SAFETY DATA SHEET
Lightning-Link® Alkaline Phosphatase

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Lightning-Link® Alkaline Phosphatase
Product number: 702

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

Identified uses: Chemical reagent

1.3. Details of the supplier of the safety data sheet

Supplier: Expedeon Ltd.
25 Norman Way
Over,
Cambridge CB24 5QE
UK: +44 (0)1223 873364
info@expedeon.com
US: 1 - 844 - 611 3656

1.4. Emergency telephone number

Emergency telephone: UK: +44 (0)1223 873364 9:00-17:00pm GMT (Mon-Fri)
US: 1 - 844 - 611 3656 8:00-17:00 PST (Mon-Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)
Physical hazards: Not Classified
Health hazards: Resp. Sens. 1 - H334
Environmental hazards: Not Classified

2.2. Label elements

Pictogram: 

Signal word: Danger
Hazard statements: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary statements:
P261 Avoid breathing dust.
P284 [In case of inadequate ventilation] wear respiratory protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with national regulations.
Contains: ALKALINE PHOSPHATASE
Lightning-Link® Alkaline Phosphatase

Supplementary precautionary statements
P261 Avoid breathing vapour/spray.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>ALKALINE PHOSPHATASE</th>
<th>1-10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: —</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td>Resp. Sens. 1 - H334</td>
</tr>
</tbody>
</table>

The full text for all hazard statements is displayed in Section 16.

Composition comments
The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Move affected person to fresh air at once. May cause respiratory system irritation. If symptoms of irritation or sensitisation occur (shortness of breath, wheezing or laboured coughing), call a doctor.

Ingestion
Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. Give plenty of water to drink.

Skin contact
Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

Eye contact
Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

Inhalation
May cause an asthma-like shortness of breath. May cause sensitisation or allergic reactions in sensitive individuals.

Ingestion
No specific symptoms known.

Skin contact
No specific symptoms known.

Eye contact
No specific symptoms known.

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

Notes for the doctor
No specific recommendations. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Specific hazards
No unusual fire or explosion hazards noted.
Lightning-Link® Alkaline Phosphatase

Hazardous combustion products
No known hazardous decomposition products.

5.3. Advice for firefighters
Protective actions during firefighting
No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions
For personal protection, see Section 8.

6.2. Environmental precautions
Environmental precautions
Not considered to be a significant hazard due to the small quantities used.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Avoid generation and spreading of dust. Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Ensure sufficient ventilation.

6.4. Reference to other sections
Reference to other sections
For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Avoid inhalation of dust. Avoid spilling. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Store at -20°C

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Ingredient comments
No exposure limits known for ingredient(s).

8.2. Exposure controls
Protective equipment

Appropriate engineering controls
No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection
No specific hand protection recommended. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Hygiene measures
When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.
Lightning-Link® Alkaline Phosphatase

Respiratory protection
Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

- **Appearance**: Freeze dried solid
- **Colour**: White.
- **Odour**: Odourless.
- **Odour threshold**: Not applicable.
- **pH**: Not applicable.
- **Melting point**: No information required.
- **Initial boiling point and range**: No information required.
- **Flash point**: Not applicable.
- **Evaporation rate**: Not applicable.
- **Upper/lower flammability or explosive limits**: Not applicable.
- **Vapour pressure**: Not applicable.
- **Vapour density**: Not applicable.
- **Relative density**: Not relevant.
- **Solubility(ies)**: Not available. Soluble in water.
- **Partition coefficient**: Not available.
- **Auto-ignition temperature**: Not applicable.
- **Decomposition Temperature**: Not available.
- **Viscosity**: Not applicable.
- **Explosive properties**: Not applicable.
- **Oxidising properties**: Not applicable.

9.2. Other information

No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

**Reactivity**: There are no known reactivity hazards associated with this product.

10.2. Chemical stability

**Stability**: Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**: Not applicable.

10.4. Conditions to avoid

**Conditions to avoid**: There are no known conditions that are likely to result in a hazardous situation.
# Lightning-Link® Alkaline Phosphatase

## 10.5. Incompatible materials

**Materials to avoid**
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

## 10.6. Hazardous decomposition products

**Hazardous decomposition products**
Does not decompose when used and stored as recommended.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicological effects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause sensitisation or allergic reactions in sensitive individuals. Avoid inhalation of dust.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause sensitisation or allergic reactions in sensitive individuals.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause discomfort if swallowed. Powder may irritate skin.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Particles in the eyes may cause irritation and smarting.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological Information

#### 12.1. Toxicity

**Toxicity**
No data available

#### 12.2. Persistence and degradability

**Persistence and degradability**
There are no data on the degradability of this product.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential**
No data available on bioaccumulation.

**Partition coefficient**
Not available.

#### 12.4. Mobility in soil

**Mobility**
The product is soluble in water.

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

**Results of PBT and vPvB assessment**
This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects**
Not applicable.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Disposal methods**
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### SECTION 14: Transport information

#### Road transport notes

Not classified.

#### Rail transport notes

Not classified.
Lightning-Link® Alkaline Phosphatase

Sea transport notes
Not classified.

Air transport notes
Not classified.

14.1. UN number
Not classified for transportation.

14.2. UN proper shipping name
Not classified for transportation.

14.3. Transport hazard class(es)
Not classified for transportation.

14.4. Packing group
Not classified for transportation.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not classified for transportation.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to
Annex II of MARPOL 73/78
and the IBC Code
Not applicable.

SECTION 15: Regulatory information

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

Guidance
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date 01/02/2018
Revision 2
Supersedes date 30/08/2012
Hazard statements in full H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.