

Material Safety Data Sheet

Australia

English

1. Identification of the material and supplier

Product name **Glutaraldehyde; part of 'ECL™ Direct Labelling Multipack'**

Catalogue Number RPN3007



Component Number NIF820

Company details**Manufacturer**

GE Healthcare UK Ltd
Amersham Place
Little Chalfont
Buckinghamshire HP7 9NA
England
+44 0870 606 1921

Supplier

GE Healthcare Bio-Sciences
Building 4B, Parklands Estate
21 South Street
Rydalmere NSW 2116
Australia
+61 2 8820 8299

Emergency telephone number 000 and +61 2 9846 4000

ADG -

Uses

Area of application Industrial applications.
Material uses Analytical reagent. Research.
Product type Liquid.

2. Hazards identification

Classification Xi; R36/37/38
R42/43

Risk phrases R36/37/38- Irritating to eyes, respiratory system and skin.
R42/43- May cause sensitisation by inhalation and skin contact.

Safety phrases S23- Do not breathe vapour.
S24- Avoid contact with skin.
S37- Wear suitable gloves.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/dangerous nature

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. Composition/information on ingredients

Mixture Yes.

Ingredient name

glutaral

CAS number

111-30-8

Concentration

1.5

Additional information

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.



Article Number

25006554-2



Page: 1/6

Validation date 11 May 2011

Version 4

4. First-aid measures

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.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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. In the event of any complaints or symptoms, avoid further exposure.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 if adverse health effects persist or are severe. 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.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. Fire-fighting measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Special exposure hazards	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. In a fire or if heated, a pressure increase will occur and the container may burst.
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.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide

6. Accidental release measures

Personal precautions	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 (see Section 8).
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 for cleaning up	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	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.

7. Handling and storage

Handling	Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
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Storage	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.
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8. Exposure controls/personal protection

Occupational exposure limits

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
glutaral	Safe Work Australia (Australia, 8/2005). Skin sensitiser. PEAK: 0.41 mg/m ³ 15 minute(s). PEAK: 0.1 ppm 15 minute(s).
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering measures	Use only with adequate ventilation. 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.
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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<u>Personal protection</u>	
Eyes	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 or dusts.
Hands	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.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Skin	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.
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.

9. Physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Solubility	Easily soluble in the following materials: cold water and hot water.

10. Stability and reactivity

Stability	The product is stable.
Materials to avoid	No specific data.

11. Toxicological information

Potential acute health effects

Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	Irritating to mouth, throat and stomach.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
glutaraldehyde	LD50 Dermal	Rat	>2500 mg/kg	-
	LD50 Dermal	Rabbit	560 uL/kg	-
	LD50 Intraperitoneal	Rat	17900 ug/kg	-
	LD50 Intravenous	Rat	9800 ug/kg	-
	LD50 Oral	Rat	140 mg/kg	-
	LD50 Oral	Rat	134 mg/kg	-
	LD50 Subcutaneous	Rat	>750 mg/kg	-
	LC50 Inhalation	Rat	480 mg/m ³	4 hours
	Vapour			

Conclusion/Summary	Not available.
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Potential chronic health effects

Chronic toxicity



Conclusion/Summary	Not available.
<u>Carcinogenicity</u>	
Conclusion/Summary	Not available.
<u>Mutagenicity</u>	
Conclusion/Summary	Not available.
<u>Teratogenicity</u>	
Conclusion/Summary	Not available.
<u>Reproductive toxicity</u>	
Conclusion/Summary	Not available.
Chronic effects	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>	
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma
Ingestion	No specific data.
Skin	Adverse symptoms may include the following: irritation redness
Eyes	Adverse symptoms may include the following: irritation watering redness
Target organs	Contains material which may cause damage to the following organs: heart, upper respiratory tract, skin, eyes, central nervous system (CNS).

12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
glutaraldehyde	-	Acute EC50 14.6 to 18 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 6.7 to 9.2 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 3.5 to 5 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 0.75 to 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <20 hours	48 hours
	-	Acute LC50 40 to 60 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	-	Acute LC50 31.4 to 41 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	-	Acute LC50 23.9 to 32 ppm Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	96 hours
	-	Acute LC50 22.6 to 32 ppm Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 12.2 to 22 ppm Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 11.6 to 22 ppm Fresh water	Fish - Fathead minnow - Pimephales	96 hours



-	Acute LC50 9.5 to 13 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
-	Acute LC50 5.4 ppm Fresh water	Fish - Fathead minnow - Pimephales promelas - 12.9 mm	96 hours
-	Acute LC50 3.5 to 4.8 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
Conclusion/Summary Not available.			
Biodegradability			
Conclusion/Summary Not available.			
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
glutaral	-	-	Not readily
Other adverse effects No known significant effects or critical hazards.			

13. Disposal considerations

Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
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14. Transport information

International transport regulations

Not classified.

15. Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Ingredient name	Schedule
Not available.	
Australia inventory (AICS)	All components are listed or exempted.
EU Classification	Xi; R36/37/38 R42/43
HCS Classification	Highly toxic material Corrosive material Sensitising material Target organ effects

16. Other information

History

Date of printing	11 May 2011	Date of previous issue	10 May 2011
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Indicates information that has changed from previously issued version.

Enquiries regarding MSDS content should be directed to: our local sales office.

Notice to reader



Article Number

25006554-2



9 5 2 5 0 0 6 5 5 4 2

Page: 5/6

Validation date 11 May 2011

Version 4

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



Article Number

25006554-2



9 5 2 5 0 0 6 5 5 4 2

Page: 6/6

Validation date 11 May 2011

Version 4