

# SAFETY DATA SHEET

FISH Probes - Red- in Buffer

## Section 1. Identification

**Product identifier** : FISH Probes - Red- in Buffer  
**Part no.** : G110997R-8, G110999R-8

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

**Identified uses** : Analytical reagent.  
 G110997R-8 through G110999R-8 FISH human chromosome probe, fluorescent red 0.005 ml - 0.02 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 substance or mixture

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.

## Section 3. Composition and ingredient information

**Substance/mixture** : Mixture

### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
ethylene carbonate	≥10 - ≤25	96-49-1

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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.

See toxicological information (Section 11)

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

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
halogenated compounds  
metal oxide/oxides

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

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

## 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.

#### Biological exposure indices

No exposure indices known.

- 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.

## Section 8. Exposure controls and personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## 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** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
ethylene carbonate	159.85	319.7	-	143.3	289.9	-

- Evaporation rate** : Not available.

- Flammability** : Not applicable.

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

- Vapour pressure** :

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Water	17.5	2.3	-	92.258	12.3	-
ethylene carbonate	0.0098	0.0013	-	-	-	-

- Relative vapour density** : Not available.

- Relative density** : Not available.

- Solubility(ies)** :

Media	Result
Water	Soluble

- Miscible with water** : Yes.

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

- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
ethylene carbonate	465	869	-

- Decomposition temperature** : Not available.

- Viscosity** : Not available.

### Particle characteristics

## Section 9. Physical and chemical properties and safety 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

Product/ingredient name	Result	Species	Dose	Exposure
ethylene carbonate	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	10 g/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethylene carbonate	Skin - Mild irritant	Rabbit	-	660 mg	-

#### 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)

Name	Category	Route of exposure	Target organs
ethylene carbonate	Category 2	oral	kidneys

#### Aspiration hazard

Not available.

## Section 11. Toxicological information

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

### 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.

### 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

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### 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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
FISH Probes - Red- in Buffer ethylene carbonate	2525.4 500	N/A N/A	N/A N/A	N/A N/A	N/A N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
ethylene carbonate	Acute EC50 >100 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute LC50 53000 mg/l Fresh water	Fish - Fry	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours

## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylene carbonate	OECD 301B Ready Biodegradability - CO2 Evolution Test	98.5 % - Readily - 28 days	-	Activated sludge
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
ethylene carbonate	-	-	Readily	

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ethylene carbonate	0.11	-	Low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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

## Section 15. Regulatory information

### [Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

### [Montreal Protocol](#)

Not listed.

### [Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

<b>Australia</b>	: Not determined.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> All components are listed or exempted.
<b>United States</b>	: All components are active or exempted.

## Section 16. Any other relevant information

### [History](#)

**Date of issue/Date of revision** : 17/11/2024

**Date of previous issue** : 28/11/2021

**Version** : 4

### [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  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 SUSMP = Standard Uniform Schedule of Medicine and Poisons  
 UN = United Nations

### [Procedure used to derive the classification](#)

Classification	Justification
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method

Indicates information that has changed from previously issued version.

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