

Hemoglobin Standard

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 4/30/2026 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Hemoglobin Standard
Product code : 1D0101

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : For research use only
Restrictions on use : Not for food, drug or household use

1.4. Supplier's details

Ethos Biosciences, Inc.
2070 Center Square Road
Logan Township, New Jersey 08085
United States
T +1-856-224-0900; +1-800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time
www.ethosbiosciences.com

1.5. Emergency phone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

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	Conc.	GHS US classification
water	CAS-No.: 7732-18-5	> 98	Not classified
sodium chloride	CAS-No.: 7647-14-5	< 1	Not classified
potassium chloride	CAS-No.: 7447-40-7	< 0.5	Not classified
DISODIUM PHOSPHATE	CAS-No.: 7558-79-4	< 0.5	Not classified
potassium dihydrogenorthophosphate	CAS-No.: 7778-77-0	< 0.5	Not classified
Hemoglobin Standard, RBC Lysate, 40 mg/mL	-	≤ 0.5	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders.	: Even though no specific hazards are defined, first-aiders should wear eye protection, gloves and disposable half mask. Consider additional protection if repeated or prolonged exposition is likely.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

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".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep cool. Protect from sunlight.

Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

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Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • sodium chloride: 31.7 g/100ml • potassium chloride: 36 g/100ml • potassium dihydrogenorthophosphate: 21 g/100ml
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

sodium chloride	
Boiling point	1461 °C
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Vapor pressure	Not applicable (solid)

potassium chloride	
Boiling point	Not applicable (melting point > 300 °C)

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potassium chloride	
Flash point	Not applicable (solid)
Auto-ignition temperature	No data available in the literature
Vapor pressure	Not applicable (solid)

potassium dihydrogenorthophosphate	
Boiling point	> 450 °C (1013 hPa, EU Method A.2: Boiling point)
Flash point	Not applicable (solid)
Auto-ignition temperature	Not applicable
Vapor pressure	< 0.01 hPa (25 °C, EU Method A.4: Vapour Pressure)

9.2. Data relevant with regard to physical hazard classes (supplemental)

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

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

sodium chloride (7647-14-5)	
LD50 oral rat	> 3980 mg/kg body weight (Rat, Experimental value, 20% aqueous solution, Oral)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	> 42 mg/l air (1 h, Rat, Male, Experimental value, 20% aqueous solution, Inhalation (aerosol))

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potassium chloride (7447-40-7)	
LD50 oral rat	3020 mg/kg body weight (Rat, Female, Experimental value, Oral)
ATE US (oral)	3020 mg/kg body weight
potassium dihydrogenorthophosphate (7778-77-0)	
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.83 mg/l air (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
Skin corrosion/irritation	: Not classified
sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
potassium chloride (7447-40-7)	
pH	5.5 – 8.5 (5 %, 20 °C)
potassium dihydrogenorthophosphate (7778-77-0)	
pH	4.5 (1 %)
Serious eye damage/irritation	: Not classified
sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
potassium chloride (7447-40-7)	
pH	5.5 – 8.5 (5 %, 20 °C)
potassium dihydrogenorthophosphate (7778-77-0)	
pH	4.5 (1 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
sodium chloride (7647-14-5)	
Viscosity, kinematic	Not applicable (solid)
potassium chloride (7447-40-7)	
Viscosity, kinematic	Not applicable (solid)
potassium dihydrogenorthophosphate (7778-77-0)	
Viscosity, kinematic	Not applicable (solid)
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

sodium chloride (7647-14-5)

LC50 - Fish [1]	5840 mg/l (ASTM, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
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potassium chloride (7447-40-7)

LC50 - Fish [1]	880 mg/l (EPA 600/4-90/027, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	440 – 880 mg/l (EPA 600/4-90/027, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

potassium dihydrogenorthophosphate (7778-77-0)

LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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water (7732-18-5)

Persistence and degradability	Not rapidly degradable
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sodium chloride (7647-14-5)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

potassium chloride (7447-40-7)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

DISODIUM PHOSPHATE (7558-79-4)

Persistence and degradability	Not rapidly degradable
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potassium dihydrogenorthophosphate (7778-77-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Hemoglobin Standard, RBC Lysate, 40 mg/mL	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

sodium chloride (7647-14-5)	
Bioaccumulative potential	Not bioaccumulative.

potassium chloride (7447-40-7)	
Bioaccumulative potential	Not bioaccumulative.

potassium dihydrogenorthophosphate (7778-77-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

sodium chloride (7647-14-5)	
Surface tension	73.03 mN/m (23 °C, 14.5 g/l)
Ecology - soil	No (test)data on mobility of the substance available.

potassium chloride (7447-40-7)	
Ecology - soil	Low potential for adsorption in soil.

potassium dihydrogenorthophosphate (7778-77-0)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

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14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Not regulated
Proper Shipping Name (TDG)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not regulated

TDG
Transport hazard class(es) (TDG) : Not regulated

IMDG
Transport hazard class(es) (IMDG) : Not regulated

IATA
Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (DOT)	: Not regulated
Packing group (TDG)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:		
Hemoglobin Standard, RBC Lysate, 40 mg/mL	CAS-No.	≤ 0.5%

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This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

DISODIUM PHOSPHATE (7558-79-4)

CERCLA RQ	5000 lb
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15.2. International regulations

CANADA

water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

sodium chloride (7647-14-5)

Listed on the Canadian DSL (Domestic Substances List)

potassium chloride (7447-40-7)

Listed on the Canadian DSL (Domestic Substances List)

DISODIUM PHOSPHATE (7558-79-4)

Listed on the Canadian DSL (Domestic Substances List)

potassium dihydrogenorthophosphate (7778-77-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

water (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

sodium chloride (7647-14-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

potassium chloride (7447-40-7)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

DISODIUM PHOSPHATE (7558-79-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

potassium dihydrogenorthophosphate (7778-77-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
DISODIUM PHOSPHATE(7558-79-4)	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

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

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Safety Data Sheet (SDS), USA

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