SAFETY DATA SHEET
SureFISH Probes - Blue, Part Numbers G110XXXB-8 through G110XXXB-8

Section 1. Identification

Product identifier : SureFISH Probes - Blue, Part Numbers G110XXXB-8 through G110XXXB-8
Part no. : G110428B-8, G110141B-8

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

Material uses : Analytical reagent. For Research Use Only. Not for use in diagnostic procedures. 0.02 ml - 0.1 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the hazard
H319 : SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
H373 : SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

GHS label elements

Hazard pictograms :  

Signal word : WARNING
Hazard statements : H319 - Causes serious eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys)

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P260 - Do not breathe vapour.

Response : P314 - Get medical advice/attention 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.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Additional warning phrases : Not applicable.

Other hazards which do not result in classification : None known.

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Date of previous issue : No previous validation
Version : 1

Conforms to Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals
Section 3. Composition and ingredient information

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>≥10 - ≤25</td>
<td>96-49-1</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye irritation.

Inhalation: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following: pain or irritation watering redness

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary
Section 4. First aid measures

Notes to physician:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
No specific treatment.

Protection of first-aiders:
No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5. Firefighting measures

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

Unsuitable extinguishing media:
None known.

Specific hazards arising from the chemical
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

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

Special protective actions for fire-fighters:
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

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

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

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

Methods and material for containment and cleaning up
Methods for cleaning up:
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

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

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits: None.

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

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

Individual protection measures

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

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

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

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Section 8. Exposure controls and personal protection

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

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

Section 9. Physical and chemical properties and safety characteristics

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

**Appearance**
- Physical state: Liquid.
- Colour: Not available.
- Odour: Not available.
- Odour threshold: Not available.
- pH: 6.2
- Melting point/freezing point: Not available.
- Boiling point, initial boiling point, and boiling range: Not available.
- Flash point: Not available.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup °C</th>
<th>Open cup °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid, trisodium salt, dihydrate</td>
<td>&gt;100</td>
<td>&gt;212</td>
</tr>
<tr>
<td>ethylene carbonate</td>
<td>159.85</td>
<td>319.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>143.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>289.9</td>
</tr>
</tbody>
</table>

**Evaporation rate**: Not available.

**Flammability**: Not applicable.

**Lower and upper explosion limit/flammability limit**: Not available.

**Vapour pressure**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapour Pressure at 20°C mm Hg</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
<tr>
<td>ethylene carbonate</td>
<td>0.0098</td>
<td>0.0013</td>
</tr>
</tbody>
</table>

**Relative vapour density**: Not available.

**Relative density**: Not available.

**Solubility**: Easily soluble in the following materials: cold water and hot water.

**Miscible with water**: Yes.

**Partition coefficient: n-octanol/water**: Not applicable.

**Auto-ignition temperature**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>465</td>
<td>869</td>
<td></td>
</tr>
</tbody>
</table>

**Decomposition temperature**: Not available.

**Viscosity**: Not available.

**Particle characteristics**

| Median particle size | Not applicable. |
Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : May react or be incompatible with oxidising materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>10 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>660 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitisation

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>Category 2</td>
<td>oral</td>
<td>kidneys</td>
</tr>
</tbody>
</table>

Aspiration hazard

Not available.

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

Potential acute health effects

Eye contact : Causes serious eye irritation.
Section 11. Toxicological information

Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

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

Potential immediate effects
Short term exposure: Not available.
Long term exposure: Not available.

Potential delayed effects
Short term exposure: Not available.
Long term exposure: Not available.

Potential chronic health effects
General: May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapours) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureFISH Probes - Blue, Part Numbers G110XXXB-8 through G110XXXB-8 ethylene carbonate</td>
<td>2525.3</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>Acute EC50 &gt;100 mg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 53000 mg/l Fresh water</td>
<td>Fish - Fry</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute NOEC 100 mg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>72 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>OECD 301B Ready Biodegradability - CO2 Evolution Test</td>
<td>98.5 % - Readily - 28 days</td>
<td>-</td>
<td>Activated sludge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene carbonate</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

**LogP**

- ethylene carbonate: 0.11 - low

**BCF**

- Not available.

**Potential**

- Bioaccumulative potential: low

**Mobility in soil**

- Soil/water partition coefficient (Koc): Not available.

**Other adverse effects**

- No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods**

- The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

**ADG / IMDG / IATA**

- Not regulated as Dangerous Goods according to the ADG Code.

**Special precautions for user**

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

**Transport in bulk according to IMO instruments**

- Not available.

Section 15. Regulatory information

**Standard for the Uniform Scheduling of Medicines and Poisons**

- Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**

- No listed substance

**International regulations**

- Chemical Weapon Convention List Schedules I, II & III Chemicals
  - Not listed.

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**Version**: 1
Section 15. Regulatory information

**Montreal Protocol**
Not listed.

**Stockholm Convention on Persistent Organic Pollutants**
Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**
Not listed.

**UNEP Aarhus Protocol on POPs and Heavy Metals**
Not listed.

**Inventory list**
- **Australia**: Not determined.
- **Canada**: Not determined.
- **China**: Not determined.
- **Europe**: Not determined.
- **New Zealand**: Not determined.
- **Philippines**: Not determined.
- **Republic of Korea**: Not determined.
- **Taiwan**: Not determined.
- **Thailand**: Not determined.
- **Turkey**: Not determined.
- **United States**: Not determined.
- **Viet Nam**: Not determined.

Section 16. Any other relevant information

**History**
- Date of issue/Date of revision: 16/10/2021
- Date of previous issue: No previous validation
- Version: 1

**Key to abbreviations**
- ADG = Australian Dangerous Goods
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

**References**
- Not available.

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Section 16. Any other relevant information

Notice to reader

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