

03/13/2015

Kit Components

Product code	Description
551017	Mouse IL-4 Set

Components:

51-1819KC	Purified Anti-Mouse IL-4
51-1804KC	Biotinylated anti-mouse IL-4
51-2447KC	BD ELISPOT Plates
51-9000209	Streptavidin-HRP

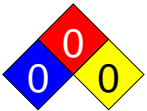
Printing date 03/13/2015

Reviewed on 03/12/2015

1 Identification

- **Product identifier**
 - **Product name:** *Purified Anti-Mouse IL-4*
 - **Catalog number:** *51-1819KC*
- **Relevant identified uses of the substance or mixture and uses advised against**
 - **Sector of Use** *SU24 Scientific research and development*
- **Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
BD Biosciences, Pharmingen
10975 Torreyana Road
San Diego, CA 92121-1106
Tel. (877)232-8995
 - **Information department:** *Technical Services*
 - **Emergency telephone number:**
In case of a chemical emergency, spill, fire, or exposure, call BD Biosciences at (877)232-8995, or ChemTrec at (800)424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
 - **GHS label elements** *Void*
 - **Hazard pictograms** *Void*
 - **Signal word** *Void*
 - **Hazard statements** *Void*
- **Classification system**
 - **NFPA ratings (scale 0-4)**

Health = 0
Flammability = 0
Reactivity = 0
- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** *Not applicable.*
 - **vPvB:** *Not applicable.*

3 Composition/information on ingredients

- **Chemical characterization:** *Mixtures*
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*
- **Dangerous components:** *Void*

USA

(Contd. on page 2)

Product name: Purified Anti-Mouse IL-4

(Contd. of page 1)

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Flush immediately with water for 15 minutes, and consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
 - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
The usual precautionary measures for handling chemicals should be followed.
See Section 8 for information on personal protection equipment.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Wipe up with damp sponge or mop.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and receptacles:** 4 °C
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

Product name: Purified Anti-Mouse IL-4

(Contd. of page 2)

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **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.

- **Exposure controls**

- **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:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:** Liquid
- **Color:** Clear
- **Odor:** Odorless
- **Odour threshold:** Not determined

· **pH-value at 20 °C (68 °F):** 7.2

- **Change in condition** Undetermined
- **Melting point/Melting range:** Not determined
- **Boiling point/Boiling range:** Not determined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable

- **Ignition temperature:**

· **Decomposition temperature:** Not determined

· **Auto igniting:** Product is not self igniting.

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

(Contd. on page 4)

Product name: Purified Anti-Mouse IL-4

(Contd. of page 3)

· Explosion limits:	
· Lower:	Not determined
· Upper:	Not determined
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density:	Not determined
· Relative density	Not determined
· Vapour density	Not determined
· Evaporation rate	Not determined
· Solubility in / Miscibility with	
· Water:	Soluble
· Partition coefficient (n-octanol/water):	Not determined
· Viscosity:	
· dynamic:	Not determined
· kinematic:	Not determined
· Solvent content:	
· Organic solvents:	0.0 %
· Water:	98.9 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No dangerous reactions known
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritating effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to OSHA 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.
- **Carcinogenic categories**
 - **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

(Contd. on page 5)

USA

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Purified Anti-Mouse IL-4

(Contd. of page 4)

 · **NTP (National Toxicology Program)**
None of the ingredients is listed.

 · **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** *No further relevant information available.*
 - **Persistence and degradability:** *No further relevant information available.*
 - **Bioaccumulative potential:** *No further relevant information available.*
 - **Mobility in soil:** *No further relevant information available.*
 - **Ecotoxicological effects:**
 - **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
 - **Additional ecological information:**
 - **General notes:** *Generally not hazardous for water.*
- **Results of PBT and vPvB assessment**
 - **PBT:** *Not applicable.*
 - **vPvB:** *Not applicable.*
- **Other adverse effects:** *No further relevant information available.*

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation**
Smaller quantities can be disposed of with solid waste.
This product is not considered a RCRA hazardous waste.
Dispose of material in accordance with federal (40 CFR 261), state and local requirements.
- **Uncleaned packagings:**
 - **Recommendation:** *Disposal must be made according to state and federal regulations.*
 - **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- | | |
|-------------------------------------|-------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | <i>Void</i> |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | <i>Void</i> |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | <i>Void</i> |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | <i>Void</i> |

(Contd. on page 6)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Purified Anti-Mouse IL-4

(Contd. of page 5)

- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

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

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act)**

7647-14-5 sodium chloride

7732-18-5 water

· **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

(Contd. on page 7)

Product name: Purified Anti-Mouse IL-4

(Contd. of page 6)

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Contact:** Technical Service Representative

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

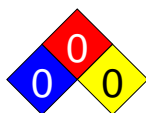
CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

1 Identification

· Product identifier**· Product name:** *Biotinylated anti-mouse IL-4***· Catalog number:** *51-1804KC***· Relevant identified uses of the substance or mixture and uses advised against****· Sector of Use** *SU24 Scientific research and development***· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:***BD Biosciences, Pharmingen**10975 Torreyana Road**San Diego, CA 92121-1106**Tel. (877)232-8995***· Information department:** *Technical Services***· Emergency telephone number:***In case of a chemical emergency, spill, fire, or exposure, call BD Biosciences at (877)232-8995, or ChemTrec at (800)424-9300.*

2 Hazard(s) identification

· Classification of the substance or mixture*The product is not classified according to the Globally Harmonized System (GHS).***· Classification according to Directive 67/548/EEC or Directive 1999/45/EC***This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.***· Classification system:***The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.***· Label elements****· GHS label elements** *Void***· Hazard pictograms** *Void***· Signal word** *Void***· Hazard statements** *Void***· Classification system****· NFPA ratings (scale 0-4)***Health = 0**Flammability = 0**Reactivity = 0***· Other hazards****· Results of PBT and vPvB assessment****· PBT:** *Not applicable.***· vPvB:** *Not applicable.*

3 Composition/information on ingredients

· Chemical characterization: *Mixtures***· Description:** *Mixture of the substances listed below with nonhazardous additions.***· Dangerous components:** *Void*

Product name: Biotinylated anti-mouse IL-4

(Contd. of page 1)

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Flush immediately with water for 15 minutes, and consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** Nitrogen oxides (NO_x)
- **Advice for firefighters**
 - **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
The usual precautionary measures for handling chemicals should be followed.
See Section 8 for information on personal protection equipment.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Wipe up with damp sponge or mop.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and receptacles:** 4 °C
 - **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials as well as heavy-metal compounds.
 - **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
 - **Specific end use(s)** No further relevant information available.

Product name: Biotinylated anti-mouse IL-4

(Contd. of page 2)

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **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.

- **Exposure controls**

- **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:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:** Liquid
- **Color:** Colorless
- **Odor:** Odorless
- **Odour threshold:** Not determined

· **pH-value at 20 °C (68 °F):** 7.2

- **Change in condition** Undetermined
- **Melting point/Melting range:** Not determined
- **Boiling point/Boiling range:** Not determined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable

- **Ignition temperature:**

· **Decomposition temperature:** Not determined

· **Auto igniting:** Product is not self igniting.

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

(Contd. on page 4)

Product name: Biotinylated anti-mouse IL-4

(Contd. of page 3)

· Explosion limits:	
· Lower:	Not determined
· Upper:	Not determined
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density:	Not determined
· Relative density	Not determined
· Vapour density	Not determined
· Evaporation rate	Not determined
· Solubility in / Miscibility with	
· Water:	Soluble
· Partition coefficient (n-octanol/water):	Not determined
· Viscosity:	
· dynamic:	Not determined
· kinematic:	Not determined
· Solvent content:	
· Organic solvents:	0.0 %
· Water:	89.6 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No dangerous reactions known
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
 - Incompatible material: strong oxidizers.
 - Incompatible materials: acidic material and metals
- **Hazardous decomposition products:** Nitrogen oxides (NO_x)
- **Additional information:**
 - Sodium azide is present in this product. Contact with acidic solutions and metal compounds over time may form potentially explosive metal azides. Should any of this material be introduced into a sanitary sewer system, flush with copious amounts of water.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritating effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

(Contd. on page 5)

USA

Product name: Biotinylated anti-mouse IL-4

(Contd. of page 4)

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.

 · **Carcinogenic categories**

 · **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

 · **NTP (National Toxicology Program)**

None of the ingredients is listed.

 · **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

 · **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

 · **Ecotoxicological effects:**

 · **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

 · **Additional ecological information:**

- **General notes:** Generally not hazardous for water.

 · **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

 · **Waste treatment methods**

 · **Recommendation**

Smaller quantities can be disposed of with solid waste.

This product is not considered a RCRA hazardous waste.

Dispose of material in accordance with federal (40 CFR 261), state and local requirements.

 · **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to state and federal regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

 · **UN-Number**

 · **DOT, ADR, ADN, IMDG, IATA** Void

 · **UN proper shipping name**

 · **DOT, ADR, ADN, IMDG, IATA** Void

(Contd. on page 6)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Biotinylated anti-mouse IL-4

(Contd. of page 5)

- | | |
|--|-----------------|
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

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

- **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

- **SARA Section 313 (specific toxic chemical listings)**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act)**

128446-35-5	(2-Hydroxypropyl)-beta-cyclodextrin
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7647-14-5	sodium chloride
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26628-22-8	Sodium azide
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7732-18-5	water
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- **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **TLV (Threshold Limit Value established by ACGIH)**

26628-22-8	Sodium azide	A4
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- **GHS label elements** Void

- **Hazard pictograms** Void

- **Signal word** Void

- **Hazard statements** Void

- **National regulations**

- **Water hazard class:** Generally not hazardous for water.

(Contd. on page 7)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Biotinylated anti-mouse IL-4· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. of page 6)

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Contact:** Technical Service Representative· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)


NFPA: National Fire Protection Association (USA)

USA

1 Identification

- **Product identifier**
 - **Product name:** *BD ELISPOT Plates*
 - **Catalog number:** *51-2447KC*
- **Relevant identified uses of the substance or mixture and uses advised against**
 - **Sector of Use** *SU24 Scientific research and development*
- **Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
BD Biosciences, Pharmingen
10975 Torreyana Road
San Diego, CA 92121-1106
Tel. (877)232-8995
 - **Information department:** *Technical Services*
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, or exposure, call BD Biosciences at (877)232-8995, or ChemTrec at (800)424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**
The substance is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.
- **Label elements**
 - **GHS label elements** *Void*
 - **Hazard pictograms** *Void*
 - **Signal word** *Void*
 - **Hazard statements** *Void*
- **Classification system**
 - **NFPA ratings (scale 0-4)**

Health = 0
Flammability = 0
Reactivity = 0
- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** *Not applicable.*
 - **vPvB:** *Not applicable.*

3 Composition/information on ingredients

- **Chemical characterization:** *Substances*
 - **CAS No. Description:**
inert

4 First-aid measures

- **Description of first aid measures**
 - **General information** *No special measures required.*

Product name: BD ELISPOT Plates

(Contd. of page 1)

- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Flush immediately with water for 15 minutes, and consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
The usual precautionary measures for handling chemicals should be followed.
See Section 8 for information on personal protection equipment.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Wipe up with damp sponge or mop.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 3)

Product name: BD ELISPOT Plates

(Contd. of page 2)

· Exposure controls
· 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:


Chemical resistant gloves (i.e. nitrile, or equivalent).

· Eye protection:


Safety glasses

· Body protection: Protective work clothing (lab coat).

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:

- | | |
|---------------------------|-----------------|
| · Form: | Solid. |
| · Color: | Not determined. |
| · Odor: | Characteristic |
| · Odour threshold: | Not determined |

· pH-value:	Not applicable.
--------------------	-----------------

· Change in condition	Undetermined
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined

· Flash point:	Not applicable
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· Flammability (solid, gaseous)	Product is not flammable.
--	---------------------------

· Ignition temperature:

· Decomposition temperature:	Not determined
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· Auto igniting:	Not determined.
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· Danger of explosion:	Product does not present an explosion hazard.
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· Explosion limits:

· Lower:	Not determined
· Upper:	Not determined

· Vapor pressure:	Not applicable.
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· Density:	Not determined
· Relative density	Not determined
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.

(Contd. on page 4)

Product name: BD ELISPOT Plates

(Contd. of page 3)

- | | |
|--|--|
| · Solubility in / Miscibility with | |
| · Water: | Not miscible or difficult to mix |
| · Partition coefficient (n-octanol/water): Not determined | |
| · Viscosity: | |
| · dynamic: | Not applicable. |
| · kinematic: | Not applicable. |
| · Organic solvents: | 0.0 % |
| · Solids content: | 100.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No dangerous reactions known
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritating effect.
 - **on the eye:** No irritating effect.
 - **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to OSHA 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.

The substance is not subject to classification.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

USA

(Contd. on page 5)

Product name: BD ELISPOT Plates

(Contd. of page 4)

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
 - **Persistence and degradability** No further relevant information available.
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- **Additional ecological information:**
 - **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation**
Smaller quantities can be disposed of with solid waste.
This product is not considered a RCRA hazardous waste.
Dispose of material in accordance with federal (40 CFR 261), state and local requirements.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to state and federal regulations.
 - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

(Contd. on page 6)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: BD ELISPOT Plates

(Contd. of page 5)

· UN "Model Regulation": -

15 Regulatory information· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **SARA Section 355 (extremely hazardous substances)**

Substance is not listed.

· **SARA Section 313 (specific toxic chemical listings)**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

Substance is not listed.

· **California Proposition 65 - Chemicals known to cause cancer**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

· **National regulations**

- **Water hazard class:** Generally not hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Contact:** Technical Service Representative· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists

(Contd. on page 7)

USA



Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: BD ELISPOT Plates

CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

(Contd. of page 6)

USA

1 Identification

· Product identifier**· Product name: Streptavidin-HRP****· Catalog number: 51-9000209****· Relevant identified uses of the substance or mixture and uses advised against****· Sector of Use SU24 Scientific research and development****· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

BD Biosciences, Pharmingen

10975 Torreyana Road

San Diego, CA 92121-1106

Tel. (877)232-8995

· Information department: Technical Services**· Emergency telephone number:**

In case of a chemical emergency, spill, fire, or exposure, call BD Biosciences at (877)232-8995, or ChemTrec at (800)424-9300.

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Sens. 1 H317 May cause an allergic skin reaction.

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

Xi; Irritant

R43: May cause sensitization by skin contact.

· Classification system:

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

· Label elements**· GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**· Hazard pictograms** GHS07**· Signal word** Warning**· Hazard-determining components of labeling:**

CMIT/MIT mixture (3:1) - a mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC No 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC No 220-239-6] (3:1)

· Hazard statements

May cause an allergic skin reaction.

· Precautionary statements

Wear protective gloves / eye protection.

Wear protective clothing.

Avoid breathing mist/vapours/spray.

If skin irritation or rash occurs: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

(Contd. of page 1)

- **Classification system**
- **NFPA ratings (scale 0-4)**


 Health = 2
 Flammability = 0
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

55965-84-9	CMIT/MIT mixture (3:1) - a mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC No 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC No 220-239-6] (3:1)	0.004%
	T R23/24/25; C R34; Xi R43; N R50/53 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	

4 First-aid measures

- **Description of first aid measures**
- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** Supply fresh air and seek medical advice.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Flush immediately with water for 15 minutes, and consult a doctor.
- **After swallowing** Seek immediate medical advice.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

USA

(Contd. on page 3)

Product name: Streptavidin-HRP

(Contd. of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
The usual precautionary measures for handling chemicals should be followed.
See Section 8 for information on personal protection equipment.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Wipe up with damp sponge or mop.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and receptacles:** 4 °C
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
 - **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.
- **Exposure controls**
 - **Personal Protective Equipment**
 - **General protective and hygienic measures**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
 - **Breathing equipment:** Not required.
 - **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

(Contd. on page 4)

USA

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

(Contd. of page 3)

 · **Eye protection:**


Safety glasses

 · **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

 · **Information on basic physical and chemical properties**

 · **General Information**

 · **Appearance:**

- | | |
|---------------------------|----------------|
| · Form: | Liquid |
| · Color: | Light brown |
| · Odor: | Odorless |
| · Odour threshold: | Not determined |

· pH-value:	Not determined
--------------------	----------------

 · **Change in condition**

- | | |
|---------------------------------------|----------------|
| · Melting point/Melting range: | Not determined |
| · Boiling point/Boiling range: | Not determined |

· Flash point:	Not applicable
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· Flammability (solid, gaseous)	Not applicable
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 · **Ignition temperature:**

· Decomposition temperature:	Not determined
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· Auto igniting:	Product is not self igniting.
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· Danger of explosion:	Product does not present an explosion hazard.
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 · **Explosion limits:**

- | | |
|-----------------|----------------|
| · Lower: | Not determined |
| · Upper: | Not determined |

· Vapor pressure:	Not applicable
--------------------------	----------------

- | | |
|---------------------------|----------------|
| · Density: | Not determined |
| · Relative density | Not determined |
| · Vapour density | Not determined |
| · Evaporation rate | Not determined |

 · **Solubility in / Miscibility with**

· Water:	Fully Miscible
-----------------	----------------

· Partition coefficient (n-octanol/water):	Not determined
---	----------------

 · **Viscosity:**

- | | |
|---------------------|----------------|
| · dynamic: | Not determined |
| · kinematic: | Not determined |

 · **Solvent content:**

- | | |
|----------------------------|--------|
| · Organic solvents: | 0.0 % |
| · Water: | 93.4 % |

(Contd. on page 5)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

(Contd. of page 4)

· **Other information** *No further relevant information available.*

10 Stability and reactivity

- **Reactivity** *No dangerous reactions known*
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *Incompatible material: strong oxidizers.*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
 - **Primary irritant effect:**
 - *on the skin:* *No irritating effect.*
 - *on the eye:* *No irritating effect.*
 - **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**
 - **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
9003-39-8	PVP	3
108-95-2	phenol	3

· NTP (National Toxicology Program)		
<i>None of the ingredients is listed.</i>		

· OSHA-Ca (Occupational Safety & Health Administration)		
<i>None of the ingredients is listed.</i>		

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** *No further relevant information available.*
 - **Persistence and degradability** *No further relevant information available.*
 - **Bioaccumulative potential** *No further relevant information available.*
 - **Mobility in soil** *No further relevant information available.*
- **Ecotoxicological effects:**
 - **Other information:**
 - *The ecological effects have not been thoroughly investigated, but currently none have been identified.*
- **Additional ecological information:**
 - **General notes:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
- **Results of PBT and vPvB assessment**
 - **PBT:** *Not applicable.*
 - **vPvB:** *Not applicable.*

(Contd. on page 6)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

 · **Other adverse effects** No further relevant information available.

(Contd. of page 5)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed of with solid waste.
 Dispose of material in accordance with federal (40 CFR 261), state and local requirements.
 This product is not considered a RCRA hazardous waste.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to state and federal regulations.
 - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
 · DOT, ADR, ADN, IMDG, IATA Void
- **UN proper shipping name**
 · DOT, ADR, ADN, IMDG, IATA Void
- **Transport hazard class(es)**
 · DOT, ADR, ADN, IMDG, IATA
 · Class Void
- **Packing group**
 · DOT, ADR, IMDG, IATA Void
- **Environmental hazards:**
 · **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

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

 · **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

 · **SARA Section 313 (specific toxic chemical listings)**

None of the ingredients is listed.

 · **TSCA (Toxic Substances Control Act)**

9003-39-8 | PVP

9048-46-8 | BSA

7647-14-5 | sodium chloride

(Contd. on page 7)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

(Contd. of page 6)

7758-11-4	potassium phosphate, dibasic
7778-77-0	potassium phosphate, monobasic
108-95-2	phenol
10377-60-3	Magnesium Nitrate
7786-30-3	Magnesium Chloride
7732-18-5	water

· **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **TLV (Threshold Limit Value established by ACGIH)**

108-95-2	phenol	A4
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· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

CMIT/MIT mixture (3:1) - a mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC No 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC No 220-239-6] (3:1)

· **Hazard statements**

May cause an allergic skin reaction.

· **Precautionary statements**

Wear protective gloves / eye protection.

Wear protective clothing.

Avoid breathing mist/vapours/spray.

If skin irritation or rash occurs: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations**

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

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Contact:** Technical Service Representative

(Contd. on page 8)

Printing date 03/13/2015

Reviewed on 03/12/2015

Product name: Streptavidin-HRP

(Contd. of page 7)

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

USA