Safety Data Sheet

Cat. # 786-254

Glycoprotein Staining Kit

Size: 10 Mini Gels
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Mixture
Product name: RAPIDStain™
Product code: 007R
Product group: Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Main use category: Research purposes

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 Medical Toxicology 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]
Not classified

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

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

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>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>&gt;= 80</td>
<td>Not classified</td>
</tr>
<tr>
<td>phosphoric acid, conc=85%</td>
<td>(CAS-No.) 7664-38-2</td>
<td>10 - 50</td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-633-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 015-011-00-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>methanol</td>
<td>(CAS-No.) 67-56-1</td>
<td>0.5 - 2</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></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></td>
<td></td>
</tr>
<tr>
<td>Commmassie Brilliant Blue G 250 Dye</td>
<td>(CAS-No.) 6104-58-1</td>
<td>&lt; 0.05</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2, H319, STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 228-058-4</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>phosphoric acid, conc=85%</td>
<td>(CAS-No.) 7664-38-2</td>
<td>(10 =&lt;C &lt; 25) Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-633-2</td>
<td>(10 =&lt;C &lt; 25) Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 015-011-00-6</td>
<td>(25 =&lt;C &lt; 100) Skin Corr. 1B, H314</td>
</tr>
<tr>
<td>methanol</td>
<td>(CAS-No.) 67-56-1</td>
<td>(3 =&lt;C &lt; 10) STOT SE 2, H371</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 200-659-6</td>
<td>(10 =&lt;C &lt; 100) STOT SE 1, H370</td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 603-001-00-X</td>
<td></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 : In all cases of doubt, or when symptoms persist, seek medical 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

Unsuitable extinguishing media : Container may slop over if solid jet (water/foam) is applied. No dry chemical powder. Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid.
Explosion hazard : No data available on direct explosion hazard. No data available on indirect explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: consider evacuation. Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows. Exposure to fire/heat: seal off low-lying areas.
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**

**Protective equipment:**

**Emergency procedures:**
Ventilate spillage area. 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. 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.

**Storage temperature:**
4 °C

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

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

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

**EU - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limit</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>Limit</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

Physical state: Liquid
Colour: Blue.
Odour: None.
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: 80 °C
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
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
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified

methanol (67-56-1)

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

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
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: 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

phosphoric acid, conc=85% (7664-38-2)
LC50 fish 1 138 mg/l (Pisces, Pure substance)

methanol (67-56-1)
LC50 fish 1 15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1 18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae) 22000 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability
phosphoric acid, conc=85% (7664-38-2)
Persistence and degradability: Biodegradability: not applicable.
Chemical oxygen demand (COD): Not applicable
ThOD: Not applicable
BOD (% of ThOD): Not applicable

methanol (67-56-1)
Persistence and degradability: Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD): 0.6 - 1.12 g O_2/g substance
Chemical oxygen demand (COD): 1.42 g O_2/g substance
ThOD: 1.5 g O_2/g substance

Coomassie Brilliant Blue G 250 Dye (6104-58-1)

12.3. Bioaccumulative potential
phosphoric acid, conc=85% (7664-38-2)
Bioaccumulative potential: Does not contain bioaccumulative component(s).

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).

Coomassie Brilliant Blue G 250 Dye (6104-58-1)
Bioaccumulative potential: No bioaccumulation data available.
12.4. Mobility in soil

**phosphoric acid, conc=85% (7664-38-2)**

| Ecology - soil | No (test)data on mobility of the components available. |

<table>
<thead>
<tr>
<th>methanol (67-56-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
</tr>
<tr>
<td>Log Koc</td>
</tr>
<tr>
<td>Ecology - soil</td>
</tr>
</tbody>
</table>

12.5. Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>Component</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>methanol (67-56-1)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
</tr>
<tr>
<td></td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</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 regulated |
| UN-No. (IMDG) | : Not regulated |
| UN-No. (IATA) | : Not regulated |
| UN-No. (ADN) | : Not regulated |
| UN-No. (RID) | : Not regulated |

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

| ADR Transport hazard class(es) (ADR) | : Not regulated |
| IMDG Transport hazard class(es) (IMDG) | : Not regulated |
| IATA Transport hazard class(es) (IATA) | : Not regulated |
| ADN Transport hazard class(es) (ADN) | : Not regulated |
| RID Transport hazard class(es) (RID) | : Not regulated |

14.4. Packing group

| Packing group (ADR) | : Not regulated |
| Packing group (IMDG) | : Not regulated |
| Packing group (IATA) | : Not regulated |
| Packing group (ADN) | : Not regulated |
| Packing group (RID) | : Not regulated |

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
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

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 Tox. 3 (Inhalation)    Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)    Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)    Acute toxicity (oral), Category 3
Eye Irrit. 2    Serious eye damage/eye irritation, Category 2
Flam. Liq. 2    Flammable liquids, Category 2
Skin Corr. 1B    Skin corrosion/irritation, Category 1B
Skin Irrit. 2    Skin corrosion/irritation, Category 2
STOT SE 1    Specific target organ toxicity — Single exposure, Category 1
STOT SE 2    Specific target organ toxicity — Single exposure, Category 2
STOT SE 3    Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225    Highly flammable liquid and vapour.
H301    Toxic if swallowed.
H314    Causes severe skin burns and eye damage.
H315    Causes skin irritation.
H319    Causes serious eye irritation.
H331    Toxic if inhaled.
H335    May cause respiratory irritation.
H370    Causes damage to organs.
H371    May cause damage to organs.
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
Product form: Mixture
Product name: Glyco Positive and Negative Control
Product code: 122G
Product group: Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Use of the substance/mixture: Research and development

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)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Not classified

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

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures
Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP]
--- | --- | --- | ---
Human Serum Albumin | (CAS-No.) 70024-90-7 | 100 | Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.

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

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: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.
Storage temperature: -20 °C

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

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: Solid
Appearance: Powder.

5/11/2017 (Version: 1.1)  EN (English)  2/5
Glyco Positive and Negative Control
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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 : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Flammability (solid, gas) : Non flammable.
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : Not applicable
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 : Not applicable

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 : Not classified
Serious eye damage/irritation : Not classified
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 : 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

### 12.2. Persistence and degradability

**Human Serum Albumin (70024-90-7)**

Persistence and degradability: Not established.

### 12.3. Bioaccumulative potential

**Human Serum Albumin (70024-90-7)**

Bioaccumulative potential: Not established.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 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 regulated
- **UN-No. (IMDG)**: Not regulated
- **UN-No. (IATA)**: Not regulated
- **UN-No. (ADN)**: Not regulated
- **UN-No. (RID)**: Not regulated

#### 14.2. UN proper shipping name

- **Proper Shipping Name (ADR)**: Not regulated
- **Proper Shipping Name (IMDG)**: Not regulated
- **Proper Shipping Name (IATA)**: Not regulated
- **Proper Shipping Name (ADN)**: Not regulated
- **Proper Shipping Name (RID)**: Not regulated

#### 14.3. Transport hazard class(es)

**ADR**
- **Transport hazard class(es) (ADR)**: Not regulated

**IMDG**
- **Transport hazard class(es) (IMDG)**: Not regulated

**IATA**
- **Transport hazard class(es) (IATA)**: Not regulated

**ADN**
- **Transport hazard class(es) (ADN)**: Not regulated

**RID**
- **Transport hazard class(es) (RID)**: Not regulated

#### 14.4. Packing group

- **Packing group (ADR)**: Not regulated
- **Packing group (IMDG)**: Not regulated
- **Packing group (IATA)**: Not regulated
- **Packing group (ADN)**: Not regulated
- **Packing group (RID)**: Not regulated

#### 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**
Not regulated
Glyco Positive and Negative Control
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

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

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

Product form: Mixture
Product name: Glyco Stain Solution
Product code: 123G
Product group: Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Research and development

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

- Serious eye damage/eye irritation, Category 1: H318
- Carcinogenicity, Category 1B: H350

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause cancer. Causes serious eye damage.
2.2. Label elements

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

Hazard pictograms (CLP):

GHS05
GHS08

CLP Signal word: Danger

Hazardous ingredients:
- hydrogen chloride, conc=36%, aqueous solution; C.I. Basic Red 9; disodium disulphite

Hazard statements (CLP):
- H318 - Causes serious eye damage.
- H350 - May cause cancer.

Precautionary statements (CLP):
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- 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+P313 - IF exposed or concerned: Get medical advice/attention.
- P310 - Immediately 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>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>&gt;= 80</td>
<td>Not classified</td>
</tr>
<tr>
<td>disodium disulphite</td>
<td>(CAS-No.) 7681-57-4</td>
<td>2 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-673-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 016-063-00-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.I. Basic Red 9</td>
<td>(CAS-No.) 569-61-9</td>
<td>0.5 - 2</td>
<td>Carc. 1B, H350</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 209-321-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 611-031-00-X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution</td>
<td>(CAS-No.) 7647-01-0</td>
<td>0.05 - 0.5</td>
<td>Skin Corr. 1A, H314 STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-595-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 017-002-01-X</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>hydrogen chloride, conc=36%, aqueous solution</td>
<td>(CAS-No.) 7647-01-0</td>
<td>(10 &lt;=C &lt; 25) Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-595-7</td>
<td>(10 &lt;=C &lt; 25) Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 017-002-01-X</td>
<td>(10 &lt;=C &lt; 100) STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(25 &lt;=C &lt; 100) Skin Corr. 1B, 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: 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 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: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after eye contact: Serious damage to eyes.
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
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: Only qualified personnel equipped with suitable protective equipment may intervene.

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. Notify authorities if product enters sewers or public waters.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes.

Hygiene measures: Separate working clothes from town clothes. Launder separately. 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 locked up. Store in a well-ventilated place. Keep cool.

Storage temperature: 4 °C

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

disodium disulphite (7681-57-4)
United Kingdom - Occupational Exposure Limits
WEL TWA (mg/m³): 5 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 inadequate ventilation] wear respiratory protection.

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>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<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>No data available</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
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 |

**disodium disulphite (7681-57-4)**

| LD50 oral rat                     | 1540 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
**LD50 dermal rat**  
> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))

**LC50 inhalation rat (mg/l)**  
> 5.5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))

**C.I. Basic Red 9 (569-61-9)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>3200 mg/kg (Rat, Oral)</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**  
Not classified

**Serious eye damage/irritation**  
Causes serious eye damage.

**Respiratory or skin sensitisation**  
Not classified

**Germ cell mutagenicity**  
Not classified

**Carcinogenicity**  
May cause cancer.

**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**  
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

**disodium disulphite (7681-57-4)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>316 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Read-across, Nominal concentration)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>89 mg/l (EU Method, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>43.8 mg/l (Equivalent or similar to OECD 201, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)</td>
</tr>
</tbody>
</table>

**hydrogen chloride, conc=36%, aqueous solution (7647-01-0)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>282 mg/l (96 h, Gambusia affinis, Pure substance)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&lt; 56 mg/l (72 h, Daphnia magna, Pure substance)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**disodium disulphite (7681-57-4)**

Persistence and degradability  
Biodegradability in water: no data available.

Chemical oxygen demand (COD)  
0.154 g O₂/g substance

**hydrogen chloride, conc=36%, aqueous solution (7647-01-0)**

Persistence and degradability  
Biodegradability: not applicable.

Chemical oxygen demand (COD)  
Not applicable

ThOD  
Not applicable

BOD (% of ThOD)  
Not applicable

**C.I. Basic Red 9 (569-61-9)**

Persistence and degradability  
Biodegradability in water: no data available.

#### 12.3. Bioaccumulative potential

**disodium disulphite (7681-57-4)**

Bioaccumulative potential  
No bioaccumulation data available.
### C.I. Basic Red 9 (569-61-9)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-0.21</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not bioaccumulative</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

**disodium disulphite (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>70.7 mN/m (20 °C, OECD 115: Surface Tension of Aqueous Solutions)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

### 12.5. Results of PBT and vPvB assessment

Component

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Criteria Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium disulphite</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
</tr>
<tr>
<td>disodium disulphate</td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</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 regulated |
| UN-No. (IMDG) | Not regulated |
| UN-No. (IATA) | Not regulated |
| UN-No. (ADN) | Not regulated |
| UN-No. (RID) | Not regulated |

#### 14.2. UN proper shipping name

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

#### 14.3. Transport hazard class(es)

| ADR | Transport hazard class(es) (ADR) | Not regulated |
| IMDG | Transport hazard class(es) (IMDG) | Not regulated |
| IATA | Transport hazard class(es) (IATA) | Not regulated |
| ADN | Transport hazard class(es) (ADN) | Not regulated |
| RID | Transport hazard class(es) (RID) | Not regulated |

#### 14.4. Packing group

| Packing group (ADR) | Not regulated |
| Packing group (IMDG) | Not regulated |
| Packing group (IATA) | Not regulated |

---

5/11/2017 (Version: 1.1) EN (English) 6/8
Glyco Stain Solution
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Packing group (ADN): Not regulated
Packing group (RID): Not regulated

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
Not regulated
Transport by sea
Not regulated
Air transport
Not regulated
Inland waterway transport
Not regulated
Rail transport
Not regulated

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>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 1B</td>
<td>Carcinogenicity, Category 1B</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</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>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</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>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
</tbody>
</table>
Glyco Stain Solution
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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
Product form: Substance
Substance name: Glyco-Oxidizing Reagent
EC-No.: 233-937-0
CAS-No.: 10450-60-9
Product code: 169G
Type of product: Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula: H5IO6
Synonyms: o-periodic acid / ortho-periodic acid / orthoperiodic-acid / periodic acid (H5IO6)
Product group: Trade product
BIG No: 21277

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Use of the substance/mixture: Laboratory chemical

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) 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) Gwenwyn 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]

Oxidising Solids, Category 2 H272
Skin corrosion/irritation, Category 1A H314
Full text of H statements: see section 16
Glyco-Oxidizing Reagent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

**Adverse physicochemical, human health and environmental effects**

May intensify fire; oxidiser. Causes severe skin burns and eye damage.

### 2.2. Label elements

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

**Hazard pictograms (CLP):**

- GHS03
- GHS05

**CLP Signal word:** Danger

**Hazard statements (CLP):**

- H272 - May intensify fire; oxidiser.
- H314 - Causes severe skin burns and eye damage.

**Precautionary statements (CLP):**

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P220 - Keep away from clothing and other combustible materials.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- 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+P370+P380 - IF INHALED: 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).
- P370+P378 - In case of fire: Use media other than water to extinguish.
- 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

**Substance type:** Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyco-Oxidizing Reagent</td>
<td>(CAS-No.) 10450-60-9</td>
<td>100</td>
<td>Ox. Sol. 2, H272 Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 233-937-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

#### 3.2. Mixtures

Not applicable

**SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

**First-aid measures general:**


**First-aid measures after inhalation:**

Remove the victim into fresh air. Immediately consult a doctor/medical service.

**First-aid measures after skin contact:**

Wash immediately with lots of water (15 minutes)/shower. Wash immediately with PE-glycol 400. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

**First-aid measures after eye contact:**

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist.

**First-aid measures after ingestion:**

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Do not give chemical antidote. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

5/11/2017 (Version: 1.1)
4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after skin contact: Burns.
Symptoms/effects after eye contact: Serious damage to eyes.
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
Fire hazard: DIRECT FIRE HAZARD: Material presenting a fire hazard. INDIRECT FIRE HAZARD: May intensify fire; oxidiser. Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
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
Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up
For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Damp up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water.
Methods for cleaning up: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Spill must not return in its original container. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
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: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.
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 locked up. Store in a well-ventilated place. Keep cool.
Incompatible materials: combustible materials.
Storage temperature: 4 °C
Heat and ignition sources: KEEP SUBSTANCE AWAY FROM: heat sources.
Glyco-Oxidizing Reagent
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Information on mixed storage: KEEP SUBSTANCE AWAY FROM: combustible materials, reducing agents, organic materials, (strong) bases, water/moisture.

Storage area: Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing, watertight, dry, clean, opaque, correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: glass.

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

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
No additional information available

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

Hand protection:
Gloves

Eye protection:
Face shield. In case of dust production: protective goggles

Skin and body protection:
Corrosion-proof clothing. In case of dust production: head/neck protection

Respiratory protection:
Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus

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: Solid
Appearance: Crystalline solid.
Molecular mass: 227.94 g/mol
Colour: White to light yellow.
Odour threshold: No data available
pH: 1.2 (10 %)
Relative evaporation rate (butylacetate=1): No data available
Melting point: 122 °C
Freezing point: Not applicable
Boiling point: No data available
Flash point: 90 °C
Auto-ignition temperature: Not applicable
Decomposition temperature: > 130 °C
Flammability (solid, gas): Non flammable.
Vapour pressure: No data available
Relative vapour density at 20 °C: Not applicable
Relative density: 4.5
Density: 4500 kg/m³
Water: 243 g/100ml
Log Pow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: May intensify fire; oxidiser.
Explosive limits : Not applicable

9.2. Other information
VOC content : 0 %
Other properties : Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity
10.1. Reactivity
Reacts exothermically with many compounds e.g.: with combustible materials, with organic material and with (some) metals with risk of spontaneous ignition.

10.2. Chemical stability
Unstable on exposure to light. Hygroscopic.

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
Combustible materials.

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. pH: 1.2 (10 %)
Serious eye damage/irritation : Serious eye damage, category 1, implicit pH: 1.2 (10 %)
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
Potential adverse human health effects and symptoms : Causes severe skin burns. Corrosive to the respiratory tract. Causes serious eye damage.

SECTION 12: Ecological information
12.1. Toxicity
Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability
Glyco-Oxidizing Reagent (10450-60-9)
Persistence and degradability : Biodegradability: not applicable.
Chemical oxygen demand (COD) : Not applicable
ThOD : Not applicable
BOD (% of ThOD) : Not applicable

12.3. Bioaccumulative potential
Glyco-Oxidizing Reagent (10450-60-9)
Bioaccumulative potential : No bioaccumulation data available.

12.4. Mobility in soil
No additional information available
12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal recommendations: Do not discharge into drains or the environment. Remove to an authorized plant for the destruction, neutralization and elimination of hazardous waste. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse.


European List of Waste (LoW) code: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 06 01 06* - other acids

SECTION 14: Transport information

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

14.1. UN number
UN-No. (ADR): Not regulated
UN-No. (IMDG): Not regulated
UN-No. (IATA): Not regulated
UN-No. (ADN): UN 3085
UN-No. (RID): Not regulated

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not regulated
Proper Shipping Name (IMDG): Not regulated
Proper Shipping Name (IATA): Not regulated
Proper Shipping Name (ADN): Oxidizing solid, corrosive, n.o.s.
Proper Shipping Name (RID): Not regulated
Transport document description (ADN): UN 3085 Oxidizing solid, corrosive, n.o.s., 5.1 (8), II

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR): Not regulated

IMDG
Transport hazard class(es) (IMDG): Not regulated

IATA
Transport hazard class(es) (IATA): Not regulated

ADN
Transport hazard class(es) (ADN): 5.1 (8)
Danger labels (ADN): 5.1, 8

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

14.4. Packing group
Packing group (ADR): Not regulated
Packing group (IMDG): Not regulated
Packing group (IATA): Not regulated
Packing group (ADN): II
Packing group (RID): Not regulated
14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Other information</td>
<td>No supplementary information available</td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

<table>
<thead>
<tr>
<th>Mode of Transport</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overland transport</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Transport by sea</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Air transport</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Inland waterway transport</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Classification code (ADN)</td>
<td>OC2</td>
</tr>
<tr>
<td>Rail transport</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

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

No REACH Annex XVII restrictions
Glyco-Oxidizing Reagent is not on the REACH Candidate List
Glyco-Oxidizing Reagent is not on the REACH Annex XIV List
Glyco-Oxidizing Reagent is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

VOC content

: 0 %

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian DSL (Domestic Substances List)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

<table>
<thead>
<tr>
<th>H- and EUH-statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ox. Sol. 2</td>
<td>Oxidising Solids, Category 2</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>H272</td>
<td>May intensify fire; oxidiser.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
</tbody>
</table>

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

| Product form | Substance
| Substance name | Glyco-Reducing Reagent
| EC Index-No. | 016-063-00-2
| EC-No. | 231-673-0
| CAS-No. | 7681-57-4
| Product code | 188G-B
| Type of product | Pure substance
| Formula | Na₂S₂O₅
| Synonyms | corexit 9186 / disodium disulfite / disodium disulphite / disodium metabisulfite / disodium pyrosulfite / disodium pyrosulphite / disulfurous acid, disodium salt / E223 / pyrosulfurous acid disodium salt / pyrosulfurous acid sodium salt / sodium acid sulfite / sodium disulfite / sodium metabisulfite / sodium metabisulphite / sodium metasulfite / sodium pyrosulfite / sodium pyrosulphite / Uantox SMBS

| Product group | Trade product
| BIG No | 13082

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture: Preservative

#### 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) Royal Victoria Hospital</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) Gwennwy 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>
Glyco-Reducing Reagent
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4  H302
Serious eye damage/eye irritation, Category 1  H318

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects
Harmful if swallowed. Causes serious eye damage. Harmful to aquatic life.

2.2. Label elements

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

Hazard pictograms (CLP):
- GHS05
- GHS07

CLP Signal word: Danger
Hazard statements (CLP):
- H302 - Harmful if swallowed.
- H318 - Causes serious eye damage.

Precautionary statements (CLP):
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P310 - Immediately call a POISON CENTER or doctor if you feel unwell.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P330 - Rinse mouth.
- 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
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

SECTION 3: Composition/information on ingredients

3.1. Substances
Substance type: Mono-constituent
Name: Glyco-Reducing Reagent
CAS-No.: 7681-57-4
EC-No.: 231-673-0
EC Index-No.: 016-063-00-2

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium disulphite</td>
<td>(CAS-No.) 7681-57-4</td>
<td>100</td>
<td>Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-673-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC Index-No.) 016-063-00-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general:

First-aid measures after inhalation:
- Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact: Wash with water and soap. Take victim to a doctor if irritation persists.
First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist. Do not apply neutralizing agents.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation: AFTER INHALATION OF DUST/MIST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. ON CONTINUOUS EXPOSURE/CONTACT: Possible inflammation of the respiratory tract. Respiratory difficulties.
Symptoms/effects after skin contact: Red skin.
Symptoms/effects after eye contact: Corrosion of the eye tissue. Lacrimation. Conjunctivitis.
Chronic symptoms: Skin rash/inflammation. Possible inflammation of the respiratory tract. Respiratory difficulties.

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: DIRECT FIRE HAZARD: Non combustible.
Hazardous decomposition products in case of fire: Toxic fumes may be released.
5.3. Advice for firefighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.
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
For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.
Methods for cleaning up: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
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.
Glyco-Reducing Reagent
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep container tightly closed.

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.
Maximum storage period: 2 year
Storage temperature: 4 °C
Heat and ignition sources: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. water/moisture.
Storage area: Store in a dry area. Keep container in a well-ventilated place. Store at ambient temperature. Meet the legal requirements.
Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. watertight. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials: SUITABLE MATERIAL: iron. aluminium. stoneware/porcelain. synthetic material. glass.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Glyco-Reducing Reagent (7681-57-4)

United Kingdom - Occupational Exposure Limits
WEL TWA (mg/m³): 5 mg/m³
disodium disulphite (7681-57-4)
United Kingdom - Occupational Exposure Limits
WEL TWA (mg/m³): 5 mg/m³

Glyco-Reducing Reagent (7681-57-4)
DNEL/DMEL (Workers)
Long-term - systemic effects, inhalation: 225 mg/m³

DNEL/DMEL (General population)
Long-term - systemic effects, oral: 8.6 mg/kg bw/day
Long-term - systemic effects, inhalation: 66 mg/m³

PNEC (Water)
PNEC aqua (freshwater): 1 mg/l
PNEC aqua (marine water): 0.1 mg/l
PNEC (STP)
PNEC sewage treatment plant: 75.4 mg/l

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

Materials for protective clothing:
GIVE GOOD RESISTANCE: chloroprene rubber. nitrile rubber. butyl rubber. fluor rubber

Hand protection:
Gloves

Eye protection:
Safety glasses. In case of dust production: protective goggles
**Skin and body protection:**
Protective clothing

**Respiratory protection:**
Dust production: dust mask with filter type P2

**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/Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Crystalline powder.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>190.11 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless to light yellow.</td>
</tr>
<tr>
<td>Odour</td>
<td>Irritating/pungent odour. Unpleasant odour.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.5 (25 %)</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable (decomposes)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable (decomposes)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 150 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.36 (20 °C, ISO 1183-1: Pycnometer Method)</td>
</tr>
<tr>
<td>Density</td>
<td>1480 kg/m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Soluble in glycerol.</td>
</tr>
<tr>
<td></td>
<td>Water: 66.7 g/100ml (25 °C)</td>
</tr>
<tr>
<td></td>
<td>Acetone: &lt; 0.001 g/100ml (20 °C)</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>Not explosive.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 9.2. Other information

- VOC content: 0 %
- Other properties: Acid reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity
Reacts exothermically with (strong) oxidizers. Decomposes slowly on exposure to air and on exposure to water (moisture).

### 10.2. Chemical stability
Unstable on exposure to moisture. Unstable on exposure to air.

### 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): Harmful if swallowed.
### Glyco-Reducing Reagent (7681-57-4)

<table>
<thead>
<tr>
<th>Toxicity Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1540 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 5.5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))</td>
</tr>
</tbody>
</table>

### disodium disulphite (7681-57-4)

<table>
<thead>
<tr>
<th>Toxicity Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1540 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 5.5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Ecology - general</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Harmful to aquatic life.</td>
</tr>
<tr>
<td>Ecology - air</td>
<td>Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014).</td>
</tr>
<tr>
<td></td>
<td>Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).</td>
</tr>
<tr>
<td>Ecology - water</td>
<td>Harmful to crustacea. Slightly harmful to fishes. No inhibition of activated sludge. Harmful to algae. pH shift.</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### Glyco-Reducing Reagent (7681-57-4)

<table>
<thead>
<tr>
<th>Ecological endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>316 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Read-across, Nominal concentration)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>89 mg/l (EU Method, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>43.8 mg/l (Equivalent or similar to OECD 201, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)</td>
</tr>
</tbody>
</table>

### disodium disulphite (7681-57-4)

<table>
<thead>
<tr>
<th>Ecological endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>316 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Read-across, Nominal concentration)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>89 mg/l (EU Method, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>43.8 mg/l (Equivalent or similar to OECD 201, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)</td>
</tr>
</tbody>
</table>
### 12.2. Persistence and degradability

**Glyco-Reducing Reagent (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradability in water</td>
<td>no data available.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>0.154 g O₂/g substance</td>
</tr>
</tbody>
</table>

**disodium disulphite (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradability in water</td>
<td>no data available.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>0.154 g O₂/g substance</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

**Glyco-Reducing Reagent (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No bioaccumulation data available.</td>
<td></td>
</tr>
</tbody>
</table>

**disodium disulphite (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No bioaccumulation data available.</td>
<td></td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

**Glyco-Reducing Reagent (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>70.7 mN/m (20 °C, OECD 115: Surface Tension of Aqueous Solutions)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

**disodium disulphite (7681-57-4)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>70.7 mN/m (20 °C, OECD 115: Surface Tension of Aqueous Solutions)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

### 12.5. Results of PBT and vPvB assessment

**Glyco-Reducing Reagent (7681-57-4)**

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

**Component**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium disulphite (7681-57-4)</td>
<td>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</td>
</tr>
<tr>
<td></td>
<td>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</td>
</tr>
</tbody>
</table>

### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
<th>Product/Packaging disposal recommendations</th>
<th>Additional information</th>
<th>European List of Waste (LoW) code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste treatment methods</td>
<td>: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I).</td>
<td>: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.</td>
<td>: 15 01 10* - packaging containing residues of or contaminated by dangerous substances</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

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

#### 14.1. UN number

<table>
<thead>
<tr>
<th>UN-No. (ADR)</th>
<th>UN-No. (IMDG)</th>
<th>UN-No. (IATA)</th>
<th>UN-No. (ADN)</th>
<th>UN-No. (RID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>: Not regulated</td>
<td>: Not regulated</td>
<td>: Not regulated</td>
<td>: Not regulated</td>
<td>: Not regulated</td>
</tr>
</tbody>
</table>
Glyco-Reducing Reagent
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR) : Not regulated

IMDG
Transport hazard class(es) (IMDG) : Not regulated

IATA
Transport hazard class(es) (IATA) : Not regulated

ADN
Transport hazard class(es) (ADN) : Not regulated

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

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

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
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

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
No REACH Annex XVII restrictions
Glyco-Reducing Reagent is not on the REACH Candidate List
Glyco-Reducing Reagent is not on the REACH Annex XIV List

VOC content : 0 %

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

<table>
<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

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.