

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 06.09.2018

Version 1.2

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No.	6A4694
Millipore Ref.	2504
Product name	Re-Blot Plus Strong Solution (10X)

REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Biochemical research/analysis
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For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com
Regional representation	Merck Chemicals Ltd * The Old Brickyard * New Road * Gillingham * Dorset * SP8 4XT * Tel. +44(0)1747 833000 * information@merckchem.co.uk .

1.4 Emergency telephone number	+49 (0) 6151 722440
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SECTION 2. Hazards identification**2.1 Classification of the substance or mixture**

Classification (REGULATION (EC) No 1272/2008)

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Catalogue No. 6A4694
Product name Re-Blot Plus Strong Solution (10X)

Corrosive to metals, Category 1, H290

Acute toxicity, Category 4, Oral, H302

Skin corrosion, Category 1A, H314

Chronic aquatic toxicity, Category 2, H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

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Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sodium hydroxide, sodium azide

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous alkaline solution.

3.1 Substance

Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No. Registration number Classification

sodium hydroxide (>= 10 % - < 20 %)

PBT/vPvB: Not applicable for inorganic substances

1310-73-2 01-2119457892-27-

XXXX

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1A, H314

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sodium azide ($\geq 2.5\%$ - $< 7\%$)

26628-22-8 01-2119457019-37-XXXX
Acute toxicity, Category 2, H300
Acute aquatic toxicity, Category 1, H400
Chronic aquatic toxicity, Category 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion, Cough, Shortness of breath

Risk of blindness!

collapse, death

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

nitrogen oxides

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® OH -, Merck Art. No. 101596). Dispose of properly. Clean up affected area.

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6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No aluminium, tin, or zinc containers.

Storage conditions

Tightly closed.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Components

Basis	Value	Threshold limits	Remarks
<i>sodium hydroxide (1310-73-2)</i>			
EH40 WEL	Short Term Exposure Limit (STEL):	2 mg/m ³	
<i>sodium azide (26628-22-8)</i>			

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EH40 WEL	Time Weighted Average (TWA):	0.1 mg/m ³	Expressed as: as NaN3
	Short Term Exposure Limit (STEL):	0.3 mg/m ³	Expressed as: as NaN3
	Skin designation:		Can be absorbed through the skin. Expressed as: as NaN3
EU ELV	Time Weighted Average (TWA):	0.1 mg/m ³	Indicative
	Short Term Exposure Limit (STEL):	0.3 mg/m ³	Indicative

Derived No Effect Level (DNEL)

sodium hydroxide (1310-73-2)

Worker DNEL, longterm	Local effects	inhalation	1 mg/m ³
Consumer DNEL, longterm	Local effects	inhalation	1 mg/m ³

Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

Predicted No Effect Concentration (PNEC)

sodium hydroxide (1310-73-2)

PNEC no data available

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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Eye/face protection

Tightly fitting safety goggles

Hand protection

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: filter ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
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Colour	clear colourless
Odour	No strong odour known.
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	at 20 °C soluble

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Product name	Re-Blot Plus Strong Solution (10X)

Partition coefficient: n-octanol/water No information available.

Auto-ignition temperature No information available.

Decomposition temperature No information available.

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties none

9.2 Other data

Corrosion May be corrosive to metals.

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:

Heavy metals, Bromine, dimethylsulfate, Acid, dichloromethane, carbon disulfide, sulphuric acid,
Halogenated hydrocarbon, Copper, Lead, chromyl chloride

Risk of ignition or formation of inflammable gases or vapours with:

Metals, Light metals

Possible formation of:

Hydrogen

Violent reactions possible with:

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ammonium compounds, Cyanides, organic nitro compounds, organic combustible substances, phenols, powdered alkaline earth metals, acids, Nitriles, magnesium

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Aluminium, various plastics, brass, metal alloys, Zinc, Tin, Light metals, glass, quartzes/silicate ceramics, animal/vegetable tissues
Metals

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

Acute toxicity estimate: 457.63 mg/kg

Calculation method

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity

This information is not available.

Skin irritation

Mixture causes severe burns.

Eye irritation

Mixture causes serious eye damage. Risk of blindness! Necrosis

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Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Systemic effects:

collapse, death

Sodium azide: after inhalation of dusts/aerosols: severe irritations of: mucous membranes, respiratory tract. Possible damages: pulmonary oedema. Latency time until onset of action. After skin contact: slight irritations. Danger of skin absorption. After eye contact: slight irritations. After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Systemic effects: CNS disorders, cardiovascular failure, tachycardia, drop in blood pressure, coughing, dyspnoea, spasms, headache, dizziness, nausea, vomiting, collapse, unconsciousness.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

sodium hydroxide

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Skin irritation

Rabbit

Result: Causes burns.

(External MSDS)

Eye irritation

Rabbit

Result: Irreversible effects on the eye

(ECHA)

Sensitisation

Patch test: human

Result: negative

(ECHA)

Germ cell mutagenicity

Genotoxicity in vitro

Mutagenicity (mammal cell test): micronucleus.

Result: negative

(Lit.)

Ames test

Result: negative

(IUCLID)

sodium azide

Acute oral toxicity

LD50 Rat: 27 mg/kg

(RTECS)

Acute inhalation toxicity

LC50 Rat: 37.0 mg/l

(External MSDS)

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Skin irritation

In vitro study

Result: No skin irritation

Human Skin Model Test

Eye irritation

In vitro study

Result: No eye irritation

OECD Test Guideline 437

Sensitisation

Sensitisation test: Mouse

Result: negative

Method: OECD Test Guideline 429

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

sodium hydroxide

Toxicity to fish

LC50 *Gambusia affinis* (Mosquito fish): 125 mg/l; 96 h

(External MSDS)

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Toxicity to daphnia and other aquatic invertebrates

EC50 Ceriodaphnia (water flea): 40.4 mg/l; 48 h
(ECHA)

Toxicity to bacteria

EC50 Photobacterium phosphoreum: 22 mg/l; 15 min
(External MSDS)

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

PBT/vPvB: Not applicable for inorganic substances

sodium azide

Toxicity to fish

LC50 Lepomis macrochirus (Bluegill sunfish): 0.7 mg/l; 96 h
(ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia pulex (Water flea): 4.2 mg/l; 48 h
(ECOTOX Database)

Toxicity to algae

IC50 mixed culture of green algae: 272 mg/l
(Lit.)

Toxicity to bacteria

EC50 Photobacterium phosphoreum: 38.5 mg/l
(Lit.)

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SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Notice Directive on waste 2008/98/EC.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 3266
14.2 Proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, SODIUM AZIDE)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

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14.1 UN number UN 3266
14.2 Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, SODIUM AZIDE)
14.3 Class 8
14.4 Packing group II
14.5 Environmentally hazardous yes
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 3266
14.2 Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, SODIUM AZIDE)
14.3 Class 8
14.4 Packing group II
14.5 Environmentally hazardous yes
14.6 Special precautions for user yes
EmS F-A S-B

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III
Legislation ENVIRONMENTAL HAZARDS
E2
Quantity 1: 200 t
Quantity 2: 500 t

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Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ≥ 0.1 % (w/w).

National legislation

Storage class 8B

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

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

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.

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Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sodium hydroxide, sodium azide

Key or legend to abbreviations and acronyms used in the safety data sheet

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Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

DOMINIQUE DUTSCHER SAS