

SAFETY STATEMENT

This document is only available in English.

1. Identification of the substance/preparation and of the company/undertaking

Product name

Elution Buffer B; part of 'illustra GFX™ 96 PCR Purification Kit, 10'

Catalogue Number

28903445



9 0 2 8 9 0 3 4 4 5

Supplier

GE Healthcare Bio-Sciences AB
SE-751 84 Uppsala
Sweden
+46 (0)18 612 0000

Swedish Poisons Information Centre :
+46 (0)8 331 231

Europe
+46 18 612 0000

USA
1-800-424-9300

Australia
000 or +61 2 9899 0999

2. Composition / information on ingredients

Substance/Preparation

Substance

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting in this section, in accordance with EU or national regulations.

Statement of hazardous nature

To the best of our knowledge this substance/preparation is not classified as hazardous according to EU, US or any other known national regulations.

9. Physical and chemical properties

Physical state

Liquid.

Color

Colorless.

16. Other information

History

Date of printing

19 July 2006

Date of previous issue

No previous validation

Date of issue

19 July 2006

Version

1

Notice to Reader

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.

This is not an MSDS. According to EU and US regulations we are not required to supply an MSDS for a product which is not classified as hazardous.



Article Number

28903445-4



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Validation date 19 July 2006


Version 1

Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name Elution Buffer A; part of 'illustra GFX 96 PCR Purification Kit, 10'

Catalogue Number 28903445 

Component Number 378186

Material uses Industrial applications: Analytical chemistry. Research.

Validation date 19 July 2006

Print date 19 July 2006

Supplier GE Healthcare Bio-Sciences AB
SE-751 84 Uppsala
Sweden
+46 (0)18 612 0000

In case of emergency

US	ChemTrec (US)	1-800-424-9300
Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state Liquid.

Odor Odorless.

Emergency overview Warning!

CAUSES EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes	Irritating to eyes.
Skin	Irritating to skin.
Inhalation	Moderately irritating to the respiratory system.
Ingestion	No known significant effects or critical hazards.

Potential chronic health effects **CARCINOGENIC EFFECTS:** Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by over-exposure Repeated or prolonged exposure is not known to aggravate any medical condition.

See toxicological information (section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>	<u>Exposure limits</u>
Tris(hydroxymethyl)aminomethane hydrochloride	1185-53-1	13.6	Not available.



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28903445-2



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Section 4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

Section 5. Fire fighting measures

Flammability of the product	Non-flammable.
Extinguishing media	
Suitable	
Not suitable	
Special exposure hazards	No specific hazard.
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	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for cleaning up	If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

Handling	Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure controls, personal protection

Personal protection

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.
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.
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.
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.

Hygiene measures

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state	Liquid.
Color	Colorless.
Odor	Odorless.
pH	8 (Conc. (% w/w): 100) [Basic.]
Boiling/condensation point	The lowest known value is 100°C (212°F) (water).
Melting/freezing point	May start to solidify at 0°C (32°F) based on data for: water.
Critical temperature	The lowest known value is 374.3°C (705.7°F) (water).
Vapor pressure	The highest known value is 3.2 kPa (23.8 mm Hg) (at 20°C) (water).
Volatility	0% (v/v).
Evaporation rate	0.36 (water) compared with Butyl acetate.
VOC	0 (g/l).
Dispersibility properties	See solubility in water, methanol, acetone.



Solubility	Easily soluble in cold water, hot water, methanol, acetone.
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Section 10. Stability and reactivity

Stability and reactivity	The product is stable.
Incompatibility with various substances	Reactive with oxidizing agents.
Hazardous decomposition products	These products are halogenated compounds, hydrogen chloride.
Hazardous polymerization	Will not occur. Not considered to be a product presenting a risk of explosion.

Section 11. Toxicological information

Other toxic effects on humans	Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).
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Specific effects

Carcinogenic effects	No known significant effects or critical hazards.
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Mutagenic effects	No known significant effects or critical hazards.
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Teratogenicity / Reproduction toxicity	No known significant effects or critical hazards.
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Sensitization

Eyes	Irritating to eyes.
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Section 12. Ecological information

Environmental precautions	No known significant effects or critical hazards.
Products of degradation	These products are carbon oxides (CO, CO ₂) and water, nitrogen oxides (NO, NO ₂ etc.), halogenated compounds.
Toxicity of the products of biodegradation	The products of degradation are more toxic than the product itself.

Section 13. Disposal considerations

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.
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RCRA classification	Code: Not classified
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Consult your local or regional authorities.

Section 14. Transport information

International transport regulations

Not classified.

Section 15. Regulatory information

HCS Classification	Irritating material
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U.S. Federal regulations	TSCA 8(b) inventory: Tris(hydroxymethyl)aminomethane hydrochloride; water SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
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State regulations	No products were found.
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EU regulations

Risk phrases	This product is not classified according to EU legislation.
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International regulations



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28903445-2



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International lists	Australia (NICNAS): Tris(hydroxymethyl)aminomethane hydrochloride; water
	China: Tris(hydroxymethyl)aminomethane hydrochloride; water
	Germany water class: Tris(hydroxymethyl)aminomethane hydrochloride
	Japan (METI): Tris(hydroxymethyl)aminomethane hydrochloride; water
	Korea (TCCL): Tris(hydroxymethyl)aminomethane hydrochloride; water
	Philippines (RA6969): Tris(hydroxymethyl)aminomethane hydrochloride; water

Section 16. Other information

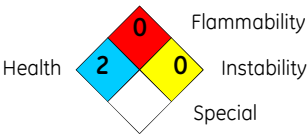
Label requirements

CAUSES EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Hazardous Material Information System (U.S.A.)

Health	1
Fire hazard	0
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)



Indicates information that has changed from previously issued version.

History

Date of printing	19 July 2006	Date of previous issue	No previous validation
Date of issue	19 July 2006	Version	1

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Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name Capture Buffer ; part of 'illustra GFX™ 96 PCR Purification Kit, 10'

Catalogue Number 28903445 

Component Number 378187

Material uses Industrial applications: Analytical chemistry. Research.

Validation date 19 July 2006

Print date 19 July 2006

Supplier GE Healthcare Bio-Sciences AB
SE-751 84 Uppsala
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+46 (0)18 612 0000

In case of emergency	US	ChemTrec (US)	1-800-424-9300
	Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state Liquid.

Odor Odorless.

Emergency overview Warning!

CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CAUSES EYE IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.

Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Potential acute health effects

Eyes	Irritating to eyes.
Skin	Harmful in contact with skin.
Inhalation	Severely irritating to the respiratory system.
Ingestion	Harmful if swallowed.

Potential chronic health effects **CARCINOGENIC EFFECTS:** Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by over-exposure Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation.

See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	% by weight	Exposure limits
Guanidine thiocyanate	593-84-0	32	



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Section 4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Skin contact	Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. 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.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. 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. 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.

Section 5. Fire fighting measures

Flammability of the product	Non-flammable.
Extinguishing media	
Suitable	
Not suitable	
Special exposure hazards	No specific hazard.
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	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for cleaning up	If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

Handling	Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure controls, personal protection

Personal protection

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, gases or dusts.
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.
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.
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.
Hygiene measures	
Consult local authorities for acceptable exposure limits.	



Section 9. Physical and chemical properties

Physical state	Liquid.
Color	Colorless.
Odor	Odorless.
Boiling/condensation point	The lowest known value is 100°C (212°F) (water).
Melting/freezing point	May start to solidify at 0°C (32°F) based on data for: water.
Critical temperature	The lowest known value is 374.3°C (705.7°F) (water).
Vapor pressure	The highest known value is 3.2 kPa (23.8 mm Hg) (at 20°C) (water).
Volatility	0% (v/v)
Evaporation rate	0.36 (water) compared with Butyl acetate.
VOC	0 (g/l).
Dispersibility properties	See solubility in water, methanol, diethyl ether, acetone.
Solubility	Easily soluble in cold water, hot water, methanol, acetone. Soluble in diethyl ether.

Section 10. Stability and reactivity

Stability and reactivity	The product is stable.
Conditions of instability	No additional remark.
Incompatibility with various substances	Highly reactive or incompatible with the following materials: acids. Reactive or incompatible with the following materials: oxidizing materials. Non-reactive or compatible with the following materials: reducing materials, combustible materials, organic materials, metals, alkalis and moisture.
Hazardous polymerization	Will not occur.
Conditions of reactivity	Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture. Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

Section 11. Toxicological information

Other toxic effects on humans	No specific information is available in our database regarding the other toxic effects of this material to humans.
<u>Specific effects</u>	
Carcinogenic effects	No known significant effects or critical hazards.
Mutagenic effects	No known significant effects or critical hazards.
Teratogenicity / Reproduction toxicity	No known significant effects or critical hazards.
<u>Sensitization</u>	
Eyes	Irritating to eyes.

Section 12. Ecological information

Environmental precautions	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Products of degradation	These products are carbon oxides (CO, CO ₂) and water, nitrogen oxides (NO, NO ₂ etc.), sulfur oxides (SO ₂ , SO ₃ etc.).
Toxicity of the products of biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal considerations

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.
RCRA classification	Code: Not classified

Consult your local or regional authorities.



Section 14. Transport information

International transport regulations

Not classified.

Section 15. Regulatory information

HCS Classification

Irritating material
Target organ effects

U.S. Federal regulations

TSCA 8(b) inventory: Guanidine thiocyanate; Potassium acetate; Acetic acid; water
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Acetic acid
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations

Pennsylvania RTK: Acetic acid: (environmental hazard, generic environmental hazard)
Florida: Acetic acid
Minnesota: Acetic acid
Massachusetts RTK: Acetic acid
New Jersey: Acetic acid

EU regulations

Hazard symbol/symbols



Risk phrases

R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

S36/37- Wear suitable protective clothing and gloves.

International regulations

International lists

Australia: Guanidine thiocyanate
Australia (NICNAS): Guanidine thiocyanate; Potassium acetate; Acetic acid; water
China: Guanidine thiocyanate; Potassium acetate; Acetic acid; water
Germany water class: Guanidine thiocyanate; Potassium acetate; Acetic acid
Japan (METI): Potassium acetate; Acetic acid; water
Korea (TCCL): Potassium acetate; Acetic acid; water
Philippines (RA6969): Guanidine thiocyanate; Potassium acetate; Acetic acid; water

Section 16. Other information

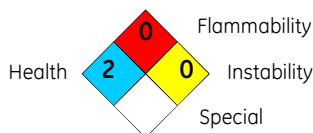
Label requirements

CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CAUSES EYE IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.

Hazardous Material Information System (U.S.A.)

Health	0
Fire hazard	0
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)



Article Number

28903445-1



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Validation date 19 July 2006

Version 1



Indicates information that has changed from previously issued version.

History

Date of printing	19 July 2006	Date of previous issue	No previous validation
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Notice to reader

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Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name Wash Buffer ; part of 'illustra GFX™ 96 PCR Purification Kit, 10'

Catalogue Number 28903445 

Component Number 378188

Material uses Industrial applications: Analytical chemistry. Research.

Validation date 19 July 2006

Print date 19 July 2006

Supplier GE Healthcare Bio-Sciences AB
SE-751 84 Uppsala
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+46 (0)18 612 0000

In case of emergency

US	ChemTrec (US)	1-800-424-9300
Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state Liquid.

Odor Odorless.

Emergency overview Warning!

CAUSES EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Do not ingest. Avoid contact with skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes	Irritating to eyes.
Skin	Irritating to skin.
Inhalation	Moderately irritating to the respiratory system.
Ingestion	Harmful if swallowed.

Potential chronic health effects **CARCINOGENIC EFFECTS:** Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by over-exposure Repeated or prolonged exposure is not known to aggravate any medical condition.

See toxicological information (section 11)



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28903445-3



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Version 1

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>	<u>Exposure limits</u>
Ethylenediaminetetraacetic acid, disodium salt, dihydrate	6381-92-6	13.9	Not available.
Tris(hydroxymethyl)aminomethane hydrochloride	1185-53-1	11.7	Not available.

Section 4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

Section 5. Fire fighting measures

Flammability of the product	Non-flammable.
Extinguishing media	
Suitable	
Not suitable	
Special exposure hazards	No specific hazard.
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	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for cleaning up	If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

Handling	Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure controls, personal protection

Personal protection

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.
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.
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.
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.

Hygiene measures

Consult local authorities for acceptable exposure limits.



Section 9. Physical and chemical properties

Physical state	Liquid.
Color	Colorless.
Odor	Odorless.
pH	8 (Conc. (% w/w): 100) [Basic.]
Boiling/condensation point	The lowest known value is 100°C (212°F) (water).
Melting/freezing point	May start to solidify at 0°C (32°F) based on data for: water.
Critical temperature	The lowest known value is 374.3°C (705.7°F) (water).
Vapor pressure	The highest known value is 3.2 kPa (23.8 mm Hg) (at 20°C) (water).
Volatility	0% (v/v).
Evaporation rate	0.36 (water) compared with Butyl acetate.
VOC	0 (g/l).
Dispersibility properties	See solubility in water, methanol, acetone.
Solubility	Easily soluble in cold water, hot water, methanol, acetone.

Section 10. Stability and reactivity

Stability and reactivity	The product is stable.
Conditions of instability	No additional remark.
Incompatibility with various substances	Reactive with oxidizing agents. Slightly reactive to reactive with metals.
Hazardous decomposition products	These products are halogenated compounds, hydrogen chloride.
Hazardous polymerization	Will not occur. Not considered to be a product presenting a risk of explosion.

Section 11. Toxicological information

Toxicity data

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Ethylenediaminetetraacetic acid, disodium salt, dihydrate	LD50	2000 mg/kg	Oral	Rat

Other toxic effects on humans Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).

Specific effects

Carcinogenic effects	No known significant effects or critical hazards.
Mutagenic effects	No known significant effects or critical hazards.
Teratogenicity / Reproduction toxicity	No known significant effects or critical hazards.

Sensitization

Eyes	Irritating to eyes.
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Section 12. Ecological information

Ecotoxicity data

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Ethylenediaminetetraacetic acid, disodium salt, dihydrate	Fish (LC50)	96 hour/hours	159 mg/l

Environmental precautions	No known significant effects or critical hazards.
Products of degradation	These products are carbon oxides (CO, CO ₂) and water, nitrogen oxides (NO, NO ₂ etc.), halogenated compounds. Some metallic oxides.
Toxicity of the products of biodegradation	The products of degradation are as toxic as the product itself.

Section 13. Disposal considerations

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.
RCRA classification	Code: Not classified

Consult your local or regional authorities.



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Section 14. Transport information

International transport regulations

Not classified.

Section 15. Regulatory information

HCS Classification	Irritating material
U.S. Federal regulations	TSCA 8(b) inventory: Tris(hydroxymethyl)aminomethane hydrochloride; water SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
State regulations	No products were found.
EU regulations	
Risk phrases	This product is not classified according to EU legislation.
International regulations	
International lists	Australia (NICNAS): Ethylenediaminetetraacetic acid, disodium salt, dihydrate; Tris(hydroxymethyl)aminomethane hydrochloride; water China: Ethylenediaminetetraacetic acid, disodium salt, dihydrate; Tris(hydroxymethyl)aminomethane hydrochloride; water Germany water class: Ethylenediaminetetraacetic acid, disodium salt, dihydrate; Tris(hydroxymethyl)aminomethane hydrochloride Japan (METI): Tris(hydroxymethyl)aminomethane hydrochloride; water Korea (TCCL): Tris(hydroxymethyl)aminomethane hydrochloride; water Philippines (RA6969): Ethylenediaminetetraacetic acid, disodium salt, dihydrate; Tris(hydroxymethyl)aminomethane hydrochloride; water

Section 16. Other information

Label requirements

CAUSES EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Hazardous Material Information System (U.S.A.)

Health	1
Fire hazard	0
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)

2

Health

0

Flammability

0

Instability

Special

Indicates information that has changed from previously issued version.

History

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Notice to reader



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.



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