Safety Data Sheet

Cat. # 786-677

Swift Membrane Stain™

Size: For 20 Blots
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Mixture
Product name: Swift Membrane Stain
Product code: 540S
Product group: Trade product

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

1.2.1. Relevant identified uses
No additional information available

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Belfast Centre)</td>
<td>Grosvenor Road BT12 6BA Belfast</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Birmingham Centre)</td>
<td>Dudley Road B18 7QH Birmingham</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Cardiff Centre)</td>
<td>Penarth CF64 2XX Cardiff</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service Edinburgh</td>
<td>Little France Crescent EH16 4SA Edinburgh</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Guy's &amp; St Thomas' Poisons Unit</td>
<td>Avonley Road SE14 5ER London</td>
<td>+44 20 7188 7188</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Newcastle Centre)</td>
<td>Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle</td>
<td>0344 892 0111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Specific target organ toxicity — Single exposure, Category 2 H371
Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects
May cause damage to organs. Causes damage to organs.
2.2. Label elements

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

CLP Signal word: Warning
Hazardous ingredients: sodium molybdate, dihydrate
Hazard statements (CLP):
- H371 - May cause damage to organs.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P308+P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
- P405 - Store locked up.
- P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
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<tbody>
<tr>
<td>Deionized water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>&gt;90</td>
<td>Not classified</td>
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<tr>
<td>methanol</td>
<td>(CAS-No.) 67-56-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 200-659-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 603-001-00-X</td>
<td>2-5</td>
<td>Flam. Liq. 2, H225, Acute Tox. 3 (Oral), H301, Acute Tox. 3 (Inhalation), H331, Acute Tox. 3 (Inhalation: vapour), H331, STOT SE 1, H370</td>
</tr>
<tr>
<td>sodium molybdate, dihydrate</td>
<td>(CAS-No.) 10102-40-6</td>
<td>&lt;2</td>
<td>Not classified</td>
</tr>
<tr>
<td>sodium oxalate</td>
<td>(CAS-No.) 62-76-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 200-550-3</td>
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<td></td>
<td>(EC Index-No.) 607-007-00-3</td>
<td>&lt;2</td>
<td>Acute Tox. 4 (Oral), H302, Acute Tox. 4 (Dermal), H312</td>
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<tr>
<td>Pyrocatechol Violet</td>
<td>(CAS-No.) 115-41-3</td>
<td>&lt;2</td>
<td>Not classified</td>
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<tr>
<td>succinic acid</td>
<td>(CAS-No.) 110-15-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 203-740-4</td>
<td>&lt;2</td>
<td>Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

Specific concentration limits:

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>Specific concentration limits</th>
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</thead>
<tbody>
<tr>
<td>methanol</td>
<td>(CAS-No.) 67-56-1</td>
<td></td>
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<tr>
<td></td>
<td>(EC-No.) 200-659-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 603-001-00-X</td>
<td>(3 &lt;=C &lt; 10) STOT SE 2, H371</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10 &lt;=C &lt; 100) STOT SE 1, H370</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: IF exposed or concerned: Get medical advice/attention.
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
No additional information available

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
 SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: Combustible liquid.
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

 SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. No open flames, no sparks, and no smoking.

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. Notify authorities if product enters sewers or public waters.
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. Do not breathe dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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 in a well-ventilated place. Keep cool. Store locked up.

7.3. Specific end use(s)
No additional information available

 SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium molybdate, dihydrate (10102-40-6)

United Kingdom - Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL TWA (mg/m³)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>WEL STEL (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

methanol (67-56-1)

EU - Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOELV TWA (mg/m³)</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>IOELV TWA (ppm)</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

United Kingdom - Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL TWA (mg/m³)</td>
<td>266 mg/m³</td>
</tr>
<tr>
<td>WEL TWA (ppm)</td>
<td>200 ppm</td>
</tr>
<tr>
<td>WEL STEL (mg/m³)</td>
<td>333 mg/m³</td>
</tr>
<tr>
<td>WEL STEL (ppm)</td>
<td>250 ppm</td>
</tr>
</tbody>
</table>
8.2. Exposure controls

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

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>85 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.
SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Acute toxicity (oral)          | Not classified                     |
| 长期毒性 (皮肤)               | Not classified                     |
| 长期毒性 (吸入)               | Not classified                     |

sucinic acid (110-15-6)

| LD50 oral rat                  | > 6740 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral) |
| LC50 inhalation rat (mg/l)     | > 1.284 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (dust)) |

sodium molybdate, dihydrate (10102-40-6)

| LD50 oral rat                  | 4233 mg/kg (Rat, Oral) |
| LD50 dermal rat                | > 2000 mg/kg (Rat, Dermal) |

methanol (67-56-1)

| LD50 oral rat                  | 1187 - 2769 mg/kg bodyweight (BASF test, Rat, Male / female, Weight of evidence, Aqueous solution, Oral, 7 day(s)) |
| LD50 dermal rabbit             | 17100 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal) |
| LC50 inhalation rat (mg/l)     | 128.2 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours)) |

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.

Acute aquatic toxicity

Not classified

Chronic aquatic toxicity

Not classified

sodium oxalate (62-76-0)

| LC50 fish 1                    | 630 mg/l (96 h, Brachydanio rerio) |

sucinic acid (110-15-6)

| LC50 fish 1                    | > 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP) |
| EC50 Daphnia 1                 | > 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP) |
| ErC50 (algae)                  | > 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |

sodium molybdate, dihydrate (10102-40-6)

<p>| LC50 fish 1                    | 644.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Semi-static system, Fresh water, Experimental value) |
| EC50 Daphnia 1                 | 130.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |</p>
<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ErC50 (algae)</strong></td>
<td>289.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence)</td>
<td></td>
</tr>
<tr>
<td><strong>methanol (67-56-1)</strong></td>
<td><strong>LC50 fish 1</strong></td>
<td>15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)</td>
</tr>
<tr>
<td></td>
<td><strong>EC50 Daphnia 1</strong></td>
<td>18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)</td>
</tr>
<tr>
<td></td>
<td><strong>ErC50 (algae)</strong></td>
<td>22000 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</td>
</tr>
<tr>
<td><strong>12.2. Persistence and degradability</strong></td>
<td><strong>sodium oxalate (62-76-0)</strong></td>
<td>Persistence and degradability: Biodegradability in water. no data available.</td>
</tr>
<tr>
<td></td>
<td><strong>Biochemical oxygen demand (BOD)</strong></td>
<td>0.11 g O₂/g substance</td>
</tr>
<tr>
<td><strong>sodium molybdate, dihydrate (10102-40-6)</strong></td>
<td>Persistence and degradability: Biodegradability: not applicable.</td>
<td><strong>ThOD</strong> 1.305 g O₂/g substance</td>
</tr>
<tr>
<td></td>
<td><strong>Chemical oxygen demand (COD)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td><strong>ThOD</strong></td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td><strong>BOD (% of ThOD)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>sodium molybdate, dihydrate (10102-40-6)</strong></td>
<td><strong>BCF fish 1</strong></td>
<td>4.9 (28 day(s), Oncorhynchus tshawytscha, Fresh water, Weight of evidence, Anhydrous form)</td>
</tr>
<tr>
<td></td>
<td><strong>Bioaccumulative potential</strong></td>
<td>Low potential for bioaccumulation (BCF &lt; 500).</td>
</tr>
<tr>
<td><strong>methanol (67-56-1)</strong></td>
<td>Persistence and degradability: Readily biodegradable in the soil. Readily biodegradable in water.</td>
<td><strong>Biodegradability in water</strong> 0.6 - 1.12 g O₂/g substance</td>
</tr>
<tr>
<td></td>
<td><strong>Chemical oxygen demand (BOD)</strong></td>
<td>1.42 g O₂/g substance</td>
</tr>
<tr>
<td></td>
<td><strong>ThOD</strong></td>
<td>1.5 g O₂/g substance</td>
</tr>
<tr>
<td></td>
<td><strong>BCF fish 1</strong></td>
<td>1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)</td>
</tr>
<tr>
<td></td>
<td><strong>Bioaccumulative potential</strong></td>
<td>Low potential for bioaccumulation (BCF &lt; 500).</td>
</tr>
</tbody>
</table>

**sodium oxalate (62-76-0)**

**Log Pow** -0.59

**Bioaccumulative potential** Not bioaccumulative.

**sodium molybdate, dihydrate (10102-40-6)**

**BCF fish 1** 4.9 (28 day(s), Oncorhynchus tshawytscha, Fresh water, Weight of evidence, Anhydrous form)

**Bioaccumulative potential** Low potential for bioaccumulation (BCF < 500).

**methanol (67-56-1)**

**BCF fish 1** 1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)

**Log Pow** -0.77 (Experimental value)

**Bioaccumulative potential** Low potential for bioaccumulation (BCF < 500).
12.4. Mobility in soil

**succinic acid (110-15-6)**

Ecology - soil: No (test)data on mobility of the substance available.

---

**sodium molybdate, dihydrate (10102-40-6)**

Ecology - soil: No (test)data on mobility of the substance available.

---

**methanol (67-56-1)**

- Surface tension: 0.023 N/m (20 °C)
- Log Koc: 0.088 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

Ecology - soil: Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>PBT Criteria</th>
<th>vPvB Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>succinic acid (110-15-6)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>methanol (67-56-1)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods


SECTION 14: Transport information

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

14.1. UN number

| UN-No. (ADR) | Not applicable |
| UN-No. (IMDG) | Not applicable |
| UN-No. (IATA) | Not applicable |
| UN-No. (ADN) | Not applicable |
| UN-No. (RID) | Not applicable |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | Not applicable |
| Proper Shipping Name (IMDG) | Not applicable |
| Proper Shipping Name (IATA) | Not applicable |
| Proper Shipping Name (ADN) | Not applicable |
| Proper Shipping Name (RID) | Not applicable |

14.3. Transport hazard class(es)

| ADR | Not applicable |
| IMDG | Not applicable |
| IATA | Not applicable |
| ADN | Not applicable |
| RID | Not applicable |

14.4. Packing group

| Packing group (ADR) | Not applicable |
| Packing group (IMDG) | Not applicable |
| Packing group (IATA) | Not applicable |
| Packing group (ADN) | Not applicable |
| Packing group (RID) | Not applicable |
14.5. Environmental hazards
Dangerous for the environment: No
Marine pollutant: No
Other information: No supplementary information available

14.6. Special precautions for user
Overland transport
No data available
Transport by sea
No data available
Air transport
No data available
Inland waterway transport
No data available
Rail transport
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

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 REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information
Full text of H- and EUH-statements:

Acute Toxicity (Inhalation) — Category 3
Acute Toxicity (Inhalation: vapour) — Category 3
Acute Toxicity (Oral) — Category 4
Acute Toxicity (Dermal) — Category 4
Eye Damage — Category 1
Flammable Liquids — Category 2
Specific Target Organ Toxicity — Single Exposure — Category 1
Specific Target Organ Toxicity — Single Exposure — Category 2
Highly Flammable Liquid and Vapour
Toxic if Swallowed
Harmful if Swallowed
Harmful in Contact with Skin
Causes Serious Eye Damage
Toxic if Inhaled
Causes Damage to Organs
Swift Membrane Stain
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| H371 | May cause damage to organs. |

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)
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.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Swift™ Destain [5X]</td>
</tr>
<tr>
<td>Product code</td>
<td>588S</td>
</tr>
<tr>
<td>Product group</td>
<td>Trade product</td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses
No additional information available

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - P 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Belfast Centre)</td>
<td>Grosvenor Road BT12 6BA Belfast</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Birmingham Centre) City Hospital</td>
<td>Dudley Road B18 7QH Birmingham</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Cardiff Centre) Gwynwyn Ward, Llandough Hospital</td>
<td>Penarth CF64 2XX Cardiff</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh</td>
<td>Little France Crescent EH16 4SA Edinburgh</td>
<td>0344 892 0111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Guy's &amp; St Thomas' Poisons Unit Medical Toxicology Unit, Guy's &amp; St Thomas' Hospital Trust</td>
<td>Avonley Road SE14 5ER London</td>
<td>+44 20 7188 7188</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit</td>
<td>Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle</td>
<td>0344 892 0111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 1B  
Full text of H statements: H314

Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage. Causes skin irritation. Causes serious eye irritation.
2.2. Label elements

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

CLP Signal word: Danger
Hazardous ingredients: sodium hydroxide
Hazard statements (CLP): H314 - Causes severe skin burns and eye damage.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340 - IF INHALATION: Remove person to fresh air and keep 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.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
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<tbody>
<tr>
<td>Deionized water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>&gt; 98</td>
<td>Not classified</td>
</tr>
<tr>
<td>sodium hydroxide</td>
<td>(CAS-No.) 1310-73-2</td>
<td>&lt; 2</td>
<td>Met. Corr. 1, H290</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 215-185-5</td>
<td></td>
<td>Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 011-002-00-6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific concentration limits:

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>Specific concentration limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide</td>
<td>(CAS-No.) 1310-73-2</td>
<td>( 0.5 =&lt;C &lt; 2) Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 215-185-5</td>
<td>( 0.5 =&lt;C &lt; 2) Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 011-002-00-6</td>
<td>( 2 =&lt;C &lt; 5) Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( 5 =&lt;C &lt; 100) Skin Corr. 1A, H314</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: Call a physician immediately.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after skin contact: Burns. Irritation.
Symptoms/effects after eye contact: Serious damage to eyes. Eye irritation.
Symptoms/effects after ingestion: Burns.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Reactivity in case of fire: Thermal decomposition generates: Corrosive vapours.
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
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. Avoid contact with skin and eyes. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures: Wash contaminated clothing before reuse. 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 in a well-ventilated place. Keep cool. Store locked up.
Storage temperature: 20 °C

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
sodium hydroxide (1310-73-2)
United Kingdom - Occupational Exposure Limits
WEL STEL (mg/m³): 2 mg/m³

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

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment
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
Colour: No data available
Odour: No data available
Odour threshold: No data available
pH: No data available
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 (solid, gas): Not applicable
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
Solubility: No data available
Log Pow: 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
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral): Not classified
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified
Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/irritation: Serious eye damage, category 1, implicit
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
Aspiration hazard: Not classified
SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

sodium hydroxide (1310-73-2)
LC50 fish 1: 45.4 mg/l (96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Solution >=50%)
EC50 Daphnia 1: 40.4 mg/l (48 h, Ceriodaphnia sp., Experimental value, Nominal concentration)

12.2. Persistence and degradability
sodium hydroxide (1310-73-2)
Biodegradability: not applicable.
Chemical oxygen demand (COD): Not applicable (inorganic)
ThOD: Not applicable (inorganic)

12.3. Bioaccumulative potential
sodium hydroxide (1310-73-2)
Bioaccumulative potential: Not bioaccumulative.

12.4. Mobility in soil
sodium hydroxide (1310-73-2)
Ecology - soil: No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment
Component
sodium hydroxide (1310-73-2)
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
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR): Not applicable
UN-No. (IMDG): Not regulated
UN-No. (IATA): Not regulated
UN-No. (ADN): Not applicable
UN-No. (RID): Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not applicable
Proper Shipping Name (IMDG): Not regulated
Proper Shipping Name (IATA): Not regulated
Proper Shipping Name (ADN): Not applicable
Proper Shipping Name (RID): Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR): Not applicable
IMDG
Transport hazard class(es) (IMDG): Not regulated
IATA
Transport hazard class(es) (IATA): Not regulated
ADN
Transport hazard class(es) (ADN): Not applicable
Swift™ Destain [5X]
Safety Data Sheet 
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group
Packing group (ADR) : Not applicable
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user
Overland transport
No data available

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
No data available

Rail transport
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

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 REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information
Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>H- and EUH-statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Met. Corr. 1</td>
<td>Corrosive to metals, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

Safety Data Sheet applicable for regions : GB - United Kingdom
Swift™ Destain [5X]
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS EU (REACH Annex II)
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.