

SAFETY DATA SHEET

Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well

Plate (strip or solid)

Revision: 01/22/2019
Supersedes Revision: 07/01/2018

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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400004/400006

Product Name: Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well Plate (strip or solid)

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.2 Label Elements:

GHS Signal Word: None

GHS Hazard Phrases:

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

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

No phrases apply.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well Plate	100.0 %	NA NA	No data available.

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid raising and breathing dust, and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:



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Exposure Controls:

8.2.1 **Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

levels below recommended exposure limits. (Ventilation etc.):

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. ce Practices:

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

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9.1	Information on Basic Physical and Chemical Properties	
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[] Liquid **Physical States:** [] Gas [X] Solid

Plate Appearance and Odor: pH: No data. **Melting Point:** No data. No data. **Boiling Point:** Flash Pt: No data. **Evaporation Rate:** No data.

No data available. Flammability (solid, gas):

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

Vapor Pressure (vs. Air or mm No data.

Hg):

No data. Vapor Density (vs. Air = 1): Specific Gravity (Water = 1): No data. No data. Solubility in Water: **Octanol/Water Partition** No data.

Coefficient:

Autoignition Pt: No data. No data. **Decomposition Temperature:** Viscosity: No data.

9.2 Other Information

> **Percent Volatile:** No data.

Section 10. Stability and Reactivity

No data available. 10.1 Reactivity:

10.2 Unstable [] Stable [X] Stability:

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

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

10.4 No data available. **Conditions To Avoid:** 10.5 Incompatibility - Materials No data available.

To Avoid:

10.6 Hazardous No data available.



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Decomposition or

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects:

CAS#	CAS # Hazardous Components (Chemical Name)		IARC	ACGIH	OSHA
NA	Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well Plate	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

Bioaccumulative No data available. 12.3

Potential:

12.4 **Mobility in Soil:** No data available.

Results of PBT and vPvB No data available. 12.5

assessment:

No data available. 12.6 Other adverse effects:

Section 13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations. 13.1

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
NA	Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well Plate	No	No	No	
CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists			
NA	Precoated (Mouse Anti-Rabbit IgG) EIA 96-Well	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA			
	Plate	PROP.65: No			



Regulatory Information

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This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement: No.1272/2008.

Section 16. Other Information

Revision Date: 01/22/2019

Additional Information About No data available.

This Product:

Company Policy or Disclaimer: 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.

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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400035

Product Name: Polysorbate 20
Synonyms: Tween 20™;

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.2 Label Elements:

GHS Signal Word: None

GHS Hazard Phrases:

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

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

No phrases apply.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
9005-64-5 TR7400000	Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives) 01-2119971749-17	100.0 %	500-018-3 NA	No GHS classifications apply.



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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid raising and breathing dust, and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:



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Exposure Controls:

8.2.1 **Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

levels below recommended exposure limits. (Ventilation etc.):

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Physical States:

Work/Hygienic/Maintenan Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety ce Practices:

[] Solid

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

[X] Liquid

Information on Basic Physical and Chemical Properties	

[] Gas

A pale yellow liquid Appearance and Odor:

No data. pH: No data. **Melting Point: Boiling Point:** No data. No data. Flash Pt: No data. **Evaporation Rate:**

Flammability (solid, gas): No data available.

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

Vapor Pressure (vs. Air or mm No data.

Hg):

Vapor Density (vs. Air = 1): No data. Specific Gravity (Water = 1): No data. No data. Solubility in Water:

Soluble in: water; **Solubility Notes:**

Octanol/Water Partition No data.

Coefficient:

Autoignition Pt: No data. No data. **Decomposition Temperature:** No data. Viscosity:

9.2 **Other Information**

> N.A. **Percent Volatile:**

C58H114O26 Molecular Formula & Weight: 1227.5



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Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

10.4 Conditions To Avoid: No data available.

10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 Hazardous carbon dioxide

Decomposition or

carbon monoxide

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects: Polysorbate 20 - Toxicity Data: Oral LD50 (rat): 36700 uL/kg; Intraperitoneal LD50 (rat): 3850

mg/kg; Oral LD50 (mouse): >33 gm/kg; Intraperitoneal LD50 (mouse): 2640 mg/kg;

Chronic Toxicological Polysorbate 20 - Investigated as a drug, primary irritant, and reproductive effector.

Effects: 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

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
9005-64-5	Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives)	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.



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Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name:

Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:

Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:

Not dangerous goods.

Additional Transport

Transport in accordance with local, state, and federal regulations.

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
9005-64-5	Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives)	No	No	No	
CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists			
9005-64-5	Polyoxyethylenesorbitan Monolaurate (polysorbate 20; Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivatives)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No			

Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement: No.1272/2008.

Section 16. Other Information

Revision Date: 01/22/2019

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer: 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.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400040

Product Name: EIA Tracer Dye

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Skin Corrosion/Irritation, Category 3

2.2 Label Elements:

GHS Signal Word: Warning

GHS Hazard Phrases:

H316: Causes mild skin irritation.

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

P332+313: If skin irritation occurs, get medical advice/attention.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Causes mild skin irritation.

Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation, ingestion, or skin absorption.

May cause eye or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	EIA Tracer Dye	100.0 %	NA NA	No data available.



SAFETY DATA SHEET EIA Tracer Dye

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:



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EIA Tracer Dye

8.2	Exposure	Controls:
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8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

levels below recommended exposure limits. (Ventilation etc.):

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety ce Practices:

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1	Information	on Basic	Physical and	Chemical	Properties
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Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: A red liquid No data. pH: No data. **Melting Point: Boiling Point:** No data. No data. Flash Pt: No data. **Evaporation Rate:**

Flammability (solid, gas): No data available.

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

No data. Vapor Pressure (vs. Air or mm

Hg):

Vapor Density (vs. Air = 1): No data. Specific Gravity (Water = 1): No data. No data. Solubility in Water: **Octanol/Water Partition** No data.

Coefficient:

No data. **Autoignition Pt: Decomposition Temperature:** No data. No data. Viscosity:

9.2 Other Information

> No data. **Percent Volatile:**

Section 10. Stability and Reactivity

No data available. 10.1 Reactivity:

10.2 Stability: Unstable [] Stable [X]

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

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

No data available. 10.4 **Conditions To Avoid:** 10.5 Incompatibility - Materials organic materials

> strong acids To Avoid:

> > strong oxidizing agents



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10.6 Hazardous No data available.

Decomposition or

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects: Sodium Hydroxide - Toxicity Data: Intraperitoneal LD50 (mouse): 40 mg/kg; Oral TDLO (rat): 44

mg/kg;

Chronic Toxicological Sodium Hydroxide - Investigated as a mutagen, reproductive effector, and tumorigen.

Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.
Sodium Hydroxide RTECS Number: WB4900000

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	EIA Tracer Dye	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:



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Section 15. Regulatory Information

A SARA (Superfund Amendments and Regultherization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
NA	EIA Tracer Dye	No	No	No	
CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists			
NA	EIA Tracer Dye	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No			

Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement: No.1272/2008.

Section 16. Other Information

Revision Date: 01/22/2019

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer: 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.



SAFETY DATA SHEET EIA Antiserum Dye

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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400042

Product Name: EIA Antiserum Dye

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Carcinogenicity, Category 1B

2.2 Label Elements:



GHS Signal Word: Danger

GHS Hazard Phrases:

H350: May cause cancer.

GHS Precaution Phrases:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P308+313: IF exposed or concerned: Get medical attention/advice.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause cancer.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA	EIA Antiserum Dye	100.0 %	NA	Carcinogen 1B: H350
NA			NA	



SAFETY DATA SHEET EIA Antiserum Dye

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:



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EIA Antiserum Dye	Revision Supersedes Revision

8.2 Exposure Controls	s:
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Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

levels below recommended exposure limits. (Ventilation etc.):

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety ce Practices:

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1	Information	on Basic	Physical and	Chemical	Properties
J. I	milomiation	OII Dasic	i iivoicai aiiu	Cilcilical	i i obei nes

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

A blue solution Appearance and Odor:

No data. pH: No data. **Melting Point: Boiling Point:** No data. No data. Flash Pt: No data. **Evaporation Rate:**

Flammability (solid, gas): No data available.

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

No data. Vapor Pressure (vs. Air or mm

Hg):

Vapor Density (vs. Air = 1): No data. Specific Gravity (Water = 1): No data. No data. Solubility in Water: **Octanol/Water Partition** No data.

Coefficient:

No data. **Autoignition Pt: Decomposition Temperature:** No data. No data. Viscosity:

9.2 Other Information

> No data. **Percent Volatile:**

Section 10. Stability and Reactivity

10.1 No data available. Reactivity:

10.2 Unstable [] Stability: Stable [X]

Stable if stored in accordance with information listed on the product insert. 10.3 Stability Note(s):

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

No data available. 10.4 **Conditions To Avoid:** 10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 Hazardous No data available.

Multi-region format



SAFETY DATA SHEET EIA Antiserum Dye

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Decomposition or

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects:

Chronic Toxicological Contains a component that has been investigated as a carcinogen.

Effects:

Carcinogenicity/Other Contains a component that has been reported to be probably carcinogenic based on its IARC,

Information: OSHA, ACGIH, NTP, or EPA classification.

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

CAS # Hazardous Components (Chemical Name)		NTP	IARC	ACGIH	OSHA
NA	EIA Antiserum Dye	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:



SAFETY DATA SHEET **EIA Antiserum Dye**

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Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists CAS# **Hazardous Components (Chemical Name)** S. 302 (EHS) S. 304 RQ S. 313 (TRI) NA EIA Antiserum Dye No No CAS# Other US EPA or State Lists **Hazardous Components (Chemical Name)** NA EIA Antiserum Dye CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

No.1272/2008. Statement:

Section 16. Other Information

01/22/2019 Revision Date:

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer: 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.



SAFETY DATA SHEET Ellman's Reagent

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Supersedes Revision: 01/23/2018

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 **Product Code:** 400050

> **Product Name:** Ellman's Reagent

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 **Details of the Supplier of the Safety Data Sheet:**

> Company Name: Cayman Chemical Company

> > 1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 **Emergency telephone number:**

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

> > CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Skin Corrosion/Irritation, Category 3

2.2 **Label Elements:**

> **GHS Signal Word:** Warning

GHS Hazard Phrases:

H316: Causes mild skin irritation.

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

P332+313: If skin irritation occurs, get medical advice/attention.

GHS Storage and Disposal Phrases:

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

2.3 **Adverse Human Health** Causes mild skin irritation.

> Material may be irritating to the mucous membranes and upper respiratory tract. **Effects and Symptoms:**

> > Material may be harmful by inhalation, ingestion, or skin absorption.

May cause eye or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.		EC No./ EC Index No.	GHS Classification
NA NA	Ellman's Reagent	100.0 %		Skin Corr. 2: H315 Eye Damage 2A: H319



SAFETY DATA SHEET Ellman's Reagent

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid raising and breathing dust, and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Other Precautions: Protect from light.



SAFETY DATA SHEET Ellman's Reagent

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Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

8.2 Exposure Controls:

8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety

shower.

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1 Inform	ation on Basic	Physical and	Chemical Properties
------------	----------------	--------------	---------------------

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

Appearance and Odor: A lyophilized yellow powder

pH: No data.
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

Vapor Pressure (vs. Air or mm No data.

Hg):

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

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Octanol/Water Partition No data.

Coefficient:

Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.



SAFETY DATA SHEET Ellman's Reagent

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Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

10.4 Conditions To Avoid: No data available.

10.5 Incompatibility - Materials strong bases

To Avoid: strong oxidizing agents

10.6 Hazardous carbon dioxide

Decomposition or carbon monoxide **Byproducts:** hydrogen chloride gas

hydrogen iodide nitrogen oxides phosphorus oxides potassium oxides sodium oxides sulfur oxides

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects:

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

CAS#	CAS # Hazardous Components (Chemical Name)		IARC	ACGIH	OSHA
NA	Ellman's Reagent	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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



SAFETY DATA SHEET Ellman's Reagent

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Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name:

Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:

Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport

Transport in accordance with local, state, and federal regulations.

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
NA	Ellman's Reagent	No	No	No	
CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists			
NA	Ellman's Reagent	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No			

Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement: No.1272/2008.

Section 16. Other Information

Revision Date: 01/22/2019

Additional Information About No data available.

This Product:

Company Policy or Disclaimer: 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.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400060

Product Name: EIA Buffer Concentrate (10X)

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.2 Label Elements:

GHS Signal Word: None

GHS Hazard Phrases:

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

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

No phrases apply.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
7758-11-4 TC5580000	Potassium phosphate, dibasic 01-2119493919-15	13.3 %	231-834-5 NA	No GHS classifications apply.
7778-77-0 TC6615500	Potassium phosphate, Monobasic 01-2119490224-41	3.21 %	231-913-4 NA	No GHS classifications apply.
26628-22-8 VY8050000	Sodium azide 01-2119457019-37	0.1 %	247-852-1 011-004-00-7	Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410
7647-14-5 VZ4725000	Sodium chloride 01-2119485491-33	23.4 %	231-598-3 NA	No GHS classifications apply.
194491-31-1 NA	EDTA, tetrasodium salt, hydrate	0.38 %	NA NA	Acute Tox.(O) 4: H302 Eye Damage 1: H318
9048-46-8	Bovine Serum Albumin (BSA)	1.0 %	232-936-2	Acute Tox.(O) 4: H302

Multi-region format



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AY9296000			NA	
7732-18-5	Water	58.61 %	231-791-2	No GHS classifications apply.
ZC0110000	na		NA	

Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.



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Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS#	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
26628-22-8	Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3	
		Europe	TWA: 0.1 mg/m3	Skin Absorption
			STEL: 0.3 mg/m3	
		France VL	TWA: 0.1 mg/m3	
			STEL: 0.3 mg/m3	
		Britain EH40	TWA: 0.1 mg/m3 ()	Skin Absorption
			STEL: 0.3 mg/m3 ()	

8.2 Exposure Controls:

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety

shower.

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1	Information	on Basic Ph	ysical and (Chemical Pr	operties
-----	-------------	-------------	--------------	-------------	----------

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

Appearance and Odor: A clear, colorless solution

pH: 7.0
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

Vapor Pressure (vs. Air or mm No data.

Hg):

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

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Octanol/Water Partition No data.

Coefficient:



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Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

10.4 Conditions To Avoid: No data available.10.5 Incompatibility - Materials No data available.

To Avoid:

10.6 Hazardous No data available.

Decomposition or Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this compound have not been thoroughly studied.

Toxicological Effects: Sodium azide - Toxicity Data: Oral LD50 (rat): 27 mg/kg; Oral TDLO (woman): 3 mg/kg;

Intraperitoneal LDLO (rat): 30 mg/kg; Subcutaneous LD50 (rat): 45100 ug/kg;

Chronic Toxicological

Sodium azide - Investigated as an agricultural chemical, drug, mutagen, reproductive effector, and

Effects: tumoriger

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Sodium azide RTECS Number: VY8050000

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

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

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.12.5 Results of PBT and vPvB No data available.

assessment:



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2.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7758-11-4	Potassium phosphate, dibasic	No	No	No
7778-77-0	Potassium phosphate, Monobasic	No	No	No
26628-22-8	Sodium azide	Yes 500 LB	Yes 1000 LB	Yes
7647-14-5	Sodium chloride	No	No	No
194491-31-1	EDTA, tetrasodium salt, hydrate	No	No	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
7732-18-5	Water	No	No	No

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



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Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement: No.1272/2008.

Section 16. Other Information

Revision Date: 01/22/2019

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer: 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.



SAFETY DATA SHEETWash Buffer Concentrate (400X)

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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 400062

Product Name: Wash Buffer Concentrate (400X)

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.2 Label Elements:

GHS Signal Word: None

GHS Hazard Phrases:

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

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

No phrases apply.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
7758-11-4 TC5580000	Potassium phosphate, dibasic 01-2119493919-15	53.0 %	231-834-5 NA	No GHS classifications apply.
7778-77-0 TC6615500	Potassium phosphate, Monobasic 01-2119490224-41	12.9 %	231-913-4 NA	No GHS classifications apply.
7732-18-5 ZC0110000	Water na	34.1 %	231-791-2 NA	No GHS classifications apply.



SAFETY DATA SHEETWash Buffer Concentrate (400X)

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:



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Cayman		SAFETY DATA SHEET		
		Wash Buffer Concentrate (400X)		
			Supersed	
8.2	Exposure Controls:			

Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

levels below recommended exposure limits. (Ventilation etc.):

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety ce Practices:

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Phy	ysical and Chemical Properties
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Physical States: [] Gas [X] Liquid [] Solid

A clear, colorless solution Appearance and Odor:

7.4 pH: No data. **Melting Point:** No data. **Boiling Point:** No data. Flash Pt: No data.

Flammability (solid, gas): No data available.

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

Vapor Pressure (vs. Air or mm No data.

Hg):

Vapor Density (vs. Air = 1): No data. Specific Gravity (Water = 1): No data. No data. Solubility in Water: **Octanol/Water Partition** No data.

Coefficient:

Evaporation Rate:

Autoignition Pt: No data. **Decomposition Temperature:** No data. No data. Viscosity:

9.2 Other Information

> No data. **Percent Volatile:**

Section 10. Stability and Reactivity

10.1 No data available. Reactivity:

10.2 Unstable [] Stability: Stable [X]

Stable if stored in accordance with information listed on the product insert. 10.3 Stability Note(s):

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

No data available. 10.4 **Conditions To Avoid:** 10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 Hazardous phosphorus oxides

Multi-region format



SAFETY DATA SHEETWash Buffer Concentrate (400X)

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Decomposition or

potassium oxides

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects:

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
7758-11-4	Potassium phosphate, dibasic	n.a.	n.a.	n.a.	n.a.
7778-77-0	Potassium phosphate, Monobasic	n.a.	n.a.	n.a.	n.a.
7732-18-5	Water	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:



SAFETY DATA SHEETWash Buffer Concentrate (400X)

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Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

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

CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7758-11-4	Potassium phosphate, dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7778-77-0	Potassium phosphate, Monobasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7732-18-5	Water	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

Regulatory Information

This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

Statement:

No.1272/2008.

Section 16. Other Information

Revision Date:

01/22/2019

Additional Information About

No data available.

This Product:

Company Policy or Disclaimer:

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.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 401710

Product Name: 9,10-DiHome AChE tracer

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Acute Toxicity: Oral, Category 4

2.2 Label Elements:



GHS Signal Word: Warning

GHS Hazard Phrases: H302: Harmful if swallowed. GHS Precaution Phrases:

P264: Wash {hands} thoroughly after handling.

GHS Response Phrases:

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330: Rinse mouth.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Harmful if swallowed.

Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation or skin absorption. May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	9,10-DiHome AChE	< 0.01 %	NA NA	No data available.
7758-11-4 TC5580000	Potassium phosphate, dibasic 01-2119493919-15	11.35 %	231-834-5 NA	No GHS classifications apply.
7778-77-0	Potassium phosphate, Monobasic	2.75 %	231-913-4	No GHS classifications apply.





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TC6615500	01-2119490224-41		NA	
7647-14-5 VZ4725000	Sodium chloride 01-2119485491-33	20.65 %	231-598-3 NA	No GHS classifications apply.
194491-31-1 NA	EDTA, tetrasodium salt, hydrate	0.32 %	NA NA	Acute Tox.(O) 4: H302 Eye Damage 1: H318
6138-23-4 LZ5776547	D-(+)-Trehalose, Dihydrate	42.67 %	612-140-5 NA	No data available.
69-65-8 OP2060000	D-Mannitol	21.32 %	200-711-8 NA	No GHS classifications apply.
9048-46-8 AY9296000	Bovine Serum Albumin (BSA)	0.85 %	232-936-2 NA	Acute Tox.(O) 4: H302
26628-22-8 VY8050000	Sodium azide 01-2119457019-37	0.08 %	247-852-1 011-004-00-7	Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410

Section 4. First Aid Measures

4.1 **Description of First Aid**

Measures:

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 15 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 15 minutes. Have eyes examined

and tested by medical personnel.

Wash out mouth with water provided person is conscious. Never give anything by mouth to an In Case of Ingestion:

unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by

medical personnel.

Section 5. Fire Fighting Measures

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

Use water spray to cool fire-exposed containers. Media:

Unsuitable Extinguishing A solid water stream may be inefficient.

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.



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Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS#	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
26628-22-8	Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3	
		Europe	TWA: 0.1 mg/m3	Skin Absorption
			STEL: 0.3 mg/m3	
		France VL	TWA: 0.1 mg/m3	
			STEL: 0.3 mg/m3	
		Britain EH40	TWA: 0.1 mg/m3 ()	Skin Absorption
			STEL: 0.3 mg/m3 ()	

8.2 Exposure Controls:

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

Wash thoroughly after handling.

No data available.



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Section 9. Physical and Chemical Propertie	Section 9.
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9.1 Information on Basic Physical and Chemical Properties

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

Appearance and Odor: A lyophilized powder

pH: No data.
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

No data.

Vapor Pressure (vs. Air or mm

Ha):

Vapor Density (vs. Air = 1):No data.Specific Gravity (Water = 1):No data.Solubility in Water:No data.Octanol/Water PartitionNo data.

Coefficient:

Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

10.4 Conditions To Avoid: No data available.

10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 Hazardous carbon dioxide

Decomposition or carbon monoxide

Byproducts:



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Section 11. Toxicological Information

11.1 The toxicological effects of this product have not been thoroughly studied. Information on

Sodium azide - Toxicity Data: Oral LD50 (rat): 27 mg/kg; Oral TDLO (woman): 3 mg/kg; **Toxicological Effects:**

Intraperitoneal LDLO (rat): 30 mg/kg; Subcutaneous LD50 (rat): 45100 ug/kg;

Chronic Toxicological

Effects:

Sodium azide - Investigated as an agricultural chemical, drug, mutagen, reproductive effector, and

tumorigen.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Sodium azide RTECS Number: VY8050000

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	9,10-DiHome AChE	n.a.	n.a.	n.a.	n.a.
7758-11-4	Potassium phosphate, dibasic	n.a.	n.a.	n.a.	n.a.
7778-77-0	Potassium phosphate, Monobasic	n.a.	n.a.	n.a.	n.a.
7647-14-5	Sodium chloride	n.a.	n.a.	n.a.	n.a.
194491-31-1	EDTA, tetrasodium salt, hydrate	n.a.	n.a.	n.a.	n.a.
6138-23-4	D-(+)-Trehalose, Dihydrate	n.a.	n.a.	n.a.	n.a.
69-65-8	D-Mannitol	n.a.	n.a.	n.a.	n.a.
9048-46-8	Bovine Serum Albumin (BSA)	n.a.	n.a.	n.a.	n.a.
26628-22-8	Sodium azide	n.a.	n.a.	A4	n.a.

Section 12. Ecological Information

12.1 Avoid release into the environment. Toxicity:

Runoff from fire control or dilution water may cause pollution.

No data available. 12.2 Persistence and

Degradability:

Bioaccumulative 12.3

No data available.

Potential:

12.4 No data available. **Mobility in Soil:**

12.5 Results of PBT and vPvB No data available.

assessment:

No data available. 12.6 Other adverse effects:

Section 13. Disposal Considerations

Dispose in accordance with local, state, and federal regulations. 13.1 **Waste Disposal Method:**

Section 14. Transport Information

LAND TRANSPORT (US DOT): 14.1

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

LAND TRANSPORT (European ADR/RID): 14.1

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:





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14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
9,10-DiHome AChE	No	No	No
Potassium phosphate, dibasic	No	No	No
Potassium phosphate, Monobasic	No	No	No
Sodium chloride	No	No	No
EDTA, tetrasodium salt, hydrate	No	No	No
D-(+)-Trehalose, Dihydrate	No	No	No
D-Mannitol	No	No	No
Bovine Serum Albumin (BSA)	No	No	No
Sodium azide	Yes 500 LB	Yes 1000 LB	Yes
	9,10-DiHome AChE Potassium phosphate, dibasic Potassium phosphate, Monobasic Sodium chloride EDTA, tetrasodium salt, hydrate D-(+)-Trehalose, Dihydrate D-Mannitol Bovine Serum Albumin (BSA)	9,10-DiHome AChE Potassium phosphate, dibasic Potassium phosphate, Monobasic No Sodium chloride EDTA, tetrasodium salt, hydrate D-(+)-Trehalose, Dihydrate No D-Mannitol Bovine Serum Albumin (BSA)	9,10-DiHome AChE Potassium phosphate, dibasic Potassium phosphate, Monobasic No No Sodium chloride No EDTA, tetrasodium salt, hydrate No D-(+)-Trehalose, Dihydrate No No No No No No No No No N

CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists
NA	9,10-DiHome AChE	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
7758-11-4	Potassium phosphate, dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7778-77-0	Potassium phosphate, Monobasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7647-14-5	Sodium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
194491-31-1	EDTA, tetrasodium salt, hydrate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
6138-23-4	D-(+)-Trehalose, Dihydrate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
69-65-8	D-Mannitol	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory: Active; CA PROP.65: No
26628-22-8	Sodium azide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

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Additional Information About No data available.

This Product:

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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.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 401712

Product Name: 9.10-DiHome ELISA Antiserum

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.2 Label Elements:

GHS Signal Word: None

GHS Hazard Phrases:

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

GHS Precaution Phrases:

No phrases apply.

GHS Response Phrases:

No phrases apply.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Anti-9,10-DiHome Antibody	0.01 %	NA NA	No data available.
7758-11-4 TC5580000	Potassium phosphate, dibasic 01-2119493919-15	31.52 %	231-834-5 NA	No GHS classifications apply.
7778-77-0 TC6615500	Potassium phosphate, Monobasic 01-2119490224-41	7.63 %	231-913-4 NA	No GHS classifications apply.
7647-14-5 VZ4725000	Sodium chloride 01-2119485491-33	57.35 %	231-598-3 NA	No GHS classifications apply.
194491-31-1 NA	EDTA, tetrasodium salt, hydrate	0.88 %	NA NA	Acute Tox.(O) 4: H302 Eye Damage 1: H318
9048-46-8 AY9296000	Bovine Serum Albumin (BSA)	2.37 %	232-936-2 NA	Acute Tox.(O) 4: H302

Cayman

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26628-22-8 Sodium azide 01-2119457019-37 01-2119457019-37 0.24 % 247-852-1 Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410

Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.

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Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS#	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
26628-22-8	Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3	
		Europe	TWA: 0.1 mg/m3	Skin Absorption
			STEL: 0.3 mg/m3	
		France VL	TWA: 0.1 mg/m3	
			STEL: 0.3 mg/m3	
		Britain EH40	TWA: 0.1 mg/m3 ()	Skin Absorption
			STEL: 0.3 mg/m3 ()	

8.2 Exposure Controls:

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

).1	Information	on Basic	Physical	and Chem	ical Properties
-----	-------------	----------	----------	----------	-----------------

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

Appearance and Odor: A lyophilized powder

pH: No data.

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

Vapor Pressure (vs. Air or mm No data.

Hg):

Vapor Density (vs. Air = 1):No data.Specific Gravity (Water = 1):No data.Solubility in Water:No data.Octanol/Water PartitionNo data.

Coefficient:



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Autoignition Pt: No data. **Decomposition Temperature:** No data.

No data. Viscosity:

9.2 **Other Information**

> Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

Conditions To Avoid: 10.4 No data available. 10.5 Incompatibility - Materials strong oxidizing agents

To Avoid:

10.6 **Hazardous** hydrogen chloride gas

> potassium oxides **Decomposition or** sodium oxides **Byproducts:**

Section 11. Toxicological Information

11.1 The toxicological effects of this product have not been thoroughly studied. Information on

Sodium azide - Toxicity Data: Oral LD50 (rat): 27 mg/kg; Oral TDLO (woman): 3 mg/kg; **Toxicological Effects:**

Intraperitoneal LDLO (rat): 30 mg/kg; Subcutaneous LD50 (rat): 45100 ug/kg;

Chronic Toxicological

Sodium azide - Investigated as an agricultural chemical, drug, mutagen, reproductive effector, and

Effects:

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Sodium azide RTECS Number: VY8050000

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	Anti-9,10-DiHome Antibody	n.a.	n.a.	n.a.	n.a.
7758-11-4	Potassium phosphate, dibasic	n.a.	n.a.	n.a.	n.a.
7778-77-0	Potassium phosphate, Monobasic	n.a.	n.a.	n.a.	n.a.
7647-14-5	Sodium chloride	n.a.	n.a.	n.a.	n.a.
194491-31-1	EDTA, tetrasodium salt, hydrate	n.a.	n.a.	n.a.	n.a.
9048-46-8	Bovine Serum Albumin (BSA)	n.a.	n.a.	n.a.	n.a.
26628-22-8	Sodium azide	n.a.	n.a.	A4	n.a.

Section 12. Ecological Information

12.1 **Toxicity:** Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 **Bioaccumulative** No data available.

Potential:

12.4 **Mobility in Soil:** No data available. 12.5

Results of PBT and vPvB No data available.

assessment:





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12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number: Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Information:

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
NA	Anti-9,10-DiHome Antibody	No	No	No
7758-11-4	Potassium phosphate, dibasic	No	No	No
7778-77-0	Potassium phosphate, Monobasic	No	No	No
7647-14-5	Sodium chloride	No	No	No
194491-31-1	EDTA, tetrasodium salt, hydrate	No	No	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
26628-22-8	Sodium azide	Yes 500 LB	Yes 1000 LB	Yes

CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists	
NA	Anti-9,10-DiHome Antibody	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No	
7758-11-4	Potassium phosphate, dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No	
7778-77-0	Potassium phosphate, Monobasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No	
7647-14-5	Sodium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No	
194491-31-1	EDTA, tetrasodium salt, hydrate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No	
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory: Active; CA PROP.65: No	
26628-22-8	Sodium azide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No	



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Regulatory Information This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

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Section 16. Other Information

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Additional Information About No data

No data available.

This Product:

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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.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

1.1 Product Code: 401714

Product Name: 9,10-DiHome ELISA Standard

Synonyms: (±)9,10-dihydroxy-12Z-octadecenoic acid; Leukotoxin diol;

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

Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

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

1.4 Emergency telephone number:

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

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

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Flammable Liquids, Category 2

2.2 Label Elements:



GHS Signal Word: Danger

GHS Hazard Phrases:

H225: Highly flammable liquid and vapor.

GHS Precaution Phrases:

P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with

water/shower.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Material may be irritating to the mucous membranes and upper respiratory tract.

Effects and Symptoms: May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
263399-34-4 NA	(±)9,10-DiHOME	0.001 %	NA NA	No data available.
64-17-5 KQ6300000	Ethyl alcohol 01-2119457610-43	99.999 %	200-578-6 603-002-00-5	Flam. Liq. 2: H225

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Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

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 15 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 15 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.

4.2 Important Symptoms and May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude

Effects, Both Acute and

(weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

Delayed:

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.

Hazards: Container explosion may occur under fire conditions.

Emits toxic fumes under fire conditions.

Sensitive to static discharge.

Vapors can travel to a source of ignition and flash back.

No data available.

Flash Pt: 14.00 C Method Used: Closed Cup

Explosive Limits: LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C

Autoignition Pt: 363.00 C

5.3 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.

Note: Flammable as diluted in ethanol.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,

Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

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

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:



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Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.

7.2 Precautions To Be Taken Keep away from heat, sparks, and flame.

in Storing: Keep container tightly closed.

Store in accordance with information listed on the product insert.

Other Precautions: Hygroscopic

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS#	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
64-17-5	Ethyl alcohol	ACGIH TLV	TLV: 1000 ppm STEL: 1000 ppm	
		France VL	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)	
		OSHA PELs	PEL: 1000 ppm	
		Britain EH40	TWA: 1920 mg/m3 (1000 ppm) STEL: ()	

8.2 Exposure Controls:

8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne

(Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

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

Appearance and Odor: A solution in ethanol

pH: No data.Melting Point: No data.Boiling Point: No data.

Flash Pt: 14.00 C Method Used: Closed Cup

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C

Vapor Pressure (vs. Air or mm 43 MM_HG at 20.0 C

Hg):

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



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Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Octanol/Water Partition No data.

Coefficient:

Autoignition Pt:363.00 CDecomposition Temperature:No data.Viscosity:No data.

9.2 Other Information

Percent Volatile: No data.

Molecular Formula & Weight: C18H34O4 314.5

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

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

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

10.4 Conditions To Avoid: heat, flames, and sparks

10.5 Incompatibility - Materials alkali metals

To Avoid: ammonia

peroxides

strong oxidizing agents

10.6 Hazardous carbon dioxide

Decomposition or carbon monoxide

Byproducts:

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.

Toxicological Effects: Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50

(rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m3 (20m); Inhalation LC50 (rat): 5,900 mg/m3

(6h); Inhalation LCLO (mouse): 29,300 ppm (7h);

Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 20 mg (24h) moderate;

Chronic Toxicological

Ethanol - Investigated as a drug, mutagen, natural product, primary irritant, reproductive effector,

Effects: and tumorigen.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Ethanol RTECS Number: KQ6300000

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

CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
263399-34-4	(±)9,10-DiHOME	n.a.	n.a.	n.a.	n.a.
64-17-5	Ethyl alcohol	n.a.	1	A4	n.a.



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Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.12.5 Results of PBT and vPvB No data available.

assessment:

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Ethyl Alcohol Solution

DOT Hazard Class: 3 FLAMMABLE LIQUID

UN/NA Number: UN1170 Packing Group: II



14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Ethyl Alcohol Solution

UN Number: 1170 Packing Group: II

Hazard Class: 3 - FLAMMABLE LIQUID

14.3 AIR TRANSPORT (ICAO/IATA):

Ethyl alcohol

64-17-5

ICAO/IATA Shipping Name: Ethyl Alcohol Solution

UN Number:1170Packing Group:IIHazard Class:3 - FLAMMABLE LIQUIDIATA Classification:3

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

Information: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of

E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes -

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

-	<u>-</u>	<u>-</u>			
CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)	
263399-34-4	(±)9,10-DiHOME	No	No	No	
64-17-5	Ethyl alcohol	No	No	No	
CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists			
263399-34-4	(±)9,10-DiHOME	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA			
		PROP.65: No			



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Inventory; CA PROP.65: No **Regulatory Information** This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008. Statement:

Section 16. Other Information

Revision Date: 11/16/2018

Additional Information About

No data available.

This Product:

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> 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.