



Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 09/13/2012
Supersedes Revision: 05/01/2012

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400035
Product Name: Polysorbate 20
Synonyms: Tween 20™;
Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
GHS Precaution Phrases: No data available.
GHS Response Phrases: No data available.
GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
Target Organs: No data available.
LD 50 / LC 50: Please refer to Section 11.
Signs and Symptoms Of Exposure: To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	100.0 %	500-018-3	No phrases apply.	TR7400000

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
Indication of any immediate medical attention and special treatment needed:	No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
Flammable Properties and Hazards:	No data available.
Flash Pt:	No data.
Autoignition Pt:	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Hazardous Combustion Products:	No data available.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.
Steps To Be Taken In Case Material Is Released Or Spilled:	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
Precautions To Be Taken in Storing:	Keep container tightly closed. Store in accordance with information listed on the product insert.
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat

Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	A clear, yellow viscous liquid
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	N.A.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide

11. Toxicological Information

Toxicological Information:	The toxicological effects of this product have not been thoroughly studied. Polysorbate 20 - Toxicity Data: Oral LD50 (rat): 36.7 ml/kg; Oral LD50 (hamster): 18 ml/kg; Oral LD50 (mouse): >33 g/kg; Irritation Data: Skin (human): 15 mg/3D mild;
Chronic Toxicological Effects:	Polysorbate 20 - Investigated as a tumorigen and reproductive effector. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Polysorbate 20 RTECS Number: TR7400000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	n.a.	n.a.	n.a.	n.a.



SAFETY DATA SHEET

Polysorbate 20

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)**DOT Proper Shipping Name** Not dangerous goods.**LAND TRANSPORT (European ADR/RID)****ADR/RID Shipping Name** Not dangerous goods.**AIR TRANSPORT (ICAO/IATA)****ICAO/IATA Shipping Name** Not dangerous goods.**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Polyoxyethylene (20) sorbitan monolaurate (Tween 20™)	9005-64-5	No	No	Inventory	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 09/13/2012**Company Policy or Disclaimer**

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



Immunoassay Buffer B Concentrate (10X)

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 11/02/2012
Supersedes Revision: 04/01/2011

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400054

Product Name: Immunoassay Buffer B Concentrate (10X)

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

GHS Precaution Phrases: No data available.

GHS Response Phrases: No data available.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.

Target Organs: No data available.

Signs and Symptoms Of Exposure: Exposure may cause: nausea, vomiting, abdominal pain, diarrhea, thirst, lowered blood pressure.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Potassium phosphate, dibasic	7758-11-4	13.3 %	231-834-5	No phrases apply.	TC5580000
2. Potassium phosphate, Monobasic	7778-77-0	3.21 %	231-913-4	No phrases apply.	TC6615500
3. Sodium azide	26628-22-8	0.1 %	247-852-1	R28-32-50/53	VY8050000
4. Sodium chloride	7647-14-5	23.4 %	231-598-3	R36	VZ4725000
5. EDTA, tetrasodium salt, hydrate	194491-31-1	0.38 %	NA	R22-41	NA
6. Bovine Serum Albumin (BSA)	9048-46-8	11.0 %	232-936-2	No phrases apply.	MT6446000
7. Water	7732-18-5	48.61 %	231-791-2	No phrases apply.	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

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In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
Indication of any immediate medical attention and special treatment needed:	No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
Flammable Properties and Hazards:	Emits toxic fumes under fire conditions.
Flash Pt:	No data.
Autoignition Pt:	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Hazardous Combustion Products:	No data available.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.
Steps To Be Taken In Case Material Is Released Or Spilled:	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
Precautions To Be Taken in Storing:	Keep container tightly closed. Store in accordance with information listed on the product insert.
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Potassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.
3. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
4. Sodium chloride	7647-14-5	No data.	No data.	No data.
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No data.	No data.	No data.
6. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.
7. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Potassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.

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Supercedes Revision: 04/01/2011

Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.
3. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3
4. Sodium chloride	7647-14-5	No data.	No data.	No data.
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No data.	No data.	No data.
6. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.
7. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	A yellowish, milky solution
pH:	7.0
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>



Immunoassay Buffer B Concentrate (10X)

Revision: 11/02/2012

Supercedes Revision: 04/01/2011

Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur [] Will not occur [X]
Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	hydrogen chloride gas potassium oxides sodium oxides

11. Toxicological Information

Toxicological Information:	The toxicological effects of this compound have not been thoroughly studied.
Chronic Toxicological Effects:	No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Potassium phosphate, dibasic	7758-11-4	n.a.	n.a.	n.a.	n.a.
2. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
3. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.
4. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
5. EDTA, tetrasodium salt, hydrate	194491-31-1	n.a.	n.a.	n.a.	n.a.
6. Bovine Serum Albumin (BSA)	9048-46-8	n.a.	n.a.	n.a.	n.a.
7. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium phosphate, dibasic	7758-11-4	No	No	No	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
3. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No



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Immunoassay Buffer B Concentrate (10X)

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Supercedes Revision: 04/01/2011

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
4. Sodium chloride	7647-14-5	No	No	No	No
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No	No	No	No
6. Bovine Serum Albumin (BSA)	9048-46-8	No	No	No	No
7. Water	7732-18-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Potassium phosphate, dibasic	7758-11-4	No	No	Inventory	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
3. Sodium azide	26628-22-8	No	No	Inventory	No
4. Sodium chloride	7647-14-5	No	No	Inventory	No
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No	No	No	No
6. Bovine Serum Albumin (BSA)	9048-46-8	No	No	Inventory	No
7. Water	7732-18-5	No	No	Inventory	No

Regulatory Information Statement:

This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date:

11/02/2012

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



SAFETY DATA SHEET

Wash Buffer Concentrate (400X)

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 09/13/2012
Supersedes Revision: 05/01/2012

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400062

Product Name: Wash Buffer Concentrate (400X)

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

GHS Precaution Phrases: No data available.

GHS Response Phrases: No data available.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.

Target Organs: No data available.

Signs and Symptoms Of Exposure: Ingestion of large amounts can cause abdominal pain, lowered blood pressure, nausea, and vomiting.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Potassium phosphate, dibasic	7758-11-4	53.0 %	231-834-5	No phrases apply.	TC5580000
2. Potassium phosphate, Monobasic	7778-77-0	12.9 %	231-913-4	No phrases apply.	TC6615500
3. Water	7732-18-5	34.1 %	231-791-2	No phrases apply.	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.



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Wash Buffer Concentrate (400X)

Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	A clear, colorless solution
pH:	7.4
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	phosphorus oxides potassium oxides

11. Toxicological Information

Toxicological Information:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Potassium phosphate, dibasic	7758-11-4	n.a.	n.a.	n.a.	n.a.
2. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.



SAFETY DATA SHEET

Wash Buffer Concentrate (400X)

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
3. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.
S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium phosphate, dibasic	7758-11-4	No	No	No	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
3. Water	7732-18-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Potassium phosphate, dibasic	7758-11-4	No	No	Inventory	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
3. Water	7732-18-5	No	No	Inventory	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 09/13/2012

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



SAFETY DATA SHEET

Streptavidin-HRP

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 01/22/2013

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400063

Product Name: Streptavidin-HRP

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

GHS Precaution Phrases: No data available.

GHS Response Phrases: No data available.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.

Target Organs: No data available.

Signs and Symptoms Of Exposure: To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases
1. Streptavidin-HRP	NA	100.0 %	NA	No phrases apply.

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Indication of any immediate medical attention and special treatment needed: No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep container tightly closed.
Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Streptavidin-HRP	NA	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Streptavidin-HRP	NA	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
Wash thoroughly after handling.

Environmental Exposure Controls: No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: No data available.

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

Other Information

Percent Volatile: No data.

10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [] Stable [X]

Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Conditions To Avoid: No data available.

Polymerization: Will occur [] Will not occur [X]

Incompatibility - Materials To Avoid: No data available.

Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide
nitrogen oxides

11. Toxicological Information

Toxicological Information: The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Streptavidin-HRP	NA	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information**LAND TRANSPORT (US DOT)**

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.**15. Regulatory Information****European Community Hazard Symbol codes**

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Streptavidin-HRP	NA	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Streptavidin-HRP	NA	No	No	No	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.**16. Other Information****Revision Date:** 01/22/2013**Company Policy or Disclaimer**

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 11/02/2012

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400074

Product Name: TMB Substrate Solution

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

GHS Precaution Phrases: No data available.

GHS Response Phrases: No data available.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
Overexposure may cause reproductive disorders based on tests with laboratory animals.

Target Organs: No data available.

Signs and Symptoms Of Exposure: To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases
1. TMB Substrate Solution	NA	100.0 %	NA	No phrases apply.

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Indication of any immediate medical attention and special treatment needed: No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Flammable Properties and Hazards: No data available.

Flash Pt: 170.00 F (76.7 C) Method Used: Closed Cup

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep container tightly closed.
Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. TMB Substrate Solution	NA	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. TMB Substrate Solution	NA	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
Wash thoroughly after handling.

Environmental Exposure Controls: No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: No data available.

pH: 5.9

Melting Point: No data.

Boiling Point: No data.

Flash Pt: 170.00 F (76.7 C) Method Used: Closed Cup

Evaporation Rate: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

Other Information

Percent Volatile: No data.

10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [] Stable [X]

Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Conditions To Avoid: No data available.

Polymerization: Will occur [] Will not occur [X]

Incompatibility - Materials To Avoid: strong oxidizing agents

Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide
nitrogen oxides

11. Toxicological Information

Toxicological Information: The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. TMB Substrate Solution	NA	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. TMB Substrate Solution	NA	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. TMB Substrate Solution	NA	No	No	No	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 11/02/2012

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

Cayman Chemical Company
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400840

Product Name: Ovalbumin-biotin Conjugate

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin
GHS Hazard Phrases:	H313: May be harmful in contact with skin.		
GHS Precaution Phrases:	No data available.		
GHS Response Phrases:	P312: Call a POISON CENTER or doctor/physician if you feel unwell.		
GHS Storage and Disposal Phrases:	Please refer to Section 7 for Storage and Section 13 for Disposal information.		
Route(s) of Entry:	Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection		
Potential Health Effects (Acute and Chronic):	Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause eye, skin, or respiratory system irritation.		
Target Organs:	No data available.		
Signs and Symptoms Of Exposure:	Exposure may cause: abdominal pain and lowered blood pressure. Ingestion may cause: nausea, vomiting, gastrointestinal disturbances, thirst, and diarrhea. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.		
Medical Conditions Generally Aggravated By Exposure:	No data available.		

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Sodium azide	26628-22-8	0.1 -0.3 %	247-852-1	R28-32-50/53	VY8050000
2. Ovalbumin-biotin Conjugate	NA	99.7 -99.9 %	NA	No phrases apply.	NA

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
Indication of any immediate medical attention and special treatment needed:	No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
Flammable Properties and Hazards:	No data available.
Flash Pt:	No data.
Autoignition Pt:	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Hazardous Combustion Products:	No data available.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.
Steps To Be Taken In Case Material Is Released Or Spilled:	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
Precautions To Be Taken in Storing:	Keep container tightly closed. Store in accordance with information listed on the product insert.
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
2. Ovalbumin-biotin Conjugate	NA	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3
2. Ovalbumin-biotin Conjugate	NA	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Safety glasses Safety shower in work area Eye wash station in work area Lab coat Safety Vent Hood
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye Protection:	Safety glasses

Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid
Appearance and Odor:	A lyophilized powder
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	hydrogen chloride gas phosphorus oxides potassium oxides sodium oxides

11. Toxicological Information

Toxicological Information:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.
2. Ovalbumin-biotin Conjugate	NA	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

Globally Harmonized System of Classification and Labelling

Acute Toxicity: Skin, Category 5 - Warning! May be harmful in contact with skin

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No
2. Ovalbumin-biotin Conjugate	NA	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Sodium azide	26628-22-8	No	No	Inventory	No
2. Ovalbumin-biotin Conjugate	NA	No	No	No	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 01/22/2013

Company Policy or Disclaimer

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N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

Product Information



Goat Anti-Mouse IgE Precoated 96-Well Strip Plate Item No. 400842

COMMENTS:

Each plate is coated with a Goat anti-mouse IgE polyclonal antibody. This Safety Data Sheet (SDS) is for the antibody only. An SDS on this material is not required as this substance is a naturally occurring animal product. However, we do recommend the following minimum precautions when using this substance:

- Do NOT get in eyes, on skin, or on clothing.
- Do NOT take internally.
- Wear protective gloves and safety glasses.
- Keep container closed.
- Store at correct temperature.
- Do NOT reuse this container.
- Do NOT release this material to the environment; dispose of by incineration in accordance with federal, state, and local regulations.
- Wash thoroughly after handling.

WARNING:

Not for human or animal disease diagnostics or therapeutic drug use.

The above information is believed to be correct but should only be used as a guide. Cayman Chemical disclaims any express or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental, or consequential damages resulting from reliance on the above information.

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Revision Date: 01/22/2013

Cayman Chemical

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**Anti-Ovalbumin IgE (mouse) EIA Standard**

Cayman Chemical Company
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108

Revision: 01/22/2013

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 400844
Product Name: Anti-Ovalbumin IgE (mouse) EIA Standard
Intended Use: For research use only, not for human or veterinary use.
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

2. Hazards Identification

GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
GHS Precaution Phrases: No data available.
GHS Response Phrases: No data available.
GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
 May be harmful by inhalation, ingestion, or skin absorption.
 May cause eye, skin, or respiratory system irritation.
Target Organs: No data available.
Signs and Symptoms Of Exposure: To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	99.99 %	NA	No phrases apply.	NA
2. Sodium azide	26628-22-8	0.01 %	247-852-1	R28-32-50/53	VY8050000

4. First Aid Measures

Emergency and First Aid Procedures:
In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Anti-Ovalbumin IgE (mouse) EIA Standard

Indication of any immediate medical attention and special treatment needed: No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep container tightly closed.
Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	No data.	No data.	No data.
2. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	No data.	No data.	No data.
2. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3

Protective Equipment Summary - Hazard Label Information: Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Anti-Ovalbumin IgE (mouse) EIA Standard

Revision: 01/22/2013

Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid
Appearance and Odor:	A lyophilized powder
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Incompatibility - Materials To Avoid:	No data available.
Hazardous Decomposition Or Byproducts:	No data available.

11. Toxicological Information

Toxicological Information:	The toxicological effects of this product have not been thoroughly studied.
Chronic Toxicological Effects:	No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	n.a.	n.a.	n.a.	n.a.
2. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.

12. Ecological Information

General Ecological Information:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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SAFETY DATA SHEET

Anti-Ovalbumin IgE (mouse) EIA Standard

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	No	No	No	No
2. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Anti-Ovalbumin IgE (mouse) EIA Standard	NA	No	No	No	No
2. Sodium azide	26628-22-8	No	No	Inventory	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 01/22/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

Cayman Chemical Company
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108



1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 10011355
Product Name: HRP Stop Solution
Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Skin Corrosion/Irritation, Category 1A	Corrosive	Danger	Causes severe skin burns and eye damage

GHS Hazard Phrases: H314: Causes severe skin burns and eye damage.

GHS Precaution Phrases:
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P264: Wash hands thoroughly after handling.
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

GHS Response Phrases:
 P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
 P363: Wash contaminated clothing before reuse.
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P310: Immediately call a POISON CENTER or doctor/physician.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Irritating to eyes, respiratory system, and skin.
 Chronic exposure to mists containing sulfuric acid is a cancer hazard.
 Harmful if swallowed, inhaled, or absorbed through the skin.
 Inhalation may cause lung edema.
 Long-term exposure to mist or vapors may cause damage to teeth.
 Material is irritating to the mucous membranes and upper respiratory tract.

Target Organs: Eyes, Lungs, Teeth, Respiratory system, Skin.

LD 50 / LC 50: Please refer to Section 11.

Signs and Symptoms Of Exposure: Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow ingestion or skin contact.
 Ingestion may cause: Sore throat, vomiting, and diarrhea.
 Irritating to the skin, eyes, nose, throat, and respiratory tract.
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By No data available.

Exposure:

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Sulfuric acid	7664-93-9	4.904 %	231-639-5	R35	WS5600000
2. Water	7732-18-5	95.096 %	231-791-2	No phrases apply.	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion: Do NOT induce vomiting. Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention.

Indication of any immediate medical attention and special treatment needed: No data available.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Unsuitable Extinguishing Media: DO NOT USE WATER.

Flammable Properties and Hazards: Concentrated solutions react violently with water, spattering and liberating heat. Emits toxic and corrosive fumes under fire conditions. Not Flammable, but reacts with most metals to form flammable hydrogen gas.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Sulfuric acid	7664-93-9	PEL: 1 mg/m3	TLV: (1 mg/m3) STEL: (3 mg/m3)	No data.
2. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Sulfuric acid	7664-93-9	No data.	TWA: 1.0 mg/m3 STEL: 3.0 mg/m3	No data.
2. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.
Environmental Exposure Controls:	No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	No data available.
pH:	4.4
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>

Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	No data available.
Polymerization:	Will occur [] Will not occur [X]
Incompatibility - Materials To Avoid:	bases halogens hydrides lithium metal acetylides metals organic material oxides potassium chlorate potassium perchlorate potassium permanganate sodium strong oxidizing agents strong reducing agents water
Hazardous Decomposition Or Byproducts:	carbon dioxide hydrogen cyanide hydrogen sulfide

11. Toxicological Information

Toxicological Information:	The toxicological effects of this product have not been thoroughly studied.
	Sulfuric acid - Toxicity Data: Oral LD50 (rat): 2,140 mg/kg; Inhalation TCLO (human): 0.63 mg/m ³ ; Inhalation LC50 (mouse): 320 mg/m ³ ; Inhalation LC50 (guinea pig): 18 mg/m ³ (8hr);
	Sulfuric acid - Irritation Data: Eyes (rabbit): 5 mg (30s) severe;
Chronic Toxicological Effects:	Sulfuric acid - Investigated as a reproductive effector. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Sulfuric Acid RTECS Number: WS5600000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sulfuric acid	7664-93-9	Known	Unknown	A2	n.a.
2. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
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13. Disposal Considerations

Waste Disposal Method:	Dispose in accordance with local, state, and federal regulations.
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14. Transport Information

Globally Harmonized System of Classification and Labelling	
Skin Corrosion/Irritation, Category 1A - Danger! Causes severe skin burns and eye damage	
LAND TRANSPORT (US DOT)	
DOT Proper Shipping Name	Sulfuric acid [with 51% or less acid]



SAFETY DATA SHEET

HRP Stop Solution

DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: 2796
Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Sulfuric acid [with 51% or less acid]
UN Number: 2796
Hazard Class: 8 - CORROSIVE
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Sulfuric acid [with 51% or less acid]
UN Number: 2796
Hazard Class: 8 - CORROSIVE
Packing Group: II
IATA Classification: 8

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes Xi: Irritant

European Community Risk and Safety Phrases

- R36/38 - Irritating to eyes and skin.
 S24/25 - Avoid contact with skin and eyes.
 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
 S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Sulfuric acid	7664-93-9	Yes 1000 LB	Yes 1000 LB	Yes	No
2. Water	7732-18-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Sulfuric acid	7664-93-9	No	No	Inventory	No
2. Water	7732-18-5	No	No	Inventory	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information

Revision Date: 11/02/2012

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required