Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

Issuing Date: 2017-08-20 **Revision Date:** 2024-04-19 **Version:** 3

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

1.1. Product identifier

Product No 12957

Product name Western Blotting Applications Solutions Kit

Kit Component

9803: Cell Lysis Buffer (10X)
56036: 3X Blue Loading Buffer
14265: 30X Reducing Agent
59329: Blue Prestained Protein Marker, Broad Range (11-250 kDa)
9998: BSA
7074: Anti-rabbit IgG, HRP-linked Antibody
7076: Anti-mouse IgG, HRP-linked Antibody
8553: PMSF
4050: Tris-Glycine SDS Running Buffer (10X)
12369: Nitrocellulose Sandwiches
12539: Tris-Glycine Transfer Buffer (10X)
9997: Tris Buffered Saline with Tween® 20 (TBST-10X)
9999: Nonfat Dry Milk
46935: SignalFire™ ECL Reagent A
74709: SignalFire™ ECL Reagent B

Hazardous Components
56036: 3X Blue Loading Buffer
14265: 30X Reducing Agent
12369: Nitrocellulose Sandwiches
9803: Cell Lysis Buffer (10X)
8553: PMSF

Contains

Chemical name	Index No.	CAS No
glycerol (>100%)	Not Listed	56-81-5
albumins, blood serum (>100%)	-	9048-46-8
nitrocellulose, containing a maximum of 12,6 % nitrogen (90 - 100%)	-	9004-70-0
alpha-toluenesulphonyl fluoride (90 - 100%)	-	329-98-6
(R*,R*)-1,4-dimercaptobutane-2,3-diol (10 - 20%)	Not Listed	3483-12-3
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether (10 - 20%)	Not Listed	9002-93-1
sodium dodecyl sulphate (0 - 10%)	Not Listed	151-21-3
ethanediol (0 - 10%)	603-027-00-1	107-21-1
sodium salt of weak mineral acid (0 - 10%)	TRADE SECRET	TRADE SECRET
tetrasodium pyrophosphate, decahydrate (0 - 10%)	Not Listed	13472-36-1
sodium azide (0 - 10%)	011-004-00-7	26628-22-8

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

Identified uses For Research Use Only. Not for Use in Diagnostic Procedures.

1.3. Details of the supplier of the safety data sheet

Importer
Cell Signaling Technology Europe B.V.
Dellaertweg 9b
2316 WZ Leiden
The Netherlands
TEL: +31 (0)71 7200 200
FAX: +31 (0)71 891 0019

Manufacturer
Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

Website www.cellsignal.com
E-mail Address info@cellsignal.eu

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Classification and label elements described below are inclusive of all hazards of the combined kit. The most severe classifications are listed for each endpoint. Refer to individual kit component SDS for classification and label elements for each component present in the kit.

Acute oral toxicity	Category 3 - (H301)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Chronic aquatic toxicity	Category 3 - (H412)
Flammable solids	Category 1 - (H228)

2.2. Label elements

Signal word
Danger

Hazard statement(s)
H228 - Flammable solid.
H301 - Toxic if swallowed.
H314 - Causes severe skin burns and eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or regular foam to extinguish.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards

Polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether (CAS no. 9002-93-1) is a suspected endocrine disruptor. Endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100(3) or Commission Regulation (EU) 2018/605(4).

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 3. Composition/information on ingredients

Kit Component **9803: Cell Lysis Buffer (10X)**

DANGER: Causes skin irritation. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	9002-93-1	5-10	-	Acute Tox. 4(H302) Eye Dam. 1(H318) Aquatic Chronic 2 (H411)	no data available
tetrasodium pyrophosphate, decahydrate	13472-36-1	0.1-1	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	no data available

Kit Component **56036: 3X Blue Loading Buffer**

WARNING: Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available
sodium dodecyl sulphate	151-21-3	5-10	205-788-1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 3 (H311)	no data available

trometamol	77-86-1	1-3	201-064-4	-	no data available

Kit Component **14265: 30X Reducing Agent**

WARNING: Causes skin irritation. Causes serious eye irritation.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	10 - <20	222-468-7	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	no data available

Kit Component **8553: PMSF**

DANGER: Toxic if swallowed. Causes severe skin burns and eye damage.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
alpha-toluenesulphonyl fluoride	329-98-6	100	206-350-2	Acute Tox. 3 (301) Skin Corr. 1B (H314)	no data available

Kit Component **12369: Nitrocellulose Sandwiches**

DANGER: Flammable solid.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
nitrocellulose, containing a maximum of 12,6 % nitrogen	9004-70-0	60-100	-	Flam. Sol. 1 (H228)	no data available

Kit Component **59329: Blue Prestained Protein Marker, Broad Range (11-250 kDa)**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	25-35	200-289-5	-	no data available
sodium dodecyl sulphate	151-21-3	1-3	205-788-1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 3 (H311)	no data available
sodium azide	26628-22-8	<0.01	247-852-1	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	no data available

Kit Component **46935: SignalFire™ ECL Reagent A**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
ethanediol	107-21-1	1-3	203-473-3	Acute Tox. 4 (H302) STOT RE 2 (H373)	no data available

Kit Component **74709: SignalFire™ ECL Reagent B**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
sodium salt of weak mineral acid	TRADE SECRET	0.1-1	TRADE SECRET	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) STOT SE 3 (H335)	no data available

Kit Component **9998: BSA**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
albumins, blood serum	9048-46-8	100	232-936-2	-	no data available

Kit Component
12539: Tris-Glycine Transfer Buffer (10X)
9997: Tris Buffered Saline with Tween® 20 (TBST-10X)
9999: Nonfat Dry Milk
7074: Anti-rabbit IgG, HRP-linked Antibody
7076: Anti-mouse IgG, HRP-linked Antibody

These products do not contain substances at concentrations requiring disclosure under (EC) No. 1907/2006 (REACH).

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation Immediate medical attention is required. Move to fresh air. If not breathing, give artificial respiration.

Skin contact Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Eye contact Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing.

Ingestion Immediate medical attention is required. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Drink plenty of water.

Protection of first-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms. Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

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

Notes to physician Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Carbon dioxide (CO_2)
Water spray
Dry chemical
Foam

Unsuitable Extinguishing Media No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. **Nitrocellulose -** Extremely flammable. Will be easily ignited by heat, sparks or flames. **PMSF -** Water hydrolyzes material liberating acidic gas. Contact with metals may evolve flammable hydrogen gas.

Hazardous Combustion Products Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen fluoride

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

For emergency responders Use personal protection recommended in Section 8.

Other information DO NOT GET WATER on spilled substance or inside containers.

6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment. Liquids: Cover liquid spill with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Solids: Avoid dust formation. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Prevent the formation of vapors, mists and aerosols. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Use only in area provided with appropriate exhaust ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep away from open flames, hot surfaces and sources of ignition. Keep in properly labeled containers.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values					
Chemical name	**European Union**	**United Kingdom**	**France**	**Spain**	**Germany**
glycerol		STEL 30 mg/m³ TWA 10 mg/m³	TWA 10 mg/m³	TWA 10 mg/m³	Ceiling / Peak: 400 mg/m³ TWA: 200 mg/m³
ethanediol	TWA 20 ppm TWA 52 mg/m³ STEL 40 ppm STEL 104 mg/m³ S*	STEL 40 ppm STEL 104 mg/m³ STEL 30 mg/m³ TWA 20 ppm TWA 52 mg/m³ TWA 10 mg/m³ Skin	TWA 20 ppm TWA 52 mg/m³ STEL 40 ppm STEL 104 mg/m³ P*	TWA 20 ppm TWA 52 mg/m³ STEL 40 ppm STEL 104 mg/m³ S*	TWA: 10 ppm TWA: 26 mg/m³ Skin Ceiling / Peak: 20 ppm Ceiling / Peak: 52 mg/m³ H*
tetrasodium pyrophosphate, decahydrate		STEL 15 mg/m³ TWA 5 mg/m³	TWA 5 mg/m³	TWA 5 mg/m³	
sodium azide	TWA 0.1 mg/m³ STEL 0.3 mg/m³ S*	STEL 0.3 mg/m³ TWA 0.1 mg/m³ Skin	TWA 0.1 mg/m³ STEL 0.3 mg/m³ P*	TWA 0.1 mg/m³ STEL 0.3 mg/m³ S*	TWA: 0.2 mg/m³ Ceiling / Peak: 0.4 mg/m³
Chemical name	**Italy**	**Portugal**	**Netherlands**	**Finland**	**Denmark**
glycerol		TWA 10 mg/m³		TWA 20 mg/m³	
ethanediol	TWA 20 ppm TWA 52 mg/m³ STEL 40 ppm STEL 104 mg/m³ Pelle*	Ceiling 100 mg/m³ C(A4)	Huid* STEL 104 mg/m³ TWA 52 mg/m³ TWA 10 mg/m³	TWA 20 ppm TWA 50 mg/m³ STEL 40 ppm STEL 100 mg/m³ iho*	TWA 10 ppm TWA 26 mg/m³ TWA 10 mg/m³ H*
tetrasodium pyrophosphate, decahydrate					TWA 5 mg/m³
sodium azide	TWA 0.1 mg/m³ STEL 0.3 mg/m³ Pelle*	TWA 0.1 mg/m³ STEL 0.3 mg/m³ Ceiling 0.29 mg/m³ Ceiling 0.11 ppm C(A4)	Huid* STEL 0.3 mg/m³ TWA 0.1 mg/m³	TWA 0.1 mg/m³ STEL 0.3 mg/m³ iho*	TWA 0.1 mg/m³ H*

		P*			
Chemical name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
glycerol		SS-C** TWA 50 mg/m³ STEL 100 mg/m³	TWA 10 mg/m³		TWA 10 mg/m³ STEL 30 mg/m³
ethanediol	H* STEL 20 ppm STEL 52 mg/m³ TWA 10 ppm TWA 26 mg/m³	SS-C** H* TWA 10 ppm TWA 26 mg/m³ STEL 20 ppm STEL 52 mg/m³	TWA 15 mg/m³ STEL 50 mg/m³	TWA 10 mg/m³ TWA 20 ppm TWA 52 mg/m³ Ceiling 25 ppm S* STEL 104 mg/m³ STEL 40 ppm	TWA 10 mg/m³ TWA 20 ppm TWA 52 mg/m³ STEL 40 ppm STEL 104 mg/m³ Skin
tetrasodium pyrophosphate, decahydrate	STEL 10 mg/m³ TWA 5 mg/m³	TWA 5 mg/m³		TWA 5 mg/m³ STEL 10 mg/m³	TWA 5 mg/m³
sodium azide	H* STEL 0.3 mg/m³ TWA 0.1 mg/m³	TWA 0.2 mg/m³ STEL 0.4 mg/m³	TWA 0.1 mg/m³ STEL 0.3 mg/m³	TWA 0.1 mg/m³ STEL 0.1 mg/m³	TWA 0.1 mg/m³ STEL 0.3 mg/m³ Skin

8.2. Exposure controls

Appropriate engineering controls
Showers, eyewash stations, and ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection	Tightly fitting safety goggles
Skin protection	Wear protective gloves and protective clothing
Hand protection	Impervious gloves
Other	Wear suitable protective clothing.
Respiratory protection	In case of inadequate ventilation wear respiratory protection

Environmental Exposure Controls
No information available

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Kit Component	**9803: Cell Lysis Buffer (10X)**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.5

Kit Component	**56036: 3X Blue Loading Buffer**
Physical state	Liquid
Color	Blue

Kit Component	**14265: 30X Reducing Agent**
Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Rotten-egg like

Kit Component	**59329: Blue Prestained Protein Marker, Broad Range (11-250 kDa)**

Physical state	Liquid
Color	Purple
pH	7.5

Kit Component	**9998: BSA**
Physical state	Solid
Appearance	Powder, Lyophilized
Color	Off-white / light yellow
pH	6.7 - 7.3

Kit Component	**7074: Anti-rabbit IgG, HRP-linked Antibody**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.5

Kit Component	**7076: Anti-mouse IgG, HRP-linked Antibody**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.5

Kit Component	**8553: PMSF**
Physical state	Solid
Appearance	Crystalline Powder
Color	Off-white / light yellow
Melting point/freezing point	92 °C

Kit Component	**4050: Tris-Glycine SDS Running Buffer (10X)**
Physical state	Liquid
Appearance	Clear
Color	Colorless / Yellow
pH	8.6

Kit Component	**12369: Nitrocellulose Sandwiches**
Physical state	Solid
Appearance	Membrane
Color	White to off-white
Odor	Odorless
Autoignition temperature	> 160 °C

Kit Component	**12539: Tris-Glycine Transfer Buffer (10X)**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	8.3

Kit Component	**9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.4

Kit Component	**9999: Nonfat Dry Milk**
Physical state	Solid
Appearance	Powder, Lyophilized
Color	White to off-white

Kit Component	**46935: SignalFire™ ECL Reagent A**

Physical state	Liquid
Appearance	Clear
Color	Colorless / Light pink
pH	9.5

Kit Component	**74709: SignalFire™ ECL Reagent B**
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	5
Solubility	Soluble in water

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

PMSF - Reaction with water or moist air will release toxic, corrosive or flammable gases. (Hydrogen fluoride).

10.3. Possibility of hazardous reactions

Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous reactions	Reacts with water to produce toxic and corrosive gas Exothermic reaction possible with strong oxidizers

10.4. Conditions to avoid

Incompatible products. Extremes of temperature and direct sunlight. Keep away from open flames, hot surfaces and sources of ignition. Storage near to reactive materials. Exposure to moisture.

10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Water.

10.6. Hazardous decomposition products

Carbon oxides (COx)
Nitrogen oxides (NOx)
Sulfur oxides
Hydrogen fluoride

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information
Refer to kit component SDS for full toxicological information. This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation

glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m³ (Rat) 1 h
nitrocellulose, containing a maximum of 12,6 % nitrogen	> 5000 mg/kg (Rat)	-	-
alpha-toluenesulphonyl fluoride	200 (mg/kg) (mice)	-	-
(R*,R*)-1,4-dimercaptobutane-2,3-diol	400 mg/kg (Rat)	-	-
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	= 1800 mg/kg (Rat)	-	-
sodium dodecyl sulphate	= 1288 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
ethanediol	-	-	-
sodium salt of weak mineral acid	1200 mg/kg (Rat)	-	-
sodium azide	= 27 mg/kg (Rat)	= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)	-

Information on likely routes of exposure

Inhalation

Kit Component **8553: PMSF**
Inhalation Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns

Eye contact

Kit Component **9803: Cell Lysis Buffer (10X)**
Eye contact Corrosive to the eyes and may cause severe damage including blindness

Kit Component **56036: 3X Blue Loading Buffer**
Eye contact May cause irritation

Kit Component **14265: 30X Reducing Agent**
Eye contact May cause irritation

Kit Component **8553: PMSF**
Eye contact Corrosive to the eyes and may cause severe damage including blindness

Skin contact

Kit Component **9803: Cell Lysis Buffer (10X)**
Skin contact Irritating to skin

Kit Component **56036: 3X Blue Loading Buffer**
Skin contact Irritating to skin

Kit Component **14265: 30X Reducing Agent**
Skin contact Irritating to skin

Kit Component **8553: PMSF**
Skin contact Corrosive to skin. May cause burns

Ingestion

Kit Component **8553: PMSF**
Ingestion Ingestion causes burns of the upper digestive and respiratory tract.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms. Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

Skin and Eye Corrosion/Irritation

Kit Component	**9803: Cell Lysis Buffer (10X)**
Serious eye damage/eye irritation	Risk of serious damage to eyes
Skin corrosion/irritation	Irritating to skin

Kit Component	**56036: 3X Blue Loading Buffer**
Serious eye damage/eye irritation	Causes serious eye irritation
Skin corrosion/irritation	Causes skin irritation

Kit Component	**14265: 30X Reducing Agent**
Serious eye damage/eye irritation	Causes serious eye irritation
Skin corrosion/irritation	Irritating to skin

Kit Component	**8553: PMSF**
Serious eye damage/eye irritation	Risk of serious damage to eyes
Skin corrosion/irritation	Causes burns

Sensitization No information available

Mutagenic effects No information available.

Carcinogenic effects No information available

Reproductive toxicity No information available.

Systemic Target Organ Toxicity (STOT) No information available

Aspiration Hazard No information available.

11.2. Information on other hazards

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Product Information

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
glycerol	-	LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50 500 mg/L (Daphnia magna) 24 h

polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	-	LC50 8.9 mg/l (Pimephales promelas) 96 h	EC50 26 mg/l (Daphnia) 48 h
sodium dodecyl sulphate	EC50 53 mg/L (Desmodesmus subspicatus) 72 h EC50 30 - 100 mg/L (Desmodesmus subspicatus) 96 h EC50 42 mg/L (Desmodesmus subspicatus) 96 h EC50 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h EC50 117 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 8 - 12.5 mg/L (Pimephales promelas) 96 h LC50 4.1 mg/L (Leuciscus idus) 48 h LC50 22.1 - 22.8 mg/L (Pimephales promelas) 96 h LC50 4.3 - 8.5 mg/L (Oncorhynchus mykiss) 96 h LC50 4.62 mg/L (Oncorhynchus mykiss) 96 h LC50 4.2 mg/L (Oncorhynchus mykiss) 96 h LC50 7.97 mg/L (Brachydanio rerio) 96 h LC50 9.9 - 20.1 mg/L (Brachydanio rerio) 96 h LC50 4.06 - 5.75 mg/L (Lepomis macrochirus) 96 h LC50 4.2 - 4.8 mg/L (Lepomis macrochirus) 96 h LC50 4.5 mg/L (Lepomis macrochirus) 96 h LC50 5.8 - 7.5 mg/L (Pimephales promelas) 96 h LC50 10.2 - 22.5 mg/L (Pimephales promelas) 96 h LC50 6.2 - 9.6 mg/L (Pimephales promelas) 96 h LC50 13.5 - 18.3 mg/L (Poecilia reticulata) 96 h LC50 10.8 - 16.6 mg/L (Poecilia reticulata) 96 h LC50 1.31 mg/L (Cyprinus carpio) 96 h LC50 15 - 18.9 mg/L (Pimephales promelas) 96 h	EC50 21.2 mg/L (Daphnia magna) 24 h EC50 1.8 mg/L (Daphnia magna) 48 h
ethanediol	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 40761 mg/L (Oncorhynchus mykiss) 96 h LC50 27540 mg/L (Lepomis macrochirus) 96 h LC50 41000 mg/L (Oncorhynchus mykiss) 96 h LC50 14 - 18 mL/L (Oncorhynchus mykiss) 96 h LC50 40000 - 60000 mg/L (Pimephales promelas) 96 h LC50 16000 mg/L (Poecilia reticulata) 96 h	EC50 46300 mg/L (Daphnia magna) 48 h
sodium salt of weak mineral acid	-	-	EC50 6.98 - 10.68 mg/L (Ceriodaphnia dubia) 48h
sodium azide	EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 0.8 mg/L (Oncorhynchus mykiss) 96 h LC50 5.46 mg/L (Pimephales promelas) 96 h LC50 0.7 mg/L (Lepomis macrochirus) 96 h	LC100 1 mg/L (Orconectes rusticus) 96 h

12.2. Persistence and degradability

Kit Component	**9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**
Persistence and degradability	Product is biodegradable

12.3. Bioaccumulative potential

Kit Component	**12369: Nitrocellulose Sandwiches**
Bioaccumulation	Not likely to bioaccumulate

Kit Component	**9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**
Bioaccumulation	Does not bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
glycerol	-1.76
sodium dodecyl sulphate	1.6
ethanediol	-1.93

12.4. Mobility in soil

Kit Component **12369: Nitrocellulose Sandwiches**
Mobility Is not likely mobile in the environment due its low water solubility

Kit Component **9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**
Mobility Will likely be mobile in the environment due to its water solubility

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Endocrine disrupting properties

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	Endocrine disrupting properties, Article 57f - environment	-	-

12.7. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products Dispose of wastes in an approved waste disposal facility.

Contaminated packaging Dispose of in accordance with local regulations.

Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO

14.1 UN number UN3316
14.2 UN proper shipping name Chemical kit
14.3 Transport hazard class(es) 9
14.4 Packing group II
14.5 Environmental hazards None
14.6 Special precautions for user None
14.7 Maritime transport in bulk according to IMO instruments Not regulated

ADR/RID

14.1 UN number	UN3316
14.2 UN proper shipping name	Chemical kit
14.3 Transport hazard class(es)	9
14.4 Packing group	II
14.5 Environmental hazards	None
14.6 Special precautions for user	

IATA

14.1 UN number	UN3316
14.2 UN proper shipping name	Chemical kit
14.3 Transport hazard class(es)	9
14.4 Packing group	II
14.5 Environmental hazards	None
14.6 Special precautions for user	

SECTION 15: Regulatory information

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

Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Chemical name	Candidate List of Substances of Very High Concern for Authorization Information	REACH Annex XVII
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether (10 - 20%)	Reason for inclusion Endocrine disrupting properties, Article 57f - environment	-

SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

International inventories

TSCA 8(b)	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3

H228 - Flammable solid
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects
EUH032 - Contact with acids liberates very toxic gas

Classification procedure: Expert judgment and weight of evidence determination.
Issuing Date: 2017-08-20
Revision Date: 2024-04-19

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.