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

### Nomenclature of the product

<table>
<thead>
<tr>
<th>Description</th>
<th>Component</th>
<th>Nb of vials</th>
<th>pH</th>
<th>Color</th>
<th>Physical state</th>
</tr>
</thead>
<tbody>
<tr>
<td>P53 total kit - 500 tests d2 conj</td>
<td>64T53TDA</td>
<td>1</td>
<td>7</td>
<td>Blue</td>
<td>Liquid</td>
</tr>
<tr>
<td>P53 total kit - 500 tests Eu conj</td>
<td></td>
<td>1</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>P53 total kit control lysate</td>
<td></td>
<td>1</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein lysis buffer #1 - 2 ml</td>
<td></td>
<td>4</td>
<td>7</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein blocking reagent - 0.3 ml</td>
<td></td>
<td>1</td>
<td>-</td>
<td>Colorless</td>
<td>Liquid</td>
</tr>
<tr>
<td>Phospho-total protein detection buffer - 2 ml</td>
<td></td>
<td>2</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 / Trade name: P53 total kit control lysate 64T53TDA
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 in accordance with 29 CFR 1910 (OSHA HCS)</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 in accordance with 29 CFR 1910 (OSHA HCS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Product identifier:
Designation / Trade name: P53 total kit control lysate 64T53TDA

Substances contained in this product:
Hazard and precautionary statements:

2.3 Other hazards

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

Adverse human health effects:
Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200[g])

Designation / Trade name: P53 total kit control lysate 64T53TDA
Version: US, Page 3 of 12, Revision date: 11/06/2019

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 in accordance with 29 CFR 1910 (OSHA HCS)</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</td>
<td>&lt; 1%</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 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.
Additional information:
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
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:

- OSHA (USA)
8.1.2 DNEL/PNEC-values:
- DNEL worker
- DNEL consumer
- PNEC

8.2 Exposure controls

8.2.1 Appropriate engineering controls:
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:
Consumer exposure control
Measures related to consumer uses of the substance (as such or in mixtures):
Measures related to the service life of the substance in articles:

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>
<th>Colour</th>
<th>Colorless:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Concentration (mol/L)</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (type : I (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPPER/lower</td>
<td>Flammability or explosive limits</td>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOWER explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td>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>
</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:
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>In vitro</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:

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

<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>
</table>
### Chronic (long-term) fish toxicity

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

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

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

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

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

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

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

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

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

**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></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:**

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

12.3 **Bioaccumulative potential**

Bioconcentration factor (BCF):

<table>
<thead>
<tr>
<th>Source</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>Source</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.

Other disposal recommendations:
Additional information:

**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>
</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:
Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Designation / Trade name: P53 total kit control lysate 64T53TDA
Version: US, Page 11 of 12, Revision date: 11/06/2019

Special packing provisions for ADR/RID:
Mixed packing provisions:
Portable tanks and bulk containers Instructions:

ADR Tank Code:
Vehicle for tank carriage:
Special provisions for carriage Bulk:
Special provisions for carriage for loading, unloading and handling:
Special Provisions for carriage Operation:

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

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:

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

15.2 Chemical Safety Assessment:
For the following substances of this mixture a chemical safety assessment has been carried out:

Section 16 : Other information

16.1 Indication of changes
Date of the previous version:06/06/2019
Modifications:
16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)):

See SECTION 2.1 (classification).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard statments</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 / Trade name: P53 total kit - 500 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 - 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 in accordance with 29 CFR 1910 (OSHA HCS)</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 in accordance with 29 CFR 1910 (OSHA HCS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Product identifier:
Designation / Trade name: P53 total kit - 500 tests d2 conj

Substances contained in this product:
Hazard and precautionary statements:

2.3 Other hazards

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

Adverse human health effects:
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 in accordance with 29 CFR 1910 (OSHA HCS)</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(2-hydroxyethyl)piperazine-1-ylethanesulfonic acid</td>
<td>7365-45-9</td>
<td>230-907-9</td>
<td></td>
<td></td>
<td>&lt; 3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Section 4: First aid measures

4.1 Description of first aid measures

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

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.
Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Section 5: Firefighting measures

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

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

5.3 Advice for fire-fighters
Wear Protective clothing.
Additional information:
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
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:

- OSHA (USA)
# Safety Data Sheet

according to Hazard Communication Standard (HCS) (29 CFR 1910.1200[g])

**Designation / Trade name:** P53 total kit - 500 tests d2 conj

**Version:** US, Page 5 of 11, Revision date: 18/06/2019

## Substance Information

<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>

**Source:** TRGS 903, November 2015, BAuA

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

**8.1.2 DNEL/PNEC-values:**

- **DNEL worker**

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

**Source:** GESTIS – substance database

- **DNEL consumer**

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

- **PNEC**

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

8.2.1 Appropriate engineering controls:
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:

Consumer exposure control

Measures related to consumer uses of the substance (as such or in mixtures):

Measures related to the service life of the substance in articles:

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Blue</td>
</tr>
<tr>
<td>Odour</td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
</tr>
</tbody>
</table>

<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></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/bubbling range (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Flash point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (type : %)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Upper explosive limit (%)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Densities</td>
<td>Density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical density (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility (type : g/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (log Pow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-octanol/water at pH :</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition energy : kJ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>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>
<tr>
<td></td>
<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

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:

Acute dermal toxicity:

Acute inhalative toxicity:

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

- Skin corrosion/irritation

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

Assessment / Classification:

- **Eye damage/irritation**

Animal data:

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

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

Animal data:

Assessment / Classification:

- Carcinogenicity

Practical experience / human evidence:

Animal data:

Other information:
Assessment / Classification:

- Reproductive toxicity

Practical experience / human evidence:

Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:

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

Animal data:

Other information:

- STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:

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

Assessment / Classification: Other information

- Aspiration hazard

Experimental data: viscosity data: see SECTION 9. 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.

Other disposal recommendations:
Additional information:

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

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

Inland waterway transport (ADN)
Classification Code ADN: Special Provisions ADN:
Section 15 : Regulatory information

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

15.2 Chemical Safety Assessment:
For the following substances of this mixture a chemical safety assessment has been carried out:

Section 16 : Other information

16.1 Indication of changes
Date of the previous version: 11/06/2019
 Modifications:

16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)):
See SECTION 2.1 (classification).

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

1.1 Product identifier:
Designation / Trade name: P53 total kit - 500 tests Eu conj

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

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

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

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

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification in accordance with 29 CFR 1910 (OSHA HCS)</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 in accordance with 29 CFR 1910 (OSHA HCS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Product identifier:
Designation / Trade name: P53 total kit - 500 tests Eu conj

Substances contained in this product:
Hazard pictograms

Signal word:

Hazard and precautionary statements:

2.3 Other hazards

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

Adverse human health effects:
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 in accordance with 29 CFR 1910 (OSHA HCS)</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<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. ;
Additional information:
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
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:

• OSHA (USA)
### Substance Safety Data Sheet

Designation / Trade name: P53 total kit - 500 tests Eu conj
Version: US, Page 5 of 11, Revision date: 18/06/2019

### Substance

<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>

### Source

Source: TRGS 903, November 2015, BAuA

### Substance

<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>

### 8.1.2 DNEL/PNEC-values:

- **DNEL worker**

### Source

Source: GESTIS – substance database

### Substance

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

- **DNEL consumer**

### Source

Source: GESTIS – substance database

### Substance

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

- **PNEC**

### Source

Source: INERIS

### Substance

<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></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>(mg/L)</td>
<td>(mg/kg)</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>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
</tbody>
</table>

### Source

Source: INERIS

### Substance

<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></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Designation / Trade name: P53 total kit - 500 tests Eu conj
Version: US, Page 6 of 11, Revision date: 18/06/2019

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

8.2 Exposure controls

8.2.1 Appropriate engineering controls:
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:

Consumer exposure control

8.2.4 Definitions of warnings:

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colorless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Odour</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Odour threshold (ppm)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>pH</th>
<th>Value</th>
<th>Concentration (mg/L)</th>
<th>Method</th>
<th>Temperature (°C)</th>
<th>Pressure (kPa)</th>
<th>Remark</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Melting point</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Styrene</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Freezing point (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Initial boiling point/boiling range (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Flash point (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Evaporation rate (kg/m²/h)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Flammability (type :</th>
<th>(%)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Upper/lower flammability or explosive limits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Upper explosive limit (%)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Lower explosive limit (%)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vapour pressure (kPa)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vapour density (g/cm³)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Densities</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Density (g/cm³)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Relative density (g/cm³)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Bulk density (g/cm³)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Critical density (g/cm³)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Solubility (Type :</th>
<th>(g/L)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient (log Pow)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>n-octanol/water at pH :</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Auto-ignition temperature (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Decomposition temperature (°C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Decomposition energy :</th>
<th>kJ</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Viscosity</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Viscosity, dynamic (poiseille)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Viscosity, cinematic (cm²/s)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Explosive properties</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

Section 11: Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:

Acute dermal toxicity:

Acute inhalative toxicity:

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

- Skin corrosion/irritation

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

- **Eye damage/irritation**

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

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

Animal data:
Assessment / Classification:

- Carcinogenicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

- Reproductive toxicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

Overall assessment on CMR properties:

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

Animal data:

Other information:

- STOT SE 3

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

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

Assessment / Classification:
Other information

- Aspiration hazard

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

11.1.1 Mixtures
No toxicological information is available for the mixture itself

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

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

Chronic (long-term) fish toxicity

Acute (short-term) toxicity to crustacea

Chronic (long-term) toxicity to crustacea

Acute (short-term) toxicity to algae and cyanobacteria

Toxicity to microorganisms and other aquatic plants / organisms

Assessment / Classification:

12.2 Persistence and degradability
Biodegradation:

Abiotic Degradation:

Assessment / Classification:

12.3 Bioaccumulative potential
Bioconcentration factor (BCF):

12.4 Mobility in soil
12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects:

Additional ecotoxicological information:

Section 13: Disposal considerations

13.1 Waste treatment methods

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

Other disposal recommendations:
Additional information:

Section 14: Transport information

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

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

Land transport (ADR/RID)

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

Sea transport (IMDG)

Marine Pollutant: Subsidiary risk(s) for IMDG:
Packing provisions for IMDG: Limited quantities for IMDG:
Packing instructions for IMDG: IBC Instructions:
IBC Provisions:
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:
Section 15 : Regulatory information

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

15.2 Chemical Safety Assessment:
For the following substances of this mixture a chemical safety assessment has been carried out:

Section 16 : Other information

16.1 Indication of changes
Date of the previous version: 11/06/2019
Modifications:

16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)):
See SECTION 2.1 (classification).

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

1.1 Product identifier:
Designation / Trade name: Phospho-total protein lysis buffer #1 - 2 ml

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

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

Section 2: Hazards identification

2.1 Classification of the substance or mixture:

<table>
<thead>
<tr>
<th>Classification according to 29 CFR 1910 (OSHA HCS)</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 in accordance with 29 CFR 1910 (OSHA HCS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Product identifier:
Designation / Trade name: Phospho-total protein lysis buffer #1 - 2 ml

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:
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 in accordance with 29 CFR 1910 (OSHA HCS)</th>
<th>Concentration (%)</th>
<th>SCL</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-(2-hydroxyethyl)piperazin-1-yleneethanesulphonic acid</td>
<td>7365-45-9</td>
<td></td>
<td>230-907-9</td>
<td>Acute toxicity - Acute Tox. 4 - H332 - Inhalation Specific target organ toxicity - repeated exposure - STOT RE 2 - H373</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 - 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; 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></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.
Additional information:

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
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:

- OSHA (USA)

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

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>BGW (mg/m³)</th>
<th>BGW (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6381-92-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: TRGS 903, November 2015, BAuA

8.1.2 DNEL/PNEC-values:

- DNEL worker

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

Source: GESTIS – substance database

- DNEL consumer

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

Source: GESTIS – substance database

- PNEC
### 8.2 Exposure controls

8.2.1 **Appropriate engineering controls:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:**
Consumer exposure control

**Measures related to consumer uses of the substance (as such or in mixtures):**
**Measures related to the service life of the substance in articles:**

### 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>Physical state</td>
<td>Liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Colorless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour threshold (ppm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Designation / Trade name: Phospho-total protein lysis buffer #1 - 2 ml
Version: US, Page 7 of 13, Revision date: 11/06/2019

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

9.2 Other information:
No other relevant data available

Section 10 : Stability and reactivity

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

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

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

Section 11 : Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity
Animal data:

**Acute oral toxicity:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>LD50 (mg/kg)</th>
<th>Species</th>
<th>Method</th>
<th>Symptoms / delayed effects</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>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:**

<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>6381-92-6</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:**

<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 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>Test duration</th>
<th>Species</th>
<th>Result/Evaluation</th>
<th>Method</th>
<th>Remark</th>
<th>General Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002-93-1</td>
<td>9002-93-1</td>
<td>8.9</td>
<td>96</td>
<td>Pimephales promelas (fathead minnow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic (long-term) fish toxicity

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

Acute (short-term) toxicity to crustacea

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

Chronic (long-term) toxicity to crustacea

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

Acute (short-term) toxicity to algae and cyanobacteria

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

Toxicity to microorganisms and other aquatic plants/organisms

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

Biodegradation:

<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></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:

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

Assessment / Classification:

12.3 Bioaccumulative potential

Bioconcentration factor (BCF):

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

12.4 Mobility in soil

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></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.

Other disposal recommendations:
Section 14 : Transport information

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

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

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

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

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

Air transport (ICAO-TI / IATA-DGR)
- Subsidiary risk for IATA: Excepted quantity for IATA:
- Passenger and Cargo Aircraft Limited Quantities Packing Instructions:
- Passenger and Cargo Aircraft Limited Quantities Maximal Net Quantity:
- Passenger and Cargo Aircraft Packaging Instructions:
- Passenger and Cargo Aircraft Maximal Net Quantity:
- Cargo Aircraft only Packaging Instructions:
- Cargo Aircraft only Maximal Net Quantity:
- ERG code: Special Provisions for IATA:
Section 15 : Regulatory information

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

15.2 Chemical Safety Assessment:
For the following substances of this mixture a chemical safety assessment has been carried out:

Section 16 : Other information

16.1 Indication of changes
Date of the previous version: 07/06/2019
Modifications:

16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)):
See SECTION 2.1 (classification).

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Code</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td></td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td></td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H332</td>
<td></td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H373</td>
<td></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></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 / Trade name: Phospho-total protein blocking reagent - 0.3 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 in accordance with 29 CFR 1910 (OSHA HCS)</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</td>
</tr>
</tbody>
</table>

2.2 Label elements

Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Product identifier:
Designation / Trade name: Phospho-total protein blocking reagent - 0.3 ml

Substances contained in this product:
Hazard pictograms
GHS07-exclam

Signal word:
Warning

Hazard and precautionary statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Phrase de risque</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Provoque une sévère irritation des yeux</td>
</tr>
<tr>
<td>P264</td>
<td>Se laver ... soigneusement après manipulation.</td>
</tr>
<tr>
<td>P280</td>
<td>Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.</td>
</tr>
<tr>
<td>P305 + P351 + P338</td>
<td>EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l’eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.</td>
</tr>
<tr>
<td>P337 + P313</td>
<td>Si l’irritation des yeux persiste: Demander un avis médical/Consulter un médecin.</td>
</tr>
</tbody>
</table>

2.3 Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under 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:
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 in accordance with 29 CFR 1910 (OSHA HCS)</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>Serious eye damage/eye irritation - Eye Irrit. 2 - H319</td>
<td>&lt; 25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trisodium tetraoxovanadate</td>
<td>13721-39-6</td>
<td>237-287-9</td>
<td>Acute toxicity - Acute Tox. 4 - H302 - Oral</td>
<td>&lt; 3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Section 4: First aid measures

4.1 Description of first aid measures

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

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No known symptoms to date.;
Effects:

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Section 5: Firefighting measures

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

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: /

5.3 Advice for fire-fighters

Wear Protective clothing.;
Additional information:
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
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:

- OSHA (USA)
### Substance Data

<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>
<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>

<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>

### Hazard Communication Standard (HCS) Values

#### DNEL/PNEC-values:

- **DNEL worker**

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
<th>Acute – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, local effects (mg/kg/day)</th>
<th>Long-term – dermal, systemic effects (mg/kg/day)</th>
<th>Acute – inhalation, local effects (mg/m³)</th>
<th>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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.79-2.79</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>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>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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **PNEC**

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC-No.</th>
<th>CAS-No</th>
</tr>
</thead>
<tbody>
<tr>
<td>13721-396</td>
<td>237-287-9</td>
<td>13721-396</td>
</tr>
<tr>
<td>7758-16-9</td>
<td>231-835-0</td>
<td>7758-16-9</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

8.2.1 Appropriate engineering controls:
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:
Consumer exposure control:

Measures related to consumer uses of the substance (as such or in mixtures):
Measures related to the service life of the substance in articles:

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 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>
</tr>
<tr>
<td>Colour</td>
<td>Colorless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odour</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>
</tr>
</tbody>
</table>
9.2 Other information:
No other relevant data available

Section 10 : Stability and reactivity

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

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

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

Section 11 : Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances

- Acute toxicity

Animal data:
Acute oral toxicity:
Acute dermal toxicity:

Acute inhalative toxicity:

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

- Skin corrosion/irritation

Animal data:

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

- Eye damage/irritation

Animal data:

<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 (carcinogenity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity:

Animal data:
Assessment / Classification:

- Carcinogenicity

Practical experience / human evidence:
Animal data:

Other information:
Assessment / Classification:

- Reproductive toxicity

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

Overall assessment on CMR properties:

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

Animal data:

Other information:

- STOT SE 3

Practical experience / human evidence:

Other information:
Assessment / Classification:

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

Practical experience / human evidence:
Animal data:

Assessment / Classification:

Other information

- Aspiration hazard

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

Remark:

11.1.1 Mixtures
No toxicological information is available for the mixture itself

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

12.1 **Aquatic toxicity:**
Acute (short-term) fish toxicity

Chronic (long-term) fish toxicity

Acute (short-term) toxicity to crustacea
Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Designation / Trade name: Phospho-total protein blocking reagent - 0.3 ml
Version: US, Page 10 of 12, Revision date: 11/06/2019

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.

Other disposal recommendations:
Additional information:

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:
- ADR Tank Code:
- Vehicle for tank carriage:
- 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:
- IBC Instructions:
- UN tank instructions:
- IMO tank instructions:
- Tanks and bulk Provisions:
- Stowage and segregation for IMDG:
- Ems:
- 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:
- Cargo Aircraft only 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

15.2 Chemical Safety Assessment:
For the following substances of this mixture a chemical safety assessment has been carried out:
Section 16: Other information

16.1 Indication of changes
Date of the previous version: 07/06/2019
Modifications:

16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)):
See SECTION 2.1 (classification).

16.5 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 / Trade name:** Phospho-total protein detection buffer - 2 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 in accordance with 29 CFR 1910 (OSHA HCS)</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 in accordance with 29 CFR 1910 (OSHA HCS)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

2.2 **Label elements**

Labelling according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

**Product identifier:**  
**Designation / Trade name:** Phospho-total protein detection buffer - 2 ml

Substances contained in this product:
Hazard pictograms

Signal word:

Hazard and precautionary statements:

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

Adverse human health effects:
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 in accordance with 29 CFR 1910 (OSHA HCS)</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 - Ora 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)piperazin-1-yethanesulphonic 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
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:

- OSHA (USA)
### Designation / Trade name
Phospho-total protein detection buffer - 2 ml

### Version
US, Page 5 of 12, Revision date: 18/06/2019

### 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>
</table>

Source: TRGS 903, November 2015, BAuA

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

8.1.2 DNEL/PNEC-values:
- DNEL worker

Source: GESTIS – substance database

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

- DNEL consumer

Source: GESTIS – substance database

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

- 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>(mg/L)</td>
<td>(mg/kg)</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

8.2.1 Appropriate engineering controls:
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7

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:
Consumer exposure control

Measures related to consumer uses of the substance (as such or in mixtures):
Measures related to the service life of the substance in articles:

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>
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<tr>
<td>Freezing point (°C)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Initial boiling point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Flash point (°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate (kg/m²/h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<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</td>
<td>Upper explosive limit (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Designation / Trade name:  Phospho-total protein detection buffer - 2 ml
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<table>
<thead>
<tr>
<th>limits</th>
<th>Lower explosive limit (%)</th>
<th>Vapour pressure (kPa)</th>
<th>Vapour density (g/Lm³)</th>
<th>Densities</th>
<th>Solubility (Type : ) (g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Density (g/Lm³)</td>
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<td></td>
<td></td>
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<td>Relative density (g/Lm³)</td>
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<td></td>
<td></td>
<td>Bulk density (g/Lm³)</td>
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<td></td>
<td>Critical density (g/Lm³)</td>
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<td></td>
<td>Partition coefficient (log Pow)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>n-octanol/water at pH :</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Auto-ignition temperature (°C)</td>
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<td></td>
<td></td>
<td></td>
<td>Decomposition temperature (°C)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Decomposition energy : kJ</td>
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<td></td>
<td></td>
<td></td>
<td>Viscosity</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Viscosity, dynamic (poiseuille)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Viscosity, cinematic (cm/s)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Explosive properties</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Oxidising properties</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information:
No other relevant data available

Section 10 : Stability and reactivity

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

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid:

10.5 Incompatible materials:

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

Section 11 : Toxicological information
Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

Substances
- Acute toxicity

Animal data:
Acute oral toxicity:
### Acute dermal toxicity:

<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 inhalative toxicity:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>C(E)l50 (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:**

**Assessment / Classification:**

- **Other information:**
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
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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.;

Other disposal recommendations:
Additional information:

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>
</table>

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

Land transport (ADR/RID)
- Classification code ADR:
- Limited quantities for ADR/RID: Special Provisions for ADR/RID:
- Packing Instructions for ADR/RID: Excepted Quantities for ADR/RID:
- Special packing provisions for ADR/RID: Portable tanks and bulk containers Instructions:
- Mixed packing provisions: ADR Tank Code:
- Portable tanks and bulk containers Special Provisions:
- Vehicle for tank carriage: ADR Tank special provisions:
- 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

15.2 Chemical Safety Assessment:

For the following substances of this mixture a chemical safety assessment has been carried out:
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according to Hazard Communication Standard (HCS) (29 CFR 1910.1200[g])

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Section 16 : Other information

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

16.2 Abbreviations and acronyms:

16.3 Key literature references and sources for data

16.4 Classification for mixtures and used evaluation method according to Hazard Communication Standard (HCS) (29 CFR 1910.1200[g]):
See SECTION 2.1 (classification).

16.5 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>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>