

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:** 14779
Product Name: UHRF1 tudor-like region (human recombinant; His-tagged)
Synonyms: E3 Ubiquitin-protein Ligase UHRF1; Inverted CCAAT Box Binding Protein of 90 kDa; Nuclear Protein 95; RING Finger Protein 106; Transcription Factor ICBP90; Ubiquitin-like PHD and RING Finger Domain-containing Protein 1;
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
Company Name: Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
Web site address: www.caymanchem.com
Information: Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

Skin Sensitization, Category 1A

Toxic To Reproduction, Category 2

Aquatic Toxicity (Acute), Category 3

2.2 Label Elements:



GHS Signal Word: **Warning**

GHS Hazard Phrases:

H317: May cause an allergic skin reaction.

H361: Suspected of damaging fertility or the unborn child.

H373: May cause damage to {heart, liver} through prolonged or repeated exposure.

H402: Harmful to aquatic life.

GHS Precaution Phrases:

P201: Obtain special instructions before use.

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

P261: Avoid breathing {dust/fume/gas/mist/vapours/spray}.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

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

GHS Response Phrases:

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

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

P321: Specific treatment {see ... on this label}.

P333+313: If skin irritation or rash occurs, seek medical advice/attention.

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

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GHS Storage and Disposal Phrases:

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

2.3 Adverse Human Health	Harmful to aquatic life.
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 an allergic skin reaction. May cause damage to {heart, liver} through prolonged or repeated exposure. May cause eye, skin, or respiratory system irritation. Suspected of damaging fertility or the unborn child. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	UHRF1 tudor-like region (human recombinant; His-tagged)	< 1.0 %	NA NA	No data available.
56-81-5 MA8050000	Glycerol 01-2119471987-18	20.0 %	200-289-5 NA	No GHS classifications apply.
60-24-2 KL5600000	2-Mercaptoethanol	0.8 %	200-464-6 NA	Acute Tox.(O) 3: H301 Acute Tox.(D) 2: H310 Skin Corr. 2: H315 Skin Sens. 1A: H317 Eye Damage 1: H318 Acute Tox.(I) 3: H331 STOT (RE) 2: H373 Aquatic (A) 1: H400 Aquatic (C) 2: H411 Toxic Repro. 2: H361
7447-40-7 TS8050000	Potassium chloride 01-2119539416-36	0.17 %	231-211-8 NA	No GHS classifications apply.
7647-14-5 VZ4725000	Sodium chloride 01-2119485491-33	0.88 %	231-598-3 NA	No GHS classifications apply.
77-86-1 TY2900000	Trizma base 01-2119957659-16	0.61 %	201-064-4 NA	
7732-18-5 ZC0110000	Water na	>76.54 %	231-791-2 NA	No GHS classifications apply.

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Section 4. First Aid Measures
4.1 Description of First Aid
Measures:

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

In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.

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

Section 5. Fire Fighting Measures

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

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

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and Hazards: Emits toxic fumes under fire conditions.

No data available.

Flash Pt: No data.

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

Autoignition Pt: No data.

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

Section 6. Accidental Release Measures

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

Protective Equipment and Emergency Procedures: 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 Contain spill and collect, as appropriate.

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

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken 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
56-81-5	Glycerol	ACGIH TLV	TLV: 10 mg/m3	

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56-81-5 Glycerol (continued)	France VL	TWA: 10 mg/m3	
	OSHA PELs	PEL: 15 (dust); 5 (resp.) mg/m3	
	Britain EH40	TWA: 10 mg/m3 () STEL: ()	
77-86-1 Trizma base	ACGIH TLV	CEIL: 5 mg/m3 (salts)	
	France VL	TWA: 5 mg/m3	
	OSHA PELs	TWA: 5 mg/m3	
	Britain EH40	TWA: 5.0 mg/m3	Skin Absorption

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 [X] Liquid [] Solid

Appearance and Odor: 50 mM Tris, pH 8.0, containing 150 mM sodium chloride, 2.2 mM potassium chloride, 10 mM .beta.-mercaptoethanol, and 20% glycerol;

pH: 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.

Coefficient:

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

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [] Stable [X]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: Will occur [] Will not occur [X]
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility - Materials To Avoid: strong bases
 strong oxidizing agents
10.6 Hazardous Decomposition or Byproducts: carbon dioxide
 carbon monoxide

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
 2-Mercaptoethanol - Toxicity Data: Oral LD50 (rat): 244 mg/kg; Oral LD50 (mouse): 190 mg/kg;
 Intraperitoneal LD50 (mouse): 200 mg/kg;
Chronic Toxicological Effects: 2-Mercaptoethanol - Investigated as a mutagen and primary irritant.
 Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
 See actual entry in RTECS for complete information.
 2-Mercaptoethanol RTECS Number: KL5600000
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	UHRF1 tudor-like region (human recombinant; His-tagged)	n.a.	n.a.	n.a.	n.a.
56-81-5	Glycerol	n.a.	n.a.	n.a.	n.a.
60-24-2	2-Mercaptoethanol	n.a.	n.a.	n.a.	n.a.
7447-40-7	Potassium chloride	n.a.	n.a.	n.a.	n.a.
7647-14-5	Sodium chloride	n.a.	n.a.	n.a.	n.a.
77-86-1	Trizma base	n.a.	n.a.	n.a.	n.a.
7732-18-5	Water	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
 Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and 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: 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	UHRF1 tudor-like region (human recombinant; His-tagged)	No	No	No
56-81-5	Glycerol	No	No	No
60-24-2	2-Mercaptoethanol	No	No	No
7447-40-7	Potassium chloride	No	No	No
7647-14-5	Sodium chloride	No	No	No
77-86-1	Trizma base	No	No	Yes-Cat. N106
7732-18-5	Water	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
NA	UHRF1 tudor-like region (human recombinant; His-tagged)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
56-81-5	Glycerol	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
60-24-2	2-Mercaptoethanol	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7447-40-7	Potassium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7647-14-5	Sodium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
77-86-1	Trizma base	CAA HAP,ODC: Yes - Cat.; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7732-18-5	Water	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No



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

Section 16. Other Information

Revision Date: 05/12/2019

Additional Information About No data available.

This Product:

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