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

1.1. Product identifier

Product form : Mixture

Product name : TwistDx Pol Protein

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory Reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

TwistDx Ltd
Abbott House
Vanwall Business Park
Vanwall Road
Maidenhead SL6 4XE
United Kingdom
Telephone: +1-877-450-6901
Email: info@twistdx.co.uk

1.4. Emergency telephone number

Emergency number : +1-703-741-5970 (+1-800-424-9300 for US, Canada)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

Labelling according to Directive 67/548/EEC or 1999/45/EC

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Tris (hydroxymethyl) aminomethane	(CAS-No.) 77-86-1 (EC-No.) 201-064-4	< 1	Not classified
Potassium chloride	(CAS-No.) 7447-40-7 (EC-No.) 231-211-8	< 1	Not classified
DITHIOTHREITOL	(CAS-No.) 3483-12-3 (EC-No.) 222-468-7	< 1	Not classified
Alcohols, C12-14-secondary, ethoxylated *(component of Tergitol™)*	(CAS-No.) 84133-50-6	0.097 – 0.1	Not classified
Ethylenediaminetetraacetic acid	(CAS-No.) 64-02-8 (EC-No.) 200-573-9 (EC Index-No.) 607-428-00-2	0.038	Not classified
Polyethylene glycol *(component of Tergitol™)*	(CAS-No.) 25322-68-3 (EC-No.) 500-038-2	< 0.003	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tris (hydroxymethyl) aminomethane	(CAS-No.) 77-86-1 (EC-No.) 201-064-4	< 1	Not classified
Potassium chloride	(CAS-No.) 7447-40-7 (EC-No.) 231-211-8	< 1	Not classified
DITHIOTHREITOL	(CAS-No.) 3483-12-3 (EC-No.) 222-468-7	< 1	Not classified
Alcohols, C12-14-secondary, ethoxylated *(component of Tergitol™)*	(CAS-No.) 84133-50-6	0.097 – 0.1	Acute Tox. 4 (Inhalation:dust,mist), H332
Ethylenediaminetetraacetic acid	(CAS-No.) 64-02-8 (EC-No.) 200-573-9 (EC Index-No.) 607-428-00-2	0.038	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Polyethylene glycol *(component of Tergitol™)*	(CAS-No.) 25322-68-3 (EC-No.) 500-038-2	< 0.003	Not classified

Full text of H- and EUH-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.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Slight irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear protective clothing.

Emergency procedures : Ventilate spillage area.

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

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.

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

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store as directed in product literature.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

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

Personal protective equipment : Protective clothing. Gloves. Safety glasses.



Hand protection : Protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : None under normal use.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless liquid.
Colour	: No data available
Odour	: Odourless.
Odour threshold	: No data available
pH	: 7.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Density	: ≈ 1
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

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

Strong oxidizing agents.

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 : Not classified

Tris (hydroxymethyl) aminomethane (77-86-1)	
LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

(7447-40-7)	
LD50 oral rat	3020 mg/kg bodyweight (Rat, Female, Experimental value, Oral)
ATE CLP (oral)	3020 mg/kg bodyweight

(64-02-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)
ATE CLP (oral)	500 mg/kg bodyweight

Polyethylene glycol (25322-68-3)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Remarks on results: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:

Alcohols, C12-14-secondary, ethoxylated (84133-50-6)	
LD50 oral rat	> 412 mg/kg
LC50 Inhalation - Rat	≈ 1.06 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 7.5

Serious eye damage/irritation : Not classified
pH: 7.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Polyethylene glycol (25322-68-3)	
LOAEL (oral, rat, 90 days)	16000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l air Animal: rat, Guideline: other:

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Tris (hydroxymethyl) aminomethane (77-86-1)	
EC50 - Crustacea [1]	> 980 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

(7447-40-7)	
LC50 - Fish [1]	2010 mg/l (96 h, Lepomis macrochirus, Static system)
EC50 - Crustacea [1]	660 mg/l (EPA 600/4-90/027, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
LC50 - Fish [2]	880 mg/l (EPA 600/4-90/027, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

(64-02-8)	
LC50 - Fish [1]	121 mg/l (96 h, Lepomis macrochirus, Literature study, Soft water)
EC50 - Crustacea [1]	625 mg/l (24 h, Daphnia magna, Literature study)

Polyethylene glycol (25322-68-3)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Poecilia reticulata
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	17475.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	13671.59 mg/l Test organisms (species): other: Duration: '28 d'

12.2. Persistence and degradability

Tris (hydroxymethyl) aminomethane (77-86-1)	
Persistence and degradability	Readily biodegradable in water.

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

(64-02-8)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	< 0.002 g O_2 /g substance
Chemical oxygen demand (COD)	0.54 – 0.58 g O_2 /g substance

12.3. Bioaccumulative potential

Tris (hydroxymethyl) aminomethane (77-86-1)	
Partition coefficient n-octanol/water (Log Pow)	-2.31 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

(7447-40-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.46 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

(64-02-8)	
Partition coefficient n-octanol/water (Log Pow)	-2.6
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Tris (hydroxymethyl) aminomethane (77-86-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.87 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

(7447-40-7)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Tris (hydroxymethyl) aminomethane (77-86-1)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

(7447-40-7)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

14.6.2. Transport by sea

14.6.3. Air transport

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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)
Contains no substance(s) listed on the REACH Candidate List
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

15.1.2. National regulations

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:
Modified.

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Abbreviations and acronyms	:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Biological limit value. Biochemical oxygen demand (BOD). Chemical oxygen demand (COD). Derived Minimal Effect level. Derived-No Effect Level. European Community number. Median effective concentration. European Standard. International Agency for Research on Cancer. International Air Transport Association. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Organisation for Economic Co-operation and Development. Occupational Exposure Limit. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Regulations concerning the International Carriage of Dangerous Goods by Rail. Safety Data Sheet. Sewage treatment plant. Theoretical oxygen demand (ThOD). Median Tolerance Limit. Volatile Organic Compounds. Chemical Abstract Service number. Not Otherwise Specified. Very Persistent and Very Bioaccumulative. Endocrine disrupting properties.
Other information	:	Issue date **2023-08-22**

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H332	Harmful if inhaled.

SDS EU

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

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