



1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN₃+0.1 mM DSS 90%(V/V) H₂O/D₂O (U-13C, 99%; U-15N, 99%)

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: 06/11/2015

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Version: 1.1

CNLM-8663

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

1.1. Product identifier

Product form	: Mixtures
Product name	: 1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN ₃ +0.1 mM DSS 90%(V/V) H ₂ O/D ₂ O (U-13C, 99%; U-15N, 99%)
Product code	: CNLM-8663

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

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

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	88.0447	Not classified
DEUTERIUM OXIDE (D, 99.9%)	(CAS-No.) 7789-20-0 (EC-No.) 232-148-9	9.7828	Not classified
IMMUNOGLOBULIN-BINDING DOMAIN B1 (U-13C, 99%; U-15N, 99%)	(CAS-No.) (EC-No.) (EC Index-No.)	1.2906	Not classified
SODIUM CHLORIDE UNLABELED	(CAS-No.) 7647-14-5 (EC-No.) 231-598-3	0.7787	Xi; R36/37/38
DISODIUM PHOSPHATE	(CAS-No.) 7558-79-4 (Unlabeled) (EC-No.) 231-448-7 (EC Index-No.)	0.0603	Not classified
POTASSIUM CHLORIDE UNLABELED	(CAS-No.) 7447-40-7 (EC-No.) 231-211-8	0.0199	Xi; N; R22-36-52
POTASSIUM DIHYDROGEN PHOSPHATE	(CAS-No.) 7778-77-0 (Unlabeled) (EC-No.) 231-913-4	0.0188	Not classified
(DSS) SODIUM 2,2-DIMETHYL- 2-SILAPENTANE-5-SULFONATE	(CAS-No.) 2039-96-5 (EC-No.) 218-031-5	0.0022	Xi; R36/37/38
SODIUM AZIDE	(CAS-No.) 26628-22-8 (Unlabeled) (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7	0.002	T+; R28 N; R50/53 R32

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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SODIUM CHLORIDE UNLABELED	(CAS-No.) 7647-14-5 (EC-No.) 231-598-3	0.7787	Skin Irrit. 2, H315 Eye Irrit. 2, H319
DISODIUM PHOSPHATE	(CAS-No.) 7558-79-4 (Unlabeled) (EC-No.) 231-448-7 (EC Index-No.)	0.0603	Not classified
POTASSIUM CHLORIDE UNLABELED	(CAS-No.) 7447-40-7 (EC-No.) 231-211-8	0.0199	Acute Tox. 3 (Inhalation), H331
POTASSIUM DIHYDROGEN PHOSPHATE	(CAS-No.) 7778-77-0 (Unlabeled) (EC-No.) 231-913-4	0.0188	Not classified
(DSS) SODIUM 2,2-DIMETHYL- 2-SILAPENTANE-5-SULFONATE	(CAS-No.) 2039-96-5 (EC-No.) 218-031-5	0.0022	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
SODIUM AZIDE	(CAS-No.) 26628-22-8 (Unlabeled) (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7	0.002	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation:dust,mist), H330 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	: When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. 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 out with water. Get medical advice/attention.

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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 moderate 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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Avoid breathing vapors, mist, gas. Avoid dust formation.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

- For containment : Dike and contain spill. Clean up any spills as soon as possible, using an absorbent material to collect it.
Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

For further information refer to section 13.

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 in a well-ventilated place. Keep container tightly closed.
Storage conditions : Store refrigerated. Do not freeze.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SODIUM AZIDE (26628-22-8 (Unlabeled))		
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	0.11 ppm Lung damage. Cardiac impairment. Not classifiable as a human carcinogen.

Additional information : Contains no substances with occupational exposure limits

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.

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Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Materials for protective clothing : Wear suitable protective clothing and gloves.
Hand protection : Wear suitable protective clothing and gloves.
Eye protection : Wear eye protection. Chemical goggles or face shield with 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.
Environmental exposure controls : Avoid release to the environment.

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 : 6.0 - 8.0 at 25 °C (77 °F)
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

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN3+0.1 mM DSS 90%(V/V) H2O/D2O (U-13C, 99%; U-15N, 99%)

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10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN3+0.1 mM DSS 90%(V/V) H2O/D2O (U-13C, 99%; U-15N, 99%)	
LD50 oral rat	> 90000 mg/kg
SODIUM CHLORIDE UNLABELED (7647-14-5)	
LD50 oral rat	3000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 42000 mg/m ³ 1 h
SODIUM AZIDE (26628-22-8 (Unlabeled))	
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 (vapors)	0.037 mg/l/4h
ATE CLP (dust, mist)	0.037 mg/l/4h
POTASSIUM DIHYDROGEN PHOSPHATE (7778-77-0 (Unlabeled))	
LD50 dermal rabbit	> 4640 mg/kg

Skin corrosion/irritation	: Not classified pH: 6.0 - 8.0 at 25 °C (77 °F)
Serious eye damage/irritation	: Not classified pH: 6.0 - 8.0 at 25 °C (77 °F)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
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 moderate 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.

SODIUM CHLORIDE UNLABELED (7647-14-5)	
LC50 fish 1	1294.6 mg/l <i>Lepomis macrochirus</i> (Bluegill) - 96 h
EC50 Daphnia 1	1661 mg/l <i>Daphnia magna</i> (Water flea) - 48 h
NOEC (chronic)	4000 mg/l <i>Pimephales promelas</i> (fathead minnow)- 7 d
POTASSIUM CHLORIDE UNLABELED (7447-40-7)	
LC50 fish 1	880 mg/l <i>Pimephales promelas</i> (fathead minnow) - 96 h

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POTASSIUM CHLORIDE UNLABELED (7447-40-7)	
EC50 Daphnia 1	83 mg/l Daphnia magna (Water flea) - 48 h

SODIUM AZIDE (26628-22-8 (Unlabeled))	
LC50 fish 1	0.68 mg/l Lepomis macrochirus - 96 h
EC50 Daphnia 1	4.2 mg/l Daphnia pulex (Water flea) - 48 h

12.2. Persistence and degradability

(DSS) SODIUM 2,2-DIMETHYL- 2-SILAPENTANE-5-SULFONATE (2039-96-5)	
Persistence and degradability	Not available.

SODIUM CHLORIDE UNLABELED (7647-14-5)	
Persistence and degradability	Not available.

POTASSIUM CHLORIDE UNLABELED (7447-40-7)	
Persistence and degradability	Not available.

SODIUM AZIDE (26628-22-8 (Unlabeled))	
Persistence and degradability	Not available.

POTASSIUM DIHYDROGEN PHOSPHATE (7778-77-0 (Unlabeled))	
Persistence and degradability	Not available.

12.3. Bioaccumulative potential

(DSS) SODIUM 2,2-DIMETHYL- 2-SILAPENTANE-5-SULFONATE (2039-96-5)	
Bioaccumulative potential	Not available.

SODIUM CHLORIDE UNLABELED (7647-14-5)	
Bioaccumulative potential	Not available.

POTASSIUM CHLORIDE UNLABELED (7447-40-7)	
Bioaccumulative potential	Not available.

SODIUM AZIDE (26628-22-8 (Unlabeled))	
Bioaccumulative potential	Not available.

POTASSIUM DIHYDROGEN PHOSPHATE (7778-77-0 (Unlabeled))	
Bioaccumulative potential	Not available.

12.4. Mobility in soil

(DSS) SODIUM 2,2-DIMETHYL- 2-SILAPENTANE-5-SULFONATE (2039-96-5)	
Ecology - soil	Not available.

SODIUM CHLORIDE UNLABELED (7647-14-5)	
Ecology - soil	Not available.

POTASSIUM CHLORIDE UNLABELED (7447-40-7)	
Ecology - soil	Not available.

SODIUM AZIDE (26628-22-8 (Unlabeled))	
Ecology - soil	Not available.

POTASSIUM DIHYDROGEN PHOSPHATE (7778-77-0 (Unlabeled))	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

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 classified as dangerous in the meaning of transport regulations.

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 classified as dangerous in the meaning of transport regulations.

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

1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN3+0.1 mM DSS 90%(V/V) H2O/D2O (U-13C, 99%; U-15N, 99%)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313.

15.2. International regulations

CANADA

1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN3+0.1 mM DSS 90%(V/V) H2O/D2O (U-13C, 99%; U-15N, 99%)	
Listed on the Canadian DSL (Domestic Substances List)	

15.2.1. National regulations

No additional information available

15.3. US State regulations

1.5 mM HIS6-GB1+10 mM PBS+0.02% NaN3+0.1 mM DSS 90%(V/V) H2O/D2O (U-13C, 99%; U-15N, 99%)	
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

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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.

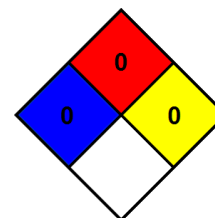
Full text of R-, H- and EUH-phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
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 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
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R28	Very toxic if swallowed
R32	Contact with acids liberates very toxic gas
R36/37/38	Irritating to eyes, respiratory system and skin
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
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