

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD1  
**Product Name:** TSH Standard 1 (0 mlU/L)
- 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:**  
**2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
 Serious Eye Damage/Eye Irritation, Category 2A  
**2.1.2 Classification according to Directive 1999/45/EC:**  
 Xi: Irritant  
 Risk Phrases: R36  
 For full text of R- phrases: see SECTION 15.
- 2.2 Label Elements:**  
**2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



**GHS Signal Word:** Warning

**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



**Xi**

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N;Xi;C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No

**European Community Hazard Symbol codes:****Xi****European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

### Section 16. Other Information

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD2  
**Product Name:** TSH Standard 2 (0.2 mlU/L)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N;Xi;C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	< 0.001 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** No data available.

**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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD3  
**Product Name:** TSH Standard 3 (0.5 mlU/L)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N;Xi;C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	< 0.001 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.



**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD4  
**Product Name:** TSH Standard 4 (2.5 mlU/L)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N; Xi; C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	< 0.001 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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



according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD5  
**Product Name:** TSH Standard 5 (5 mlU/L)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N; Xi; C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	~ 0.001 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.  
Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:****Xi****European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD6  
**Product Name:** TSH Standard 6 (10 mIU/L)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N; Xi; C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	~ 0.001 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TSHSTD7  
**Product Name:** TSH Standard 7 (20 mIU/L)
- 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:**  
**2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
 Serious Eye Damage/Eye Irritation, Category 2A  
**2.1.2 Classification according to Directive 1999/45/EC:**  
 Xi: Irritant  
 Risk Phrases: R36  
 For full text of R- phrases: see SECTION 15.
- 2.2 Label Elements:**  
**2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



**GHS Signal Word:** Warning

**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



**Xi**

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.002 %	611-341-5 613-167-00-5	T; N; Xi; C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302
9002-71-5 XP3581600	Thyrotropin (Thyroid-stimulating hormone)	~ 0.002 %	232-664-4 NA	No phrases apply. No data available.

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.



**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9002-71-5	Thyrotropin (Thyroid-stimulating hormone)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** No data available.

**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.

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

# Product Information



## Streptavidin Precoated Plate

Item No. 500740P

### COMMENTS:

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

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

### WARNING:

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

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

Copyright Cayman Chemical Company

Revision Date: 12/10/13

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
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#### E-Mail

custserv@caymanchem.com

#### Web

www.caymanchem.com

# Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate

Revision: 12/10/2013

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740CONG  
**Product Name:** Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Risk Phrases:**  
 For full text of R- phrases: see SECTION 15.
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**  
**GHS Signal Word:**  
**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.
- 2.2.2 Labeling according to Directive 1999/45/EC:**
- 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.	Risk Phrases/ GHS Classification
NA NA	Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate	< 0.001 %	NA NA	No phrases apply. No data available.
55965-84-9 NX8157050	Proclin 300	< 0.01 %	611-341-5 613-167-00-5	T; N;Xi;C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311

**Conjugate**

			Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
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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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

**Section 7. Handling and Storage**

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

**Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin  
Conjugate**

Revision: 12/10/2013

**Section 8. Exposure Controls/Personal Protection**
**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
NA	Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA	Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

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

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

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.  
**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.  
**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
 Runoff from fire control or dilution water may cause pollution.

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

**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	Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate	No	No	No
55965-84-9	Proclin 300	No	No	No

Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin  
Conjugate

Revision: 12/10/2013

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
NA	Goat Anti-TSH-HRP + Mouse Anti-TSH-Biotin Conjugate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

**European Community Hazard Symbol codes:****European Community Risk and Safety Phrases:**

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

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** No data available.

**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.

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



according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740TMBSUB  
**Product Name:** TMB Substrate Solution
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Flammable Liquids, Category 4**  
**Skin Corrosion/Irritation, Category 3**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Risk Phrases:**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H227: Combustible liquid.

H316: Causes mild skin irritation.

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

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

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

P264: Wash {hands} thoroughly after handling.

**GHS Response Phrases:**

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

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

**2.2.2 Labeling according to Directive 1999/45/EC:**

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

**Effects and Symptoms:** Causes serious eye irritation.

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

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

May cause 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.	Risk Phrases/ GHS Classification
54827-17-7 DV2300000	3,3',5,5'-Tetramethylbenzidine	0.03 %	259-364-6 NA	Xn;N; R22-43-51/53-20/21/22-68 Skin Corr. 2: H315 Eye Damage 2A: H319 TOST (SE) 3: H335 H336
7722-84-1 MX0899000	Hydrogen peroxide	0.015 %	231-765-0 008-003-00-9	O; C;Xn; R5-8-20/22-35 Ox. Liq. 1: H271 Acute Tox.(O) 4: H302 Skin Corr. 1A: H314 Acute Tox.(I) 4: H332
67-68-5 PV6210000	Dimethyl sulfoxide, anhydrous	< 5.0 %	200-664-3 NA	Xn; R20/21/22-36/37/38 Flam. Liq. 4: H227 Eye Damage 2A: H319 Skin Corr. 2: H315

**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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
54827-17-7	3,3',5,5'-Tetramethylbenzidine	No data.	No data.	No data.
7722-84-1	Hydrogen peroxide	TWA: 1.4 mg/m3 (1 ppm) STEL: 2.8 mg/m3 (2 ppm)	TWA: 1.5 mg/m3 (1 ppm)	No data.
67-68-5	Dimethyl sulfoxide, anhydrous	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
54827-17-7	3,3',5,5'-Tetramethylbenzidine	No data.	No data.	No data.
7722-84-1	Hydrogen peroxide	PEL: 1 ppm	TLV: 1 ppm	No data.
67-68-5	Dimethyl sulfoxide, anhydrous	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
54827-17-7	3,3',5,5'-Tetramethylbenzidine	No	No	No
7722-84-1	Hydrogen peroxide	Yes 1000 LB	No	No
67-68-5	Dimethyl sulfoxide, anhydrous	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
54827-17-7	3,3',5,5'-Tetramethylbenzidine	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
7722-84-1	Hydrogen peroxide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
67-68-5	Dimethyl sulfoxide, anhydrous	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No

**European Community Hazard Symbol codes:**

**European Community Risk and Safety Phrases:**

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

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

**Section 16. Other Information**

**Revision Date:**                      12/10/2013

**Additional Information About This Product:**      No data available.

**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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740STOP  
**Product Name:** Stop Solution
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Skin Corrosion/Irritation, Category 2**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R35**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**GHS Signal Word:** Warning**GHS Hazard Phrases:**

H315: Causes skin irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

P362+364: Take off contaminated clothing and wash it before reuse.

**GHS Response Phrases:**

P302+352: IF ON SKIN: Wash with plenty of soap and water.

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.

- 2.2.2 Labeling according to Directive 1999/45/EC:**



Xi

**2.3 Adverse Human Health** Causes 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 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.	Risk Phrases/ GHS Classification
7664-93-9 WS5600000	Sulfuric acid	1.5 %	231-639-5 016-020-00-8	C;Xi; R35 Skin Corr. 1A: H314

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.

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

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

**6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.



### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

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

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

### Section 9. Physical and Chemical Properties

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** No data available.

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.
- 10.6 Hazardous Decomposition Or Byproducts:** No data available.

### Section 11. Toxicological Information

- 11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.
- Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### Section 12. Ecological Information

- 12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

### 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)
7664-93-9	Sulfuric acid	Yes 1000 LB	Yes 1000 LB	Yes

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7664-93-9	Sulfuric acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No

**European Community Hazard Symbol codes:****Xi****European Community Risk and Safety Phrases:**

R35 Causes severe burns.  
S24/25 Avoid contact with skin and eyes.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

### Section 16. Other Information

**Revision Date:** 12/10/2013

**Additional Information About This Product:** 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.

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

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 500740WASH  
**Product Name:** Wash Solution (50X)
- 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:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Serious Eye Damage/Eye Irritation, Category 2A**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xi: Irritant**  
**Risk Phrases: R36**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



**GHS Signal Word:** Warning

**GHS Hazard Phrases:**

H319: Causes serious eye irritation.

**GHS Precaution Phrases:**

P264: Wash {hands} thoroughly after handling.

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

**GHS Response Phrases:**

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**

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

- 2.2.2 Labeling according to Directive 1999/45/EC:**



**Xi**

**2.3 Adverse Human Health** Causes serious eye 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 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.	Risk Phrases/ GHS Classification
7558-79-4 WC4500000	Sodium phosphate, Dibasic	1.3 %	231-448-7 NA	Xi; R36 Eye Damage 2A: H319
55965-84-9 NX8157050	Proclin 300	0.015 %	611-341-5 613-167-00-5	T; N; Xi; C; R23/24/25-34-43-50/53 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Aquatic (A) 1: H400 Aquatic (C) 1: H410
60-00-4 AH4025000	Ethylenediamine Tetraacetic Acid	0.46 %	200-449-4 607-429-00-8	Xi; R36/37/38 Acute Tox.(O) 5: H303 Eye Damage 2A: H319 Aquatic (A) 3: H402
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	0.1 %	232-936-2 NA	Xn; R22 Acute Tox.(O) 4: H302

### 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 Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and 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, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

**Section 7. Handling and Storage**

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

**Section 8. Exposure Controls/Personal Protection**

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7558-79-4	Sodium phosphate, Dibasic	No data.	No data.	No data.
55965-84-9	Proclin 300	No data.	No data.	No data.
60-00-4	Ethylenediamine Tetraacetic Acid	No data.	No data.	No data.
9048-46-8	Bovine Serum Albumin (BSA)	No data.	No data.	No data.

**8.2 Exposure Controls:**

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne 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 (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.

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

Wash thoroughly after handling.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**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 To Avoid:** No data available.

**10.6 Hazardous Decomposition Or Byproducts:** No data available.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

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

**Section 12. Ecological Information**

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

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

**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)
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
55965-84-9	Proclin 300	No	No	No
60-00-4	Ethylenediamine Tetraacetic Acid	No	Yes 5000 LB	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
55965-84-9	Proclin 300	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
60-00-4	Ethylenediamine Tetraacetic Acid	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No



**European Community Hazard Symbol codes:**



**Xi**

**European Community Risk and Safety Phrases:**

R36 Irritating to eyes.  
S24/25 Avoid contact with skin and eyes.

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

**Section 16. Other Information**

**Revision Date:** 12/10/2013

**Additional Information About This Product:** No data available.

**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.

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