification Code ADN:
- Special Provisions ADN:
- Limited quantities ADN:
- Excepted quantities ADN:
- Carriage permitted:
- Equipment required:
- Provisions concerning loading and unloading:
- Provisions concerning carriage:
- Number of blue cones/lights:
- Remark:

Air transport ([ICAO-TI] / IATA-DGR)
- Subsidiary risk for IATA:
- Excepted quantity for IATA:
- Passenger and Cargo Aircraft Limited Quantities Packing Instructions:
- Passenger and Cargo Aircraft Limited Quantities Maximal Net Quantity:
- Passenger and Cargo Aircraft Packaging Instructions:
- Passenger and Cargo Aircraft Maximal Net Quantity:
- Cargo Aircraft only Packaging Instructions:
- Cargo Aircraft only Maximal Net Quantity:
- ERG code:
- Special Provisions for IATA:

Section 15 : Regulatory information
15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulations**

- Authorisations and/or restrictions on use:

  **Authorisations:**
  **SVHC:**
  - Other EU regulations:
  - Directive 2010/75/EC on industrial emissions

**National regulations**

15.2 **Chemical Safety Assessment:**

For this mixture, no chemical safety assessment has been carried out

**Section 16 : Other information**

16.1 **Indication of changes**

Date of the previous version: 18/06/2019

Modifications:

16.2 **Other informations**

16.3 **Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]:**

See SECTION 2.1 (classification).

16.4 **Relevant R-, H- and EUH-phrases (number and full text):**

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
</tbody>
</table>