

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

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

- 1.1 Product Code:** 10478
Product Name: Cytokeratin Monoclonal PE Antibody (Clone C-11)
Synonyms: pan-Cytokeratin;
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
Company Name: Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
Web site address: www.caymanchem.com
Information: Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Acute Toxicity: Oral, Category 3

Aquatic Toxicity (Acute), Category 2

Aquatic Toxicity (Chronic), Category 2

2.2 Label Elements:



GHS Signal Word:

Danger

GHS Hazard Phrases:

H301: Toxic if swallowed.

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

GHS Precaution Phrases:

P264: Wash {hands} thoroughly after handling.

P273: Avoid release to the environment.

GHS Response Phrases:

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P330: Rinse mouth.

P391: Collect spillage.

GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health Effects and Symptoms:	Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation or skin absorption. May cause eye, skin, or respiratory system irritation. Toxic if swallowed. Toxic to aquatic life with long lasting effects. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
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Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Cytokeratin Monoclonal PE Antibody (Clone C-11)	0.071 %	NA NA	No data available.
9048-46-8 MT6446000	Bovine Serum Albumin (BSA)	70.872 %	232-936-2 NA	Acute Tox.(O) 4: H302
26628-22-8 VY8050000	Sodium azide	7.087 %	247-852-1 011-004-00-7	Acute Tox.(O) 2: H300 Aquatic (A) 1: H400 Aquatic (C) 1: H410
7558-79-4 WC4500000	Sodium phosphate, Dibasic 01-2119489797-11	9.922 %	231-448-7 NA	Eye Damage 2: H319
57-50-1 WN6500000	Sucrose	12.048 %	200-334-9 NA	No GHS classifications apply.

Section 4. First Aid Measures

4.1 Description of First Aid Measures:	<p>In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.</p> <p>In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.</p> <p>In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.</p> <p>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.</p>
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Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
5.2 Flammable Properties and Hazards:	No data available. 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 raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 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 #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
26628-22-8	Sodium azide	ACGIH TLV	CEIL: 0.29 mg/m3	
		Europe	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	Skin Absorption
		France VL	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	
		Britain EH40	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	Skin Absorption
57-50-1	Sucrose	ACGIH TLV	TLV: 10 mg/m3	
		France VL	TWA: 10 mg/m3	
		OSHA PELs	PEL: 15 (dust); 5 (resp.) mg/m3	
		Britain EH40	TWA: 10 mg/m3 () STEL: 20 mg/m3 ()	

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. No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States:	[] Gas [] Liquid [X] Solid	
Appearance and Odor:	100 µg of purified phycoerythrin (PE)-labeled IgG1 lyophilized from 100 mM sodium phosphate, pH 7.4, containing 50 mM sucrose, 150 mM sodium chloride, 0.1% BSA, and 2 mM sodium azide	
pH:	7.4	
Melting Point:	No data.	
Boiling Point:	No data.	
Flash Pt:	No data.	
Evaporation Rate:	No data.	
Flammability (solid, gas):	No data available.	
Explosive Limits:	LEL: No data.	UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.	
Vapor Density (vs. Air = 1):	No data.	
Specific Gravity (Water = 1):	No data.	
Solubility in Water:	No data.	
Octanol/Water Partition Coefficient:	No data.	
Autoignition Pt:	No data.	
Decomposition Temperature:	No data.	
Viscosity:	No data.	

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity:	No data available.
10.2 Stability:	Unstable [] Stable [X]
10.3 Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Polymerization:	Will occur [] Will not occur [X]
10.4 Conditions To Avoid:	No data available.
10.5 Incompatibility - Materials To Avoid:	acid chlorides acids halogenated hydrocarbon metals strong acids strong oxidizing agents
10.6 Hazardous Decomposition or Byproducts:	phosphorus oxides sodium oxides

Section 11. Toxicological Information

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

Chronic Toxicological Effects: Sodium azide - Toxicity Data: Oral LD50 (rat): 27 mg/kg; Skin LD50 (rat): 50 mg/kg; Sodium azide - Investigated as a mutagen, reproductive effector, and tumorigen. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Sodium azide RTECS Number: VY8050000

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	Cytokeratin Monoclonal PE Antibody (Clone C-11)	n.a.	n.a.	n.a.	n.a.
9048-46-8	Bovine Serum Albumin (BSA)	n.a.	n.a.	n.a.	n.a.
26628-22-8	Sodium azide	n.a.	n.a.	A4	n.a.
7558-79-4	Sodium phosphate, Dibasic	n.a.	n.a.	n.a.	n.a.
57-50-1	Sucrose	n.a.	n.a.	A4	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment - very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and Degradability: No data available.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Toxic solid, organic, n.o.s.
DOT Hazard Class: 6.1 POISON
UN/NA Number: UN2811 **Packing Group:** III



14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Toxic solid, organic, n.o.s.
UN Number: 2811 **Packing Group:** III
Hazard Class: 6.1 - POISON



SAFETY DATA SHEET

Cytokeratin Monoclonal PE Antibody (Clone C-11)

Revision: 08/02/2018

Supersedes Revision: 04/04/2013

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Toxic solid, organic, n.o.s.
UN Number: 2811 **Packing Group:** III
Hazard Class: 6.1 - POISON **IATA Classification:** 6.1

Additional Transport Information: Transport in accordance with local, state, and federal regulations.
 When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.
 Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

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	Cytokeratin Monoclonal PE Antibody (Clone C-11)	No	No	No
9048-46-8	Bovine Serum Albumin (BSA)	No	No	No
26628-22-8	Sodium azide	Yes 500 LB	Yes 1000 LB	Yes
7558-79-4	Sodium phosphate, Dibasic	No	Yes 5000 LB	No
57-50-1	Sucrose	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
NA	Cytokeratin Monoclonal PE Antibody (Clone C-11)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
9048-46-8	Bovine Serum Albumin (BSA)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
26628-22-8	Sodium azide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7558-79-4	Sodium phosphate, Dibasic	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
57-50-1	Sucrose	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

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

Section 16. Other Information

Revision Date: 08/02/2018

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.