Dilurex PBS Casein Sucrose Blocker

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 11/7/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Product name	:	Dilurex PBS Casein Sucrose Blocker
Product code	:	4Z0023 - all sizes

1.2. Recommended use and restrictions on use

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

1.3. Supplier

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

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

97% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
97% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
97% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Deionized Water	CAS-No.: 7732-18-5	> 92	Not classified
sucrose	CAS-No.: 57-50-1	< 5	Not classified
sodium chloride	CAS-No.: 7647-14-5	< 1	Not classified
potassium chloride	CAS-No.: 7447-40-7	< 0.5	Not classified
sodium phosphate, dibasic	CAS-No.: 7558-79-4	< 0.5	Not classified
casein	CAS-No.: 9000-71-9	≤ 0.2	Not classified
potassium phosphate, monobasic	CAS-No.: 7778-77-0	< 0.1	Not classified
Proclin 300	CAS-No.: 55965-84-9	≤ 0.05	Not classified

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

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 and effects (acute and delayed)

Symptoms/effects after skin contact : May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

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

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Collect spillage.
Methods for cleaning up	:	Take up liquid spill into absorbent material.
Other information	:	Dispose of materials or solid residues at an authorized site.

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	:	Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sucrose (57-50-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 mg/m³

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/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. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear, colorless liquid.
Color	:	Colorless
Odor	:	odorless
Odor threshold	:	No data available
pH	:	7.3 – 7.5
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	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	:	No data available
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
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

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

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

casein	
Boiling point	Not applicable
Auto-ignition temperature	> 460 °C (T1)

potassium chloride	
Boiling point	Not applicable (melting point > 300 °C)
Flash point	Not applicable (solid)
Auto-ignition temperature	No data available in the literature
Vapor pressure	Not applicable (solid)

sodium phosphate, dibasic	
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Vapor pressure	< 0.1 hPa (20 °C)

potassium phosphate, monobasic	
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)

sucrose	
Boiling point	697 °C (1013 hPa)
Flash point	Not applicable (solid)
Auto-ignition temperature	No data available in the literature
Vapor pressure	No data available in the literature

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

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

Dilurex PBS Casein Sucrose Blocker	
Unknown acute toxicity (GHS US)	97% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 97% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 97% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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))

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))

potassium chloride (7447-40-7)	
LD50 oral rat	3020 mg/kg body weight (Rat, Female, Experimental value, Oral)

sodium phosphate, dibasic (7558-79-4)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 420: Acute Oral toxicity – Acute Toxic Class Method, Rat, 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))
LC50 Inhalation - Rat	> 0.83 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))

potassium phosphate, monobasic (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))

sucrose (57-50-1)	
LD50 oral rat	29700 mg/kg (Rat, Literature study, Oral)

Skin corrosion/irritation : Not classified
pH: 7.3 – 7.5

sodium chloride (7647-14-5)	
pH	7.5 (18 °C)

Proclin 300 (55965-84-9)	
pH	No data available in the literature

potassium chloride (7447-40-7)	
pH	5.5 – 8.5 (5 %, 20 °C)

sodium phosphate, dibasic (7558-79-4)	
pH	9 (1 %)

potassium phosphate, monobasic (7778-77-0)	
pH	4.5 (1 %)

sucrose (57-50-1)	
pH	No data available in the literature

Serious eye damage/irritation : Not classified
pH: 7.3 – 7.5

sodium chloride (7647-14-5)	
pH	7.5 (18 °C)

Proclin 300 (55965-84-9)	
pH	No data available in the literature

potassium chloride (7447-40-7)	
pH	5.5 – 8.5 (5 %, 20 °C)

sodium phosphate, dibasic (7558-79-4)	
pH	9 (1 %)

potassium phosphate, monobasic (7778-77-0)	
pH	4.5 (1 %)

sucrose (57-50-1)	
pH	No data available in the literature

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
Viscosity, kinematic : No data available

sodium chloride (7647-14-5)	
Viscosity, kinematic	Not applicable (solid)

Proclin 300 (55965-84-9)	
Viscosity, kinematic	Not applicable (solid)

potassium chloride (7447-40-7)	
Viscosity, kinematic	Not applicable (solid)

potassium phosphate, monobasic (7778-77-0)	
Viscosity, kinematic	Not applicable (solid)

sucrose (57-50-1)	
Viscosity, kinematic	Not applicable (solid)

Symptoms/effects after skin contact : May cause an allergic skin reaction.

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. Toxic to aquatic life with long lasting effects.

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

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)

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)

sodium phosphate, dibasic (7558-79-4)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

potassium phosphate, monobasic (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)

potassium phosphate, monobasic (7778-77-0)	
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

Dilurex PBS Casein Sucrose Blocker	
Persistence and degradability	Not rapidly degradable

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

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

casein (9000-71-9)	
Persistence and degradability	Biodegradability in water: no data available.

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

potassium chloride (7447-40-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

sodium phosphate, dibasic (7558-79-4)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

potassium phosphate, monobasic (7778-77-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

sucrose (57-50-1)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.69 g O_2/g substance
ThOD	1.12 g O_2/g substance
BOD (% of ThOD)	0.61 (5 day(s), Literature study)

12.3. Bioaccumulative potential

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

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).

casein (9000-71-9)	
Bioaccumulative potential	No bioaccumulation data available.

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

sodium phosphate, dibasic (7558-79-4)	
Bioaccumulative potential	Not bioaccumulative.

potassium phosphate, monobasic (7778-77-0)	
Bioaccumulative potential	Not bioaccumulative.

sucrose (57-50-1)	
Partition coefficient n-octanol/water (Log Pow)	-3.7 (Experimental value)
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.

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.

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

sodium phosphate, dibasic (7558-79-4)	
Ecology - soil	No (test)data on mobility of the substance available.

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

sucrose (57-50-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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

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. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

14.7. 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

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:		
sodium chloride	CAS-No. 7647-14-5	< 1%
Proclin 300	CAS-No. 55965-84-9	≤ 0.05%
casein	CAS-No. 9000-71-9	≤ 0.2%
potassium chloride	CAS-No. 7447-40-7	< 0.5%
sodium phosphate, dibasic	CAS-No. 7558-79-4	< 0.5%
potassium phosphate, monobasic	CAS-No. 7778-77-0	< 0.1%
sucrose	CAS-No. 57-50-1	< 5%

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.

15.2. International regulations

CANADA

Deionized Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Deionized Water (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US 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

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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