

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

Product Code: 21942
Product Name: Citrullinated Vimentin (human recombinant)
Company Name: Cayman Chemical Company
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
Web site address: www.caymanchem.com
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
 CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Intended Use: For research use only, not for human or veterinary use.

2. Hazards Identification

GHS Signal Word: **None**
GHS Hazard Phrases: Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
GHS Precaution Phrases: No phrases apply.
GHS Response Phrases: No phrases apply.
GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.
Emergency Overview: **Avoid contact and inhalation.**
Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
 May be harmful by inhalation, ingestion, or skin absorption.
 May cause eye, skin, or respiratory system irritation.
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
77-86-1	Trizma base	6.1 %	TY2900000
7791-18-6	Magnesium chloride, hexahydrate	2.0 %	OM2975000
7732-18-5	Water	91.8 %	ZC0110000
NA	Citrullinated Vimentin (human recombinant)	< 0.1 %	NA

4. First Aid Measures

Emergency and First Aid

Procedures:

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

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

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

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

5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
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.
Flammable Properties and Hazards:	No data available.
Hazardous Combustion	No data available.
Products:	

6. Accidental Release Measures

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

7. Handling and Storage

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

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
77-86-1	Trizma base	TWA: 5 mg/m ³	CEIL: 5 mg/m ³ (salts)	No data.
7791-18-6	Magnesium chloride, hexahydrate	No data.	No data.	No data.
7732-18-5	Water	No data.	No data.	No data.
NA	Citrullinated Vimentin (human recombinant)	No data.	No data.	No data.

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
77-86-1	Trizma base	ACGIH TLV	CEIL: 5 mg/m ³ (salts)	
		France VL	TWA: 5 mg/m ³	
		OSHA PELs	TWA: 5 mg/m ³	
		Britain EH40	TWA: 5.0 mg/m ³	Skin Absorption

Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
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.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Solid
Appearance and Odor:	10 mM Tris, pH 8.0		
pH:	7.8		
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.		

10. Stability and Reactivity

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

11. Toxicological Information

Toxicological Information: The toxicological effects of this product have not been thoroughly studied.
 Trizma base - Toxicity Data: Oral LDLO (rabbit): 1,000 mg/kg; Oral TDLO (mouse): 3,000 mg/kg; Oral LD50 (rat): >3,000 mg/kg; Oral LD50 (mouse): 5,500 mg/kg; Oral TDLO (rat): 3,000 mg/kg;
 Trizma base - Irritation Data: Skin (rabbit): 500 mg severe;

Chronic Toxicological Effects: Trizma base- Investigated as a reproductive effector.
 Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
 See actual entry in RTECS for complete information.
 Trizma base RTECS Number: TY2900000

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

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
77-86-1	Trizma base	n.a.	n.a.	n.a.	n.a.
7791-18-6	Magnesium chloride, hexahydrate	n.a.	n.a.	n.a.	n.a.
7732-18-5	Water	n.a.	n.a.	n.a.	n.a.
NA	Citrullinated Vimentin (human recombinant)	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

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

13. Disposal Considerations

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

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class:

UN/NA Number:

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number:

Hazard Class:

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

15. Regulatory Information

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

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
77-86-1	Trizma base	No	No	Yes-Cat. N106
7791-18-6	Magnesium chloride, hexahydrate	No	No	No
7732-18-5	Water	No	No	No
NA	Citrullinated Vimentin (human recombinant)	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
77-86-1	Trizma base	CAA HAP,ODC: Yes - Cat.; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7791-18-6	Magnesium chloride, hexahydrate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
7732-18-5	Water	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
NA	Citrullinated Vimentin (human recombinant)	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:

R36/37/38 Irritating to eyes, respiratory system and skin.
 S24/25 Avoid contact with skin and eyes.
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

16. Other Information

Revision Date: 05/30/2018

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.