

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product name

**Solution A Luminol Enhancer, 200ml; part of
'Amersham™ ECL™ start Western blotting
reagent, for 4000 cm² membrane'**

Catalogue Number

RPN3244



9 0 R P N 3 2 4 4

Component Number

RPN3244V1

Product description

Not available.

Product type

Liquid.

Other means of identification

Not available.

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

Identified uses

Use in laboratories

1.3 Details of the supplier of the safety data sheet

Supplier

Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Hours of operation
08.30 - 17.00

Person who prepared the SDS : sds_author@cytiva.com

1.4 Emergency telephone number

United Kingdom (UK)

Cytiva UK
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA
t: 0870 606 1921

Call INFOTRAC 24 Hour number:
001-352-323-3500 (Call Collect).

National advisory body/Poison Centre

United Kingdom (UK)

Health professionals should contact the National Poisons Information Service (NPIS) by telephone,
or use TOXBASE www.toxbase.org.

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:
In England and Wales: NHS Direct - 0845 4647 or 111
In Scotland: NHS 24 - 08454 24 24 24
In N Ireland: Contact your local GP or pharmacist during normal hours; click here (www.gpoutofhours.hscni.net/) for GP services Out-of-Hours.



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture

Classification according to UK CLP/GHS

Repr. 1B, H360FD

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity 4 percent of the mixture consists of component(s) of unknown acute oral toxicity
6 percent of the mixture consists of component(s) of unknown acute dermal toxicity
6 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity Contains 4% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word Danger

Hazard statements May damage fertility. May damage the unborn child.

Precautionary statements

General Not applicable.

Prevention Obtain special instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response If exposed or concerned: Get medical advice or attention.

Storage Not applicable.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Restricted to professional users.

manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Special packaging requirements

Containers to be fitted with child-resistant fastenings Not applicable.

Tactile warning of danger Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Mixture

| Product/ingredient name | Identifiers | % | Classification | Type |
|-------------------------|-------------|---|----------------|------|
|-------------------------|-------------|---|----------------|------|



| | | | | |
|-------------------|---|---------|--|---------|
| Ethanediol | REACH #: 01-2119456816-28 EC: 203-473-3 CAS: 107-21-1 Index: 603-027-00-1 | 1 - 3 | Acute Tox. 4, H302 | [1] [2] |
| 1,2,4-triazole | EC: 206-022-9 CAS: 288-88-0 Index: 613-111-00-X | 0.1 - 1 | Acute Tox. 4, H302 Eye Irrit. 2, H319 Repr. 1B, H360FD | [1] |
| hydrochloric acid | REACH #: 01-2119484862-27 EC: 231-595-7 CAS: 7647-01-0 Index: 017-002-01-X | 0.01 | Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 | [1] [2] |

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|----------------------------|--|
| Eye contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Skin contact | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

| | |
|--------------|---|
| Eye contact | No specific data. |
| Inhalation | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Skin contact | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |

4.3 Indication of any immediate medical attention and special treatment needed

| | |
|---------------------|---|
| Notes to physician | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | No specific treatment. |



SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

5.3 Advice for firefighters

Special precautions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities



Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

| | |
|---|--|
| Recommendations | Research and Development Analytical reagent. Analytical chemistry. |
| Industrial sector specific solutions | Not available. |

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|-------------------------|---|
| Ethanediol | EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. TWA 8 hours: 10 mg/m ³ . Form: Particulate. TWA 8 hours: 20 ppm. Form: Vapour. STEL 15 minutes: 40 ppm. Form: Vapour. TWA 8 hours: 52 mg/m ³ . Form: Vapour. STEL 15 minutes: 104 mg/m ³ . Form: Vapour. |
| hydrochloric acid | EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 8 mg/m ³ . Form: (gas and aerosol mists). STEL 15 minutes: 5 ppm. Form: (gas and aerosol mists). TWA 8 hours: 2 mg/m ³ . Form: (gas and aerosol mists). TWA 8 hours: 1 ppm. Form: (gas and aerosol mists). |

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name

Ethanediol

Result

DNEL - General population - Long term - Inhalation

7 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

35 mg/m³

Effects: Local

DNEL - General population - Long term - Dermal

53 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

106 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Oral

0.08 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Inhalation

0.65 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Dermal

5.86 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

8 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

8 mg/m³

Effects: Local



DNEL - General population - Short term - Inhalation

15 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

15 mg/m³

Effects: Local

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

| | |
|---|---------------------------|
| Physical state | Liquid. |
| Colour | Clear. Colourless. |
| Odour | Not available. |
| Odour threshold | Not available. |
| pH | 9.4 [Conc. (% w/w): 100%] |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | Not available. |
| Flash point | Not applicable. |
| Auto-ignition temperature | Not available. |
| Ingredient name | |
| Ethanediol | |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Solubility(ies) | |

| °C | Method |
|-----|--------|
| 398 | |



| Media | Result | | |
|---|-----------------|-------|--------|
| cold water | Easily soluble | | |
| hot water | Easily soluble | | |
| Solubility in water | Not available. | | |
| Partition coefficient: n-octanol/water | Not available. | | |
| Vapour pressure | Not available. | | |
| Vapour Pressure at 20°C | | | |
| Ingredient name | mm Hg | kPa | Method |
| water | 17.5 | 2.3 | |
| ethanediol | 0.09226 | 0.012 | |
| Evaporation rate | Not available. | | |
| Relative density | Not available. | | |
| Vapour density | Not available. | | |
| Explosive properties | Not available. | | |
| Oxidising properties | Not available. | | |
| Particle characteristics | | | |
| Median particle size | Not applicable. | | |

9.2 Other information

Not available.

| | |
|----------------------------|-----------------|
| Burning time | Not applicable. |
| Burning rate | Not applicable. |
| Solubility in water | Not available. |

SECTION 10: Stability and reactivity

| | |
|--|--|
| 10.1 Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | The product is stable. |
| 10.3 Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | No specific data. |
| 10.5 Incompatible materials | No specific data. |
| 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

| Product/ingredient name | Result |
|-------------------------|--|
| water | Rat - Oral - LD50 4700 mg/kg |
| 1,2,4-triazole | Rat - Dermal - LD50 3129 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Respiratory depression |
| | Rat - Oral - LD50 1375 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Respiratory depression |
| hydrochloric acid | Rat - Inhalation - LC50 Gas. 3124 ppm [1 hours] <u>Toxic effects:</u> Olfaction - Other changes Eye - Iritis |

Conclusion/Summary [Product] Not available.

Acute toxicity estimates



| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Solution A Luminol Enhancer, 200ml; part of 'Amersham ECL start Western blotting reagent, for 4000 cm ² membrane' | 25000 | N/A | N/A | N/A | N/A |
| ethanediol | 500 | N/A | N/A | N/A | N/A |
| 1,2,4-triazole | 1320 | 3129 | N/A | N/A | N/A |
| hydrochloric acid | N/A | N/A | 1562 | N/A | N/A |

Skin corrosion/irritation**Product/ingredient name**

1,2,4-triazole

Result**Rabbit - Skin - Mild irritant**Amount/concentration applied: 0.5 gm**Conclusion/Summary [Product]** Not available.**Serious eye damage/eye irritation****Product/ingredient name**

1,2,4-triazole

Result**Rabbit - Eyes - Severe irritant**Amount/concentration applied: 50 mg**Rabbit - Eyes - Severe irritant**Amount/concentration applied: 100 mg**Conclusion/Summary [Product]** Not available.**Respiratory corrosion/irritation**

Not available.

Conclusion/Summary [Product] Not available.**Respiratory or skin sensitization**

Not available.

Skin**Conclusion/Summary [Product]** Not available.**Respiratory****Conclusion/Summary [Product]** Not available.**Germ cell mutagenicity**

Not available.

Conclusion/Summary [Product] Not available.**Carcinogenicity**

Not available.

Conclusion/Summary [Product] Not available.**Reproductive toxicity**

Not available.

Conclusion/Summary [Product] Not available.**Specific target organ toxicity (single exposure)****Product/ingredient name**

hydrochloric acid

Result

STOT SE 3, H335 (Respiratory tract irritation)



9 5 2 9 1 1 7 1 8 3 1

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

| | |
|---------------------|---|
| Inhalation | No known significant effects or critical hazards. |
| Ingestion | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Eye contact | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|---|
| Inhalation | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Skin contact | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Eye contact | No specific data. |

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

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Long term exposure | |

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Long term exposure | |

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Long term exposure | |

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Long term exposure | |

Potential chronic health effects

Not available.

Conclusion/Summary [Product] Not available.

| | |
|------------------------------|--|
| General | No known significant effects or critical hazards. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Reproductive toxicity | May damage fertility. May damage the unborn child. |

| | |
|--------------------------|----------------|
| Other information | Not available. |
|--------------------------|----------------|

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

Ethanediol

Result

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: ≤7 days

8050 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate

6900 mg/l [48 hours]

Effect: Mortality

1,2,4-triazole

Acute - LC50 - Fresh water

US EPA

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*



Weight: 1.27 g
498 ppm [96 hours]
Effect: Mortality

hydrochloric acid

Acute - LC50 - Marine water

Crustaceans - Green crab - *Carcinus maenas* - Adult
240 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water

Fish - Western mosquitofish - *Gambusia affinis* - Adult
282 ppm [96 hours]
Effect: Mortality

Conclusion/Summary [Product] Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Ethanediol | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| ≤3 | -1.36 | 10 | Low |
| <1 | -0.58 | 1 | Low |
| <0.1 | 0.25 | - | Low |

12.4 Mobility in soil

Soil/water partition coefficient Not available.

Mobility Not available.

12.5 Results of PBT and vPvB assessment

| | | | | | | | |
|-------------------|----|-----|----|-----|----|-----|----|
| Ethanediol | No | N/A | No | No | No | N/A | No |
| 1,2,4-triazole | No | N/A | No | Yes | No | N/A | No |
| hydrochloric acid | No | No | No | No | No | No | No |

12.6 Other adverse effects No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information



| | ADR/RID | ADN | IMDG | IATA |
|--|----------------|----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - | - |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. | No. |
| Additional information | - | - | - | - |

14.6 Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| Product/ingredient name | % | Designation [Usage] |
|--|----------|----------------------------|
| Solution A Luminol Enhancer, 200ml; part of 'Amersham ECL start Western blotting reagent, for 4000 cm ² membrane' | ≥90 | 3 30 |
| 1,2,4-triazole | <1 | 30 |

Labelling Restricted to professional users.

Seveso Directive

This product is not controlled under the Seveso Directive.

Named substances

Name

EU regulations

| | |
|---|------------|
| Industrial emissions (integrated pollution prevention and control) - Air | Not listed |
|---|------------|



**Industrial emissions
(integrated pollution
prevention and control) -
Water**

Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States Not determined.

Canada inventory Not determined.

China Not determined.

Japan Not determined.

**15.2 Chemical safety
assessment** This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms

ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

| Classification | Justification |
|--|--------------------|
| <input checked="" type="checkbox"/> Repr. 1B, H360FD | Calculation method |

Full text of abbreviated H statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H360FD May damage fertility. May damage the unborn child.

Full text of classifications

Acute Tox. 3 ACUTE TOXICITY - Category 3
 Acute Tox. 4 ACUTE TOXICITY - Category 4
 Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
 Repr. 1B REPRODUCTIVE TOXICITY - Category 1B
 Skin Corr. 1B SKIN CORROSION/IRRITATION - Category 1B
 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader



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