


SAFETY DATA SHEET

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

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

1.1 Product identifier

Product name	Labelling Reagent; part of 'ECL™ direct nucleic acid labelling and detection system; To label 10 µg'	
Catalogue Number	RPN3001	 9 0 R P N 3 0 0 1
Component Number	NIF819	
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

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

Identified uses

☒ Analytical chemistry.
Laboratory chemicals
Scientific research and development

1.3 Details of the supplier of the safety data sheet

Supplier	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 1494 508000	Hours of operation 08.30 - 17.00
Person who prepared the SDS : sds_author@cytiva.com		

1.4 Emergency telephone number

United Kingdom (UK)	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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National advisory body/Poison Centre

United Kingdom (UK)	Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE www.toxbase.org . NPIS http://www.npis.org/ advise that others seeking specific information on poisons should contact: In England and Wales: NHS Direct - 0845 4647 or 111 In Scotland: NHS 24 - 08454 24 24 24 In N Ireland: Contact your local GP or pharmacist during normal hours; click here (www.gpoutofhours.hscni.net/) for GP services Out-of-Hours.
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SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media None known.

5.2 Special hazards arising from the substance or mixture

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

Hazardous combustion products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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



Large spill	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
6.4 Reference to other sections	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

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

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Recommendations	Analytical chemistry. Laboratory chemicals. Scientific research and development.
Industrial sector specific solutions	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

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

Product/ingredient name	Result
Sodium carbonate	DNEL - General population - Long term - Inhalation 5 mg/m³ Effects: Local DNEL - Workers - Long term - Inhalation 10 mg/m³ Effects: Local

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.







Eye/face protection	☑ Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection	
Hand protection	☑ Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	☑ Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	☑ Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	☑ Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Environmental exposure controls	☑ Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance																																			
Physical state	Liquid.																																		
Colour	Colourless.																																		
Odour	Not available.																																		
Odour threshold	Not available.																																		
pH	Not available.																																		
Melting point/freezing point	Not available.																																		
Initial boiling point and boiling range	Not available.																																		
Flammability (solid, gas)	Not available.																																		
Upper/lower flammability or explosive limits	Not available.																																		
Flash point	Not applicable.																																		
Auto-ignition temperature	Not available.																																		
Decomposition temperature	Not available.																																		
Viscosity	Not available.																																		
Solubility in water	Not available.																																		
Partition coefficient: n-octanol/ water	Not available.																																		
Vapour pressure	Not available.																																		
<table><tr><td rowspan="2">Ingredient name</td><td colspan="3"><u>Vapour Pressure at 20 °C</u></td><td colspan="3"><u>Vapour pressure at 50 °C</u></td></tr><tr><td>mm Hg</td><td>kPa</td><td>Method</td><td>mm Hg</td><td>kPa</td><td>Method</td></tr><tr><td> water</td><td>17.5</td><td>2.3</td><td></td><td></td><td></td><td></td></tr><tr><td>sodium hydrogencarbonate</td><td>0.5</td><td>0.067</td><td>EU A.4</td><td></td><td></td><td></td></tr><tr><td>sodium carbonate</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td></tr></table>		Ingredient name	<u>Vapour Pressure at 20 °C</u>			<u>Vapour pressure at 50 °C</u>			mm Hg	kPa	Method	mm Hg	kPa	Method	 water	17.5	2.3					sodium hydrogencarbonate	0.5	0.067	EU A.4				sodium carbonate	0	0				
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sodium hydrogencarbonate	0.5	0.067	EU A.4																																
sodium carbonate	0	0																																	
Evaporation rate	Not available.																																		
Relative density	Not available.																																		
Vapour density	Not available.																																		
Explosive properties	Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidising materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.																																		
Oxidising properties	Not available.																																		
Particle characteristics																																			
Median particle size	 Not applicable.																																		

9.2 Other information

Not available.

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

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	
Product/ingredient name	Result
Sodium carbonate	Rat - Oral - LD50 4090 mg/kg
Conclusion/Summary [Product]	Not available.

Acute toxicity estimates					
Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Sodium carbonate	4090	N/A	N/A	N/A	N/A

Skin corrosion/irritation	
Not available.	
Conclusion/Summary [Product]	Not available.

Serious eye damage/eye irritation	
Not available.	
Conclusion/Summary [Product]	Not available.

Respiratory corrosion/irritation	
Not available.	
Conclusion/Summary [Product]	Not available.

Respiratory or skin sensitization	
Not available.	

Skin	
Conclusion/Summary [Product]	Not available.

Respiratory	
Conclusion/Summary [Product]	Not available.

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



Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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

Potential acute health effects

Inhalation ☒ No known significant effects or critical hazards.

Ingestion ☒ No known significant effects or critical hazards.

Skin contact ☒ No known significant effects or critical hazards.

Eye contact ☒ No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation ☒ No specific data.

Ingestion ☒ No specific data.

Skin contact ☒ No specific data.

Eye contact ☒ No specific data.

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

Short term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] Not available.

General ☒ No known significant effects or critical hazards.

Carcinogenicity ☒ No known significant effects or critical hazards.

Mutagenicity ☒ No known significant effects or critical hazards.

Reproductive toxicity ☒ No known significant effects or critical hazards.


Other information Not available.



SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

 Sodium carbonate

Result

Acute - LC50 - Fresh water

Fish - Bluegill - *Lepomis macrochirus*
Size: 3.88 cm; Weight: 0.96 g
300 mg/l [96 hours]
Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Scud Order - *Amphipoda*
176 mg/l [48 hours]
Effect: Mortality

Conclusion/Summary [Product] Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] Not available.

12.3 Bioaccumulative potential

Not available.


12.4 Mobility in soil

Soil/water partition coefficient Not available.

Mobility Not available.

12.5 Results of PBT and vPvB assessment

 Sodium carbonate No No No No No No No

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


SECTION 13: Disposal considerations

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


13.1 Waste treatment methods

Product

Methods of disposal


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

Hazardous waste


 Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal

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

Special precautions

 This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-

14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

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

14.7 Transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

No listed substance

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

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

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States All components are listed or exempted.

Canada inventory All components are listed or exempted.



China	All components are listed or exempted.
Japan	<div><div></div>Japan inventory (CSCL): All components are listed or exempted.</div> <div><div></div>Japan inventory (ISHL): Not determined.</div>
15.2 Chemical safety assessment	<div><div></div>This product contains substances for which Chemical Safety Assessments are still required.</div>

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms	ATE = Acute Toxicity Estimate GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = GB CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative
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Procedure used to derive the classification

Classification	Justification
Not classified.	

Full text of abbreviated H statements	<div><div></div>H319</div> Causes serious eye irritation.
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Full text of classifications	<div><div></div>Eye Irrit. 2</div> SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
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Notice to reader

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