Kit components

Product Western Blue® Stabilized Substrate for Alkaline Phosphatase
Product code S3841

<table>
<thead>
<tr>
<th>Substance number</th>
<th>Description</th>
<th>Amount</th>
<th>Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>S384</td>
<td>Western Blue® Stabilized Substrate for Alkaline Phosphatase</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>
1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: Western Blue® Stabilized Substrate for

Article number: S384

Application of the substance / the preparation: Laboratory chemicals

Details of the supplier of the safety data sheet

Manufacturer/Supplier: Promega Corporation

2800 Woods Hollow Road

Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

Information department: MSDS author: Regulatory.Affairs@promega.com

Emergency telephone number:

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300

For call originating outside the United States dial 001-703-527-3887

2 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components: Void

Additional information: For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

Classification of the substance or mixture

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Not applicable. Product has been classified as non-hazardous.

Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of international guidelines.

Classification system:

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

Label elements

Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.
4 First aid measures

**General information**: No special measures required.
**After inhalation**: Supply fresh air; consult doctor in case of complaints.
**After skin contact**: Generally the product does not irritate the skin.
**After eye contact**: Rinse opened eye for several minutes under running water.
**After swallowing**: If symptoms persist consult doctor.

5 Firefighting measures

**Suitable extinguishing agents**: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
**Special hazards arising from the substance or mixture**: None known
**Protective equipment**: No special measures required.

6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**: Not required.
**Environmental precautions**: Do not allow to enter sewers/surface or ground water.
**Methods and material for containment and cleaning up**: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
**Reference to other sections**: No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

**Handling**: No special measures required.
**Precautions for safe handling**: No special measures required.
**Information about protection against explosions and fires**: The product is not flammable.
**Storage**: No special requirements.
**Information about storage in one common storage facility**: Not required.
**Further information about storage conditions**: None.
**Specific end use(s)**: No further relevant information available.
8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

General Information

Appearance:

Form: Fluid
Color: Colorless
Odor: Characteristic
Odour threshold: Not determined.

pH-value at 20°C (68 °F):

9.8

Change in condition

Melting point/Melting range: 0°C (32 °F)
Boiling point/Boiling range: 100°C (212 °F)

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature:

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.
Upper: Not determined.

Vapor pressure: Not determined.

Density: Not determined.
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not determined.
Trade name: Western Blue® Stabilized Substrate for

| Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| Segregation coefficient (n-octanol/water): | Not determined. |
| Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| Solvent content: | |
| Organic solvents: | 0.0 % |
| Water: | 99.5 % |
| Solids content: | 2.0 % |
| Other information: | No further relevant information available. |

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No irritant effect.
on the eye: Irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability: Not available
Behavior in environmental systems:
Bioaccumulative potential: Not known
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

(Contd. of page 3)
13 Disposal considerations

Waste treatment methods

Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

Contact Promega Safety Department for additional transportation information

<table>
<thead>
<tr>
<th>DOT regulations:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class:</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Land transport ADR/RID (cross-border):</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR/RID class:</td>
<td>-</td>
</tr>
<tr>
<td>UN-Number:</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

| Maritime transport IMDG:               |                |
| IMDG Class:                            | -             |
| Marine pollutant:                      | No            |

| Air transport ICAO-TI and IATA-DGR:    | Not regulated |
| ICAO/IATA Class:                       | -             |

15 Regulatory information

Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.
### Cancerogenity categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPA (Environmental Protection Agency)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>IARC (International Agency for Research on Cancer)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>NTP (National Toxicology Program)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>TLV (Threshold Limit Value established by ACGIH)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>MAK (German Maximum Workplace Concentration)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>NIOSH-Ca (National Institute for Occupational Safety and Health)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td><strong>OSHA-Ca (Occupational Safety &amp; Health Administration)</strong></td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

### Product related hazard informations:

- Observe the general safety regulations when handling chemicals.
- The product is not subject to identification regulations according to directives on hazardous materials.

### National regulations:

- **Water hazard class**: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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### Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing MSDS:**
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph: (608)274-4330

* Data compared to the previous version altered.