

Dilurex NHEBSA Diluent

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 4/7/2025 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Dilurex NHEBSA Diluent
Product code : 4Z1216 - all sizes

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 laboratory use only
Restrictions on use : Not for food, drug or household use

1.4. Supplier's details

Exocell
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

Dilurex NHEBSA Diluent

Safety Data Sheet

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

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.	GHS US classification
water	CAS-No.: 7732-18-5	> 95	Not classified
HEPES	CAS-No.: 7365-45-9	1 – 2	Not classified
Proclin 300	CAS-No.: 55965-84-9	< 1	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317
sodium chloride	CAS-No.: 7647-14-5	< 1	Not classified
Bovine Serum Albumin (BSA)	CAS-No.: 9048-46-8	< 1	Not classified
EDTA tetrasodium salt	CAS-No.: 10378-23-1	< 1	Not classified
sodium hydroxide	CAS-No.: 1310-73-2	< 1	Met. Corr. 1, H290 Acute Tox. 4 (Dermal), H312 Skin Corr. 1, H314 Eye Dam. 1, H318

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.

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.
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Dilurex NHEBSA Diluent

Safety Data Sheet

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

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.

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 : Store always product in container of same material as original container.

Dilurex NHEBSA Diluent

Safety Data Sheet

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

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

sodium hydroxide (1310-73-2)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL C	2 mg/m ³
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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.

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 : • Proclin 300: • sodium chloride: 31.7 g/100ml • HEPES: 703.6 mg/l • sodium hydroxide: 100 g/100ml

Dilurex NHEBSA Diluent

Safety Data Sheet

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

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

Proclin 300

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

sodium chloride

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

HEPES

Boiling point	408.47 °C (1 atm, Not applicable (decomposes), Calculated, OECD 103: Boiling Point)
Flash point	Not applicable
Auto-ignition temperature	> 400 °C (1 atm, EU Method A.16: Relative Self-Ignition Temperature for Solids, T2)
Vapor pressure	Not applicable (solid)

sodium hydroxide

Boiling point	1388 °C (1013 hPa)
Flash point	Not applicable (solid)
Auto-ignition temperature	No data available in the literature
Vapor pressure	< 0.01 hPa (25 °C)

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.

Dilurex NHEBSA Diluent

Safety Data Sheet

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

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

Proclin 300 (55965-84-9)	
LD50 oral rat	66 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Calculated by reference to active substance, Oral, 14 day(s))
LD50 dermal rat	> 141 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.17 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Calculated by reference to active substance, Inhalation (dust), 14 day(s))
ATE US (oral)	66 mg/kg body weight
ATE US (dermal)	50 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h
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))
HEPES (7365-45-9)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
sodium hydroxide (1310-73-2)	
ATE US (dermal)	1100 mg/kg body weight
Skin corrosion/irritation	: Not classified
Proclin 300 (55965-84-9)	
pH	No data available in the literature

Dilurex NHEBSA Diluent

Safety Data Sheet

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

sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
HEPES (7365-45-9)	
pH	5 – 6.5 (Literature, 238 g/l, 25 °C)
sodium hydroxide (1310-73-2)	
pH	14 (5 %)

Serious eye damage/irritation : Not classified

Proclin 300 (55965-84-9)	
pH	No data available in the literature
sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
HEPES (7365-45-9)	
pH	5 – 6.5 (Literature, 238 g/l, 25 °C)
sodium hydroxide (1310-73-2)	
pH	14 (5 %)

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

Proclin 300 (55965-84-9)	
Viscosity, kinematic	Not applicable (solid)
sodium chloride (7647-14-5)	
Viscosity, kinematic	Not applicable (solid)
sodium hydroxide (1310-73-2)	
Viscosity, kinematic	No data available in the literature

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.

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

Dilurex NHEBSA Diluent

Safety Data Sheet

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

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Proclin 300 (55965-84-9)	
LC50 - Fish [1]	0.19 mg/l (EPA OPP 72-1, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	0.007 mg/l (48 h, Acartia tonsa, Salt water, Experimental value, GLP)
ErC50 algae	19.9 µg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Skeletonema costatum, Static system, Salt water, Experimental value, GLP)

sodium chloride (7647-14-5)	
LC50 - Fish [1]	5840 mg/l (ASTM, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)

HEPES (7365-45-9)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 g/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

sodium hydroxide (1310-73-2)	
LC50 - Fish [1]	189 mg/l (48 h, Leuciscus idus, Fresh water, Experimental value)
EC50 - Crustacea [1]	40 mg/l (48 h, Ceriodaphnia sp., Experimental value, Locomotor effect)

12.2. Persistence and degradability

Dilurex NHEBSA Diluent	
Persistence and degradability	Not rapidly degradable

Proclin 300 (55965-84-9)	
Persistence and degradability	Not readily biodegradable in water.

sodium chloride (7647-14-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

HEPES (7365-45-9)	
Persistence and degradability	Not readily biodegradable in water.

Bovine Serum Albumin (BSA) (9048-46-8)	
Persistence and degradability	Not rapidly degradable

EDTA tetrasodium salt (10378-23-1)	
Persistence and degradability	Not rapidly degradable

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

Dilurex NHEBSA Diluent

Safety Data Sheet

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

sodium hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Proclin 300 (55965-84-9)	
BCF - Fish [1]	41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-0.32 – 0.7 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

HEPES (7365-45-9)	
Partition coefficient n-octanol/water (Log Pow)	< -3.85 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

sodium hydroxide (1310-73-2)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Proclin 300 (55965-84-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.81 – 1 (log Koc, Calculated value)
Ecology - soil	Highly mobile 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.

HEPES (7365-45-9)	
Surface tension	63.98 mN/m (20 °C, 1.082 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	< 1.32 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

sodium hydroxide (1310-73-2)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

Dilurex NHEBSA Diluent

Safety Data Sheet

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

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.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

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
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TDG

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

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

Transport hazard class(es) (IATA)	: Not regulated
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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.
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14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

Dilurex NHEBSA Diluent

Safety Data Sheet

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

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:

Proclin 300	CAS-No. 55965-84-9	< 1%
HEPES	CAS-No. 7365-45-9	1 – 2%
EDTA tetrasodium salt	CAS-No. 10378-23-1	< 1%

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.

sodium hydroxide (1310-73-2)

CERCLA RQ	1000 lb
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15.2. International regulations

CANADA

Proclin 300 (55965-84-9)

Listed on the Canadian DSL (Domestic Substances List)

sodium chloride (7647-14-5)

Listed on the Canadian DSL (Domestic Substances List)

Bovine Serum Albumin (BSA) (9048-46-8)

Listed on the Canadian DSL (Domestic Substances List)

EDTA tetrasodium salt (10378-23-1)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

sodium hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

Dilurex NHEBSA Diluent

Safety Data Sheet

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

EU-Regulations

No additional information available

National regulations

sodium chloride (7647-14-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

EDTA tetrasodium salt (10378-23-1)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

water (7732-18-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

sodium hydroxide (1310-73-2)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

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
sodium hydroxide(1310-73-2)	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)

Issue date : 4/7/2025

Full text of hazard classes and H-statements	
H290	May be corrosive to metals
H301	Toxic if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled

NFPA health hazard

: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard

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

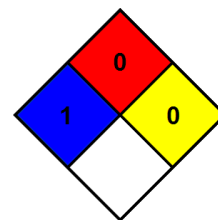
Dilurex NHEBSA Diluent

Safety Data Sheet

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

NFPA reactivity

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



Safety Data Sheet (SDS), USA

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