



HIS-UBIQUITIN (HUMAN) (15N, 95%)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 13/09/2017

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Supersedes: 13/09/2017

Version: 1.1

NEX-UB1-HIS-N

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name : HIS-UBIQUITIN (HUMAN) (15N, 95%)
Product code : NEX-UB1-HIS-N

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

GHS-US classification

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
WATER UNLABELED	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	89.682	Not classified
DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O	(CAS-No.) 7789-20-0 (EC-No.) 231-791-2	8.977	Not classified
HIS-UBIQUITIN (HUMAN) (15N, 95%)	(EC Index-No.)	0.99	Not classified
SODIUM PHOSPHATE UNLABELED	(CAS-No.) 7601-54-9 (EC-No.) 231-509-8	0.331	Xi; R36/37/38
SODIUM AZIDE UNLABELED	(CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7	0.02	T+; R26/27 T; R25 N; R51/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER UNLABELED	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	89.682	Not classified
DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O	(CAS-No.) 7789-20-0 (EC-No.) 231-791-2	8.977	Not classified
HIS-UBIQUITIN (HUMAN) (15N, 95%)	(EC Index-No.)	0.99	Not classified
SODIUM PHOSPHATE UNLABELED	(CAS-No.) 7601-54-9 (EC-No.) 231-509-8	0.331	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
SODIUM AZIDE UNLABELED	(CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7	0.02	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation), H330 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	GHS-US classification
WATER UNLABELED	(CAS-No.) 7732-18-5	89.682	Not classified
DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O	(CAS-No.) 7789-20-0	8.977	Not classified
HIS-UBIQUITIN (HUMAN) (15N, 95%)		0.99	Not classified
SODIUM PHOSPHATE UNLABELED	(CAS-No.) 7601-54-9	0.331	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
SODIUM AZIDE UNLABELED	(CAS-No.) 26628-22-8	0.02	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation:dust,mist), H330 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of R- and H- phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
First-aid measures after inhalation	: If not breathing give artificial respiration. When symptoms occur: go into open air and ventilate suspected area. Get medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get immediate medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Alcohol resistant foam. Dry chemical. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Wear recommended personal protective equipment. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Avoid breathing dust, fume, gas, mist, spray, vapors. Ensure adequate air ventilation. Evacuate unnecessary personnel. Evacuate danger area.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment : Keep in suitable, closed containers for disposal.

Methods for cleaning up : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation to minimize dust and/or vapor concentrations.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store tightly closed in a dry and cool place. Comply with applicable regulations. Keep container tightly closed.

Storage conditions : Store in freezer (-80°C). Protect from light, air and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SODIUM AZIDE UNLABELED (26628-22-8)

Italy - Portugal - USA ACGIH ACGIH STEL (ppm)

0.11 ppm Lung damage. Cardiac impairment. Not classifiable as a human carcinogen.

SODIUM PHOSPHATE UNLABELED (7601-54-9)

Italy - Portugal - USA ACGIH ACGIH STEL (mg/m³)

5 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Personal protective equipment : Safety glasses. Gloves. Protective clothing. Respiratory protection of the dependent type.



Materials for protective clothing : Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

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Eye protection	: Chemical goggles or safety glasses.
Skin and body protection	: Wear suitable protective clothing, gloves and eye/face protection.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state	: Liquid
Appearance	: Liquid
Molecular mass	: 18.02 g/mol
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
pH	: 6.5
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 0 °C (32.0 °F)
Freezing point	: No data available
Boiling point	: 100 °C (212.0 °F)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1 g/ml at 20 °C (68 °F)
Solubility	: Water: Completely miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Two years after receipt if stored as stated in "Storage" section. Re-QC after 2 years.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Not available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

HIS-UBIQUITIN (HUMAN) (15N, 95%)

LD50 oral rat	> 90000 mg/kg
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SODIUM AZIDE UNLABELED (26628-22-8)	
LD50 oral rat	27 mg/kg
LD50 dermal rabbit	20 mg/kg
LC50 inhalation rat (mg/l)	37 mg/m ³
ATE CLP (oral)	27.000 mg/kg body weight
ATE CLP (dermal)	20.000 mg/kg body weight
ATE CLP (gases)	10.000 ppmV/4h
ATE CLP (vapors)	0.037 mg/l/4h
ATE CLP (dust, mist)	0.037 mg/l/4h

Skin corrosion/irritation	: Not classified pH: 6.5
Serious eye damage/irritation	: Not classified pH: 6.5
Respiratory or skin sensitization	: Not available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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SODIUM AZIDE UNLABELED (26628-22-8)

LC50 fish 1	5.46 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 other aquatic organisms 1	0.35 mg/l Pseudokirchneriella subcapitata - 96 h

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Not dangerous goods.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

HIS-UBIQUITIN (HUMAN) (15N, 95%)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
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HIS-UBIQUITIN (HUMAN) (15N, 95%)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
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SODIUM AZIDE UNLABELED (26628-22-8)

Listed on the United States SARA Section 302
Subject to reporting requirements of United States SARA Section 313

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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SODIUM PHOSPHATE UNLABELED (7601-54-9)

SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
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DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O (7789-20-0)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313
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WATER UNLABELED (7732-18-5)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
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SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.
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15.2. International regulations

CANADA

HIS-UBIQUITIN (HUMAN) (15N, 95%)

Listed on the Canadian DSL (Domestic Substances List)

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15.2.1. National regulations

No additional information available

15.3. US State regulations

HIS-UBIQUITIN (HUMAN) (15N, 95%)()	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List

HIS-UBIQUITIN (HUMAN) (15N, 95%)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

SODIUM AZIDE UNLABELED (26628-22-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

SODIUM PHOSPHATE UNLABELED (7601-54-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O (7789-20-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

WATER UNLABELED (7732-18-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

HIS-UBIQUITIN (HUMAN) (15N, 95%)	
State or local regulations	
U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List	

SODIUM AZIDE UNLABELED (26628-22-8)	
State or local regulations	
U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List	

SODIUM PHOSPHATE UNLABELED (7601-54-9)	
State or local regulations	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

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DEUTERIUM OXIDE (D2, 70-80%) PROCESSED RECOVERY D2O (7789-20-0)

State or local regulations

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

WATER UNLABELED (7732-18-5)

State or local regulations

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

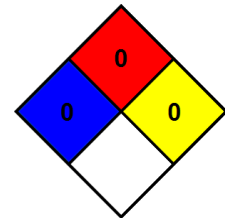
Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Inhalation)	Acute toxicity (inhalation) Category 1
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H300	Fatal if swallowed
H310	Fatal in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R25	Toxic if swallowed
R26/27	Very toxic by inhalation and in contact with skin
R36/37/38	Irritating to eyes, respiratory system and skin
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T	Toxic
T+	Very toxic
Xi	Irritant

NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 0 Minimal Hazard - No significant risk to health
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product