**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>Phospho-total protein lysis buffer #1 - 130 mL</td>
<td>64KL1FDF</td>
<td>5</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein blocking reagent - 2 ml</td>
<td>64KB1AAC</td>
<td>15</td>
<td>-</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein detection buffer - 50 ml</td>
<td>64KL1FDF</td>
<td>5</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>mTOR phospho-S2448 kit 10,000 tests d2 conj</td>
<td>64TORTDA</td>
<td>5</td>
<td>7</td>
<td>Blue</td>
<td>Liquid</td>
</tr>
<tr>
<td>mTOR phospho-S2448 kit 10,000 tests Eu conj</td>
<td>64TORTDA</td>
<td>5</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>mTOR phospho-S2448 kit control lysate</td>
<td>64TORTDA</td>
<td>10</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</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-poitons 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) \( \geq 0.1\% \) 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>disodium dihydrogenpyrophosphate</td>
<td>7758-16-9</td>
<td>231-835-0</td>
<td>231-835-8</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>237-287-9</td>
<td></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 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:** Phospho-total protein blocking reagent - 2 ml 64KB1AAC

**Version:** UK, Page 5 of 13, Revision date: 28/05/2019

---

#### 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 España

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></td>
<td>0.05</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>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</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>
</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>7758-16-9 / 231-835-0</td>
<td>231-835-0</td>
<td>7758-16-9</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>
</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>freshwater</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>marine water</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>intermittent release</td>
<td></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>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>(ppm)</td>
<td>(mg/L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
<td>(ppm)</td>
<td>(mg/L)</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</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>

<table>
<thead>
<tr>
<th>pH</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point (°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Initial boiling point/boiling range (°C)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point (°C)</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
</tr>
</tbody>
</table>

### Flammability (type : l (%))

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

### Vapour pressure (kPa)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Vapour density (g/cm³)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Densities

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

### Solubility (Type : ) (g/L)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Partition coefficient (log Pow)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### n-octanol/water at pH:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Auto-ignition temperature (°C)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Decomposition temperature (°C)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Decomposition energy : kJ

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Viscosity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Viscosity, dynamic (poiseuille)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Viscosity, cinematic (cm³/s)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Oxidising properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</table>

### Explosive properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
</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:

<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>7758-16-9/231-835-0</td>
<td>Rabbit</td>
<td>OECD 405</td>
<td>Eye irritation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- CMR effects (carcinogenicity, 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:
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
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 11 of 13, Revision date: 28/05/2019

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
ADR/RID/AND/IMDG/IATA

<table>
<thead>
<tr>
<th>UN No</th>
<th>UN Proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Hazard label(s)</th>
<th>Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></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:**
- **IMO tank instructions:**
- **IBC Instructions:**
- **UN tank instructions:**
- **Tanks and bulk Provisions:**
- **EmS :**
- **Stowage and segregation for IMDG:**

### 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:**
  - **Restrictions on use:**
  - **SVHC :**
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: 24/05/2019
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 - CBBOA -
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 pictograms

Signal word:

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-ylenesulphonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td>Acute toxicity - Inhalation</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>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>&lt; 1%</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

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

### Version:
UK, Page 6 of 14, Revision date: 21/05/2019

#### 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></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>6381-92-6</td>
<td>6381-92-6</td>
<td></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 – dermal, systemic effects (mg/kg/day)</th>
<th>Long-term – dermal, systemic effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Acute – inhalation, systemic 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></td>
<td></td>
<td></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></td>
<td></td>
<td></td>
<td>1.5-1.5</td>
<td>23.5-23.5</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 – dermal, systemic effects (mg/kg/day)</th>
<th>Long-term – dermal, systemic effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>Long-term – inhalation, local effects (mg/m³)</th>
<th>Acute – inhalation, systemic 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></td>
<td></td>
<td></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></td>
<td></td>
<td></td>
<td>1.5-1.5</td>
<td>23.5-23.5</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>freshwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
<tr>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7365-45-9</td>
<td>230-907-9</td>
<td>7365-45-9</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>6381-92-6</td>
<td>6381-92-6</td>
<td>6381-92-6</td>
<td></td>
</tr>
<tr>
<td>7365-45-9</td>
<td>230-907-9</td>
<td>7365-45-9</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>
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:

<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:
In-vitro skin test result:
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:
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:

<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
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Designation / Commercial name : Phospho-total protein lysis buffer #1 - 130 mL
Version: UK, Page 11 of 14, Revision date: 21/05/2019

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

<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

<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></td>
<td>48</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>

Assessment / Classification:

12.2 Persistence and degradability

Biodegradation:
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>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>9002-93-1</td>
<td></td>
<td>BOD (% of COD)</td>
<td>36-36</td>
<td></td>
<td>In accordance with the required stability the product is poorly biodegradable.</td>
</tr>
</tbody>
</table>

**Abiotic Degradation:**

Source:

<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):

Source:

<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*

Source:

<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>UN No.</th>
<th>UN Proper shipping name</th>
<th>Transport hazard classes</th>
<th>Hazard label(s)</th>
<th>Packing group</th>
</tr>
</thead>
</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:
- Packing Instructions for ADR/RID:
- Special packaging 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:
- 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: 03/05/2019

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: mTOR phospho-S2448 kit control lysate 64TORTDA

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: mTOR phospho-S2448 kit control lysate 64TORTDA

Substances contained in this product:
Hazard pictograms

Signal word:

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>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 Serious eye damage/eye irritation - Eye Dam. 1 - H318 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;
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>
<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/m³/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>Upper explosive limit (%)</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>
</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: mTOR phospho-S2448 kit control lysate 64TORTDA
Version: UK, Page 8 of 13, Revision date: 28/05/2019

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:
Other information

- 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

<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

<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
### 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>

### Assessment / Classification:

#### 12.2 Persistence and degradability

**Biodegradation:**

<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></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>
</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>

### 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-</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>
</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:
- 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: 21/05/2019

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 statement</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: Phospho-total protein detection buffer - 50 ml

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 1227/2008 [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 1227/2008 [CLP/GHS]

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

Substances contained in this product:
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>
<tbody>
<tr>
<td>Potassium fluoride</td>
<td>7789-23-3</td>
<td>009-005-00-2</td>
<td>232-151-5</td>
<td>Acute toxicity - Acute Tox. 3 - H301 - Oral Acute toxicity - Acute Tox. 3 - H311 - Dermal Acute toxicity - Acute Tox. 3 - H331 - Inhalation</td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-(2-hydroxyethyl)piperazine-1-ylethanesulphonic 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 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: 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></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>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>
</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>freshwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>marine water</td>
<td>marine water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>intermittent release</td>
<td>intermittent release</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>(mg/L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(mg/kg)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(ppm)</td>
</tr>
<tr>
<td>7365-45-9</td>
<td>230-907-9</td>
<td>7365-45-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7365-45-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7789-23-3</td>
<td>232-151-5</td>
<td>7789-23-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7789-23-3</td>
<td></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;
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>Physical state</th>
<th>Liquid;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colorless;</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</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 detection buffer - 50 ml
Version: UK, Page 8 of 13, Revision date: 29/05/2019

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>Melting point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/bubbling range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m³/h)</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>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper explosive limit (%)</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>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Densities
- Density (g/cm³)
- Relative density (g/cm³)
- Bulk density (g/cm³)
- Critical density (g/cm³)

Solubility (Type : | (g/L) |        |                  |               |                 |

Partition coefficient (log Pow)
- n-octanol/water at pH : |

Auto-ignition temperature (°C) |        |                  |               |                 |

Decomposition temperature (°C) |        |                  |               |                 |

Decomposition energy (kJ) |        |                  |               |                 |

Viscosity
- Viscosity, dynamic (poiseuille) |
- Viscosity, cinematic (cm³/s) |

Oxidising properties: |        |                  |               |                 |

Explosive properties: |        |                  |               |                 |

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:
  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:

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:

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 instructions for IMDG: Limited quantities for IMDG:
- IBC Instructions:
- 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

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: 24/05/2019
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>
Section 1 : Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name : mTOR phospho-S2448 kit 10,000 tests d2 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 - CBIOA -
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 5:30 pm 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 : mTOR phospho-S2448 kit 10,000 tests d2 conj

Substances contained in this product:
**Safety Data Sheet**

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

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---

**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 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>
<tbody>
<tr>
<td>potassium fluoride</td>
<td>7789-23-3</td>
<td>009-005-00-2</td>
<td>232-151-5</td>
<td>Acute toxicity - Acute Tox. 3 - H301 - Oral</td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-(2-hydroxyethyl)piperazine-1-ylethanesulfonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td>Acute toxicity - Acute Tox. 3 - H311 - Dermal</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>
# Safety Data Sheet

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

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### 8.1.2 Biological limit values (Germany):

<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>

### 8.1.3 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></td>
<td>3-3</td>
<td>3-3</td>
<td>23.5-23.5</td>
<td></td>
<td>3-3</td>
<td>3-3</td>
</tr>
<tr>
<td>7789-23-3/232-151-5</td>
<td>232-151-5</td>
<td>7789-23-3</td>
<td>3-3</td>
<td></td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td></td>
<td>3-3</td>
<td>3-3</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>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></td>
<td>3-3</td>
<td>3-3</td>
<td>23.5-23.5</td>
<td></td>
<td>3-3</td>
<td>3-3</td>
</tr>
<tr>
<td>7789-23-3/232-151-5</td>
<td>232-151-5</td>
<td>7789-23-3</td>
<td>3-3</td>
<td></td>
<td>3-3</td>
<td>3-3</td>
<td>3-3</td>
<td></td>
<td>3-3</td>
<td>3-3</td>
</tr>
</tbody>
</table>
Safety Data Sheet
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DNEL remark:
- PNEC

<table>
<thead>
<tr>
<th>Source</th>
<th>INERIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC-No.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PNEC AQUATIC</th>
<th>PNEC Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td>freshwater</td>
<td>marine water</td>
</tr>
<tr>
<td>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
</tbody>
</table>

Source: INERIS

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</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;

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>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
</tr>
<tr>
<td>Colour</td>
</tr>
<tr>
<td>Odour</td>
</tr>
<tr>
<td>Odour threshold</td>
</tr>
</tbody>
</table>
### Safety Data Sheet

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<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>Melting point (°C)</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>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</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>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</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>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Upper explosive limit (%)</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>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td>Density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relative density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bulk density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility (Type : )</td>
<td>(g/L)</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>
</tr>
<tr>
<td>n-octanol/water at pH</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>
</tr>
<tr>
<td>Decomposition temperature (°C)</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>
</tr>
<tr>
<td>Viscosity</td>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Viscosity, cinematic (cm²/s)</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>
</tr>
<tr>
<td>Explosive properties</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
**Safety Data Sheet**

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

Designation / Commercial name: mTOR phospho-S2448 kit 10,000 tests d2 conj

Version: UK, Page 9 of 13, Revision date: 21/05/2019

---

**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–S</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>
<tbody>
<tr>
<td>7789-23-3/232-151–S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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>
<tbody>
<tr>
<td>7789-23-3/232-151–S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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:
  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:

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>UN No.</th>
<th>UN Proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Hazard label(s)</th>
<th>Packing group</th>
</tr>
</thead>
</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

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: 03/05/2019

Modifications:

16.2 Other information

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>
Section 1 : Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Designation / Commercial name: mTOR phospho-S2448 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: mTOR phospho-S2448 kit 10,000 tests Eu conj

Substances contained in this product:
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:


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.; Remove affected person from the danger area and lay down.; Following inhalation: In case of respiratory tract irritation, consult a physician.; Provide fresh air.; Following skin contact: After contact with skin, wash immediately with water; Remove contaminated clothing; 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.; Give nothing to eat or drink.; If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.; 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.; Emergency procedures: Remove persons to safety.; Personal precautions: Use personal protection equipment (see section 8).

6.2 Environmental precautions
Do not allow to enter into surface water or drains.; Ensure all waste water is collected and treated via a waste water treatment plant.

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.; Avoid: Eye contact; Avoid: Generation/formation of aerosols; Avoid: Skin contact; Avoid: Inhalation; In the immediate working surroundings there must be: Emergency shower installed; In the immediate working surroundings there must be: Provide eye shower and label its location conspicuously; Wash contaminated clothing immediately.
Fire preventions:
Do not eat, drink or smoke in areas where reagents are handled.; Do not pipet by mouth; Wear suitable one-way gloves at work;
Advice on general occupational hygiene
Handle in accordance with good industrial hygiene and safety practice; Observe technical data sheet.; Remove contaminated, saturated clothing; Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Requirements for storage rooms and vessels: Keep container tightly closed.; Keep-store only in original container or in properly labeled containers;
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
- Spain
- Germany
- Italia
- Greece
- UK
- OSHA (USA)

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; Laboratory coats;
- **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>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>
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<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
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<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>Flammable or explosive limits</td>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower explosive limit (%)</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>Density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relative density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bulk density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility (Type :</td>
<td>(g/L)</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 :</td>
<td>kJ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Viscosity, cinematic (cm²/s)</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:

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 (carcinogenicity, 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:
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:

Parking 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:

Parking provisions for IMDG: Limited quantities for IMDG:

Parking 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:

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:
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: 03/05/2019
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):