



Kit SDS Cover Sheet

Product Name:

Item No(s):

Transport Information: *This kit contains Dangerous Goods component(s) which are being shipped under the Excepted Quantities exemption or as a Chemical kit (UN3316). For further information on individual components, please refer to the corresponding component SDS.*

This is a test kit that is comprised of several individual components, listed below, each of which may have its own Safety Data Sheet (SDS). If a component does not have a Safety Data Sheet included, the item falls under Hazard Communication [1910.1200(b)(6)], *Articles*, and does not require a Safety Data Sheet.

Kit Components:

For product information, please contact your Neogen Corporation Representative.
For further information regarding this SDS, please contact SDS@neogen.com.

SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

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Rapid Extraction Buffer, Type 4

Revision 1
Revision date 2019-12-10

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

1.1. Product identifier

Product name	Rapid Extraction Buffer, Type 4
Product code	T501113S

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

Product Use	[SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [PC21] Laboratory chemicals;
Description	Intended for laboratory use only.

1.3. Details of the supplier of the safety data sheet

Company	Neogen Corporation
Address	620 Leshler Place Lansing MI 48912 USA
Web	www.neogen.com
Telephone	517-372-9200/800-234-5333
Email	SDS@neogen.com

1.4. Emergency telephone number


	24 hours: Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international) Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - GHS	Flam. Liq. 3: H226;
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2.2. Label elements

Hazard pictograms	
Signal Word	Warning
Hazard Statement	Flam. Liq. 3: H226 - Flammable liquid and vapour.
Precautionary Statement: Prevention	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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2.2. Label elements

Precautionary Statement: Response	P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Precautionary Statement: Storage	P403+P235 - Store in a well-ventilated place. Keep cool.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations

2.3. Other hazards

Other hazards	None known.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Ethanol	603-002-00-5	64-17-5	200-578-6		30 - 40%	Flam. Liq. 2: H225;

Description

	Concentrations listed are not product specifications.
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Further information

	Full text of Hazard Statements listed in this Section is provided in Section 16.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration. Seek medical attention if irritation or symptoms persist.
Eye contact	Rinse immediately with plenty of water. Contact lenses should be removed. Seek medical attention if irritation or symptoms persist.
Skin contact	Rinse immediately with plenty of water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
Ingestion	DO NOT INDUCE VOMITING unless advised to do so by a doctor. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.
Eye contact	May cause irritation to eyes.
Skin contact	May cause irritation to skin.
Ingestion	Ingestion may cause nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

	Remove the affected person from the source of contamination immediately. Transfer to hospital if there are burns or symptoms of poisoning. IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

	In case of fire, use carbon dioxide (CO2), Alcohol resistant foam, Dry chemical, Foam. Use
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5.1. Extinguishing media

extinguishing media appropriate to the surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes. Fire will produce dense black smoke. Vapor may travel considerable distance to source of ignition and flash back. Heat will increase pressure in sealed containers.

5.3. Advice for firefighters

Flammable liquid and vapour. In case of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus and protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Flammable liquid. Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid sparks, flames, heat and sources of ignition. Ensure adequate ventilation of the working area. Use as appropriate: Protective equipment. Avoid prolonged or repeated exposure.

6.2. Environmental precautions

Prevent further spillage if safe. Clean spillage area thoroughly with plenty of water. Do not flush into surface water. Do not let product contaminate subsoil.

6.3. Methods and material for containment and cleaning up

Flammable liquid. Absorb with inert, absorbent material. Collect spillage. Transfer to suitable, labelled containers for disposal. Dispose of this material and its container to hazardous or special waste collection point. Do not contaminate water by cleaning of equipment or disposal of wastes. Clean with detergents. Avoid solvents.

6.4. Reference to other sections

See section 2, 8 & 13 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with eyes. Do not eat, drink or smoke in areas where this product is used or stored. Ensure adequate ventilation of the working area. Do not contaminate water by cleaning of equipment or disposal of wastes. Use as appropriate: Protective clothing.
Read the entire label and follow all use directions, restrictions, and precautions.

7.2. Conditions for safe storage, including any incompatibilities

Flammable liquid and vapour. Contact with combustible material may cause fire. Store in correctly labelled containers. Keep container tightly closed. Do not contaminate water, food, or feed by storage or disposal. Follow label instructions.

7.3. Specific end use(s)

See Section 1.2 for further information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limit Values


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Exposure Limit Values

Ethanol	ACGIH TLV TWA: 1000 ppm	ACGIH TLV STEL: -
	Notations: A4	OSHA PEL 8hr TWA ppm: 1000
	OSHA PEL 8hr TWA mg m3: 1900	Skin Designation: -
	NIOSH REL 10hr TWA ppm:	NIOSH REL 10hr TWA mg m3:
	NIOSH REL 15 min ST ppm:	NIOSH REL 15 min ST mg m3:

8.2. Exposure controls

	
Appropriate engineering controls	Ensure adequate ventilation of the working area.
Individual protection measures	Use as appropriate: Protective equipment.
Eye / face protection	Use as appropriate: Suitable eye protection.
Skin protection - Hand protection	Use as appropriate: Chemical-resistant gloves made of any waterproof material.
Skin protection - Other	Use as appropriate: Protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Occupational exposure controls	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food, drink and animal feed and/ or feed products. Provide chemical shower. Provide eye wash station.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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9.1. Information on basic physical and chemical properties

State	Liquid
Color	Clear
Odor	Alcoholic/Mild
Odor threshold	No data available
pH	No data available
Melting point	-98 °C
Freezing Point	No data available
Boiling point	64 - 65 °C
Flash point	29 °C
Evaporation rate	6.3 g/min
Flammability limits	Not applicable.
Upper Explosive Limit	36.5 %
Lower Explosive Limit	5.5 %
Vapor pressure	128 Pa
Vapor density	1.11
Relative density	0.79
Partition coefficient (n-octanol/water)	-0.77
Autoignition temperature	455 °C
Viscosity	No data available
Oxidizing properties	No data available
Solubility	Soluble in water

9.2. Other information

VOC (Volatile organic compounds)	32.64 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.
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10.4. Conditions to avoid

	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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10.5. Incompatible materials

	Contact with combustible material may cause fire. Keep away from oxidizing agents, Combustible materials.
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10.6. Hazardous decomposition products

	Carbon oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

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11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. However, this product does contain substance(s) that are classified as hazardous. For more information, see Section 3.
Skin corrosion/irritation	May cause irritation to skin.
Serious eye damage/irritation	May cause irritation to eyes.
Respiratory or skin sensitization	May cause allergic reactions in susceptible people.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Listed by the International Agency for Research on Cancer (IARC) as a group 3 substance: evidence does not support the substance as a human carcinogen, [Polyvinyl pyrrolidone, CAS No. 9003-39-8]. Not listed in the National Toxicology Program (NTP) 14th Report on Carcinogens. Not listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Guide to Occupational Exposure Values. Not listed in the OSHA standard 1910.1003 Carcinogens.
Reproductive toxicity	Adverse reproductive effects have been found in laboratory animals.
STOT-single exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT-repeated exposure	Component(s) may cause damage to human organs based on animal data.
Aspiration hazard	No Significant Hazard.
Repeated or prolonged exposure	Avoid prolonged or repeated exposure. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.

11.1.2. Mixtures

	See Section(s) 3 for further information.
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11.1.3. Hazard Information

	See Section(s) 2 and 3 for further information.
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11.1.4. Toxicological information

	No data available
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11.1.5. Hazard Class

	See Section(s) 2 and 14 for further information.
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11.1.6. Classification Criteria

	Based on the Globally Harmonized System (GHS) considerations for the classification of mixtures. See Section 15 for regulatory citations.
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11.1.7. Information on likely routes of exposure

	Eye contact. Ingestion. Skin contact. Inhalation.
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11.1.8. Symptoms related to the physical, chemical and toxicological characteristics

	See Section(s) 4.2 for further information.
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11.1.9. Delayed and immediate effects as well as chronic effects from short and long-term exposure

	See Section(s) 4.2 for further information.
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11.1.10. Interactive effects

	No data available.
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11.1.11. Absence of specific data

	<1% of this mixture consists of ingredients of unknown acute toxicity.
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11.1.12. Mixture versus substance information

See Section(s) 3 for further information.

11.1.13. Other information

Caution - substance not yet fully tested.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

Ethanol -0.349 log P

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

No data is available on this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of as special waste in compliance with local and national regulations.

Disposal methods

Do not contaminate water by cleaning of equipment or disposal of wastes. Do not flush into surface water. Dispose of in compliance with all local and national regulations.

Disposal of packaging

Nonrefillable container. Do not reuse or refill this container.
If empty: Do not reuse this container. Place in trash or offer for recycling, if available.
If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

SECTION 14: Transport information

Hazard pictograms



14.1. UN number

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14.1. UN number	
	UN1170
14.2. UN proper shipping name	
	ETHANOL SOLUTION
14.3. Transport hazard class(es)	
DOT	3
Subsidiary risk	-
IMDG	3
Subsidiary risk	-
IATA	3
Subsidiary risk	-
14.4. Packing group	
Packing group	III
14.5. Environmental hazards	
Environmental hazards	No
Marine pollutant	No
DOT	
Hazard ID	30
Tunnel Category	(D/E)
IMDG	
EmS Code	F-E S-D
IATA	
Packing Instruction (Cargo)	366
Maximum quantity	220 L
Packing Instruction (Passenger)	355
Maximum quantity	60 L

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulations	Hazard Communication Standard: 29 Code of Federal Regulations 1910.1200: Occupational Safety and Health Standards: Z: Toxic and Hazardous Substances: Hazard Communication.
Chemical Inventories/Right-to-Know Lists:	<p>--International--</p> <p>Basel Convention (Hazardous Waste): H3.</p> <p>Chemical Weapons Convention (OPCW): This material contains no reportable components.</p> <p>Kyoto Protocol Greenhouse Gases: This material contains no reportable components.</p> <p>Mercosur Agreement: Applicable.</p> <p>Montreal Protocol: This material contains no reportable components.</p> <p>The Rotterdam Convention: This material contains no reportable components.</p> <p>The Stockholm Convention: This material contains no reportable components.</p> <p>--Asia and the ASEAN Nations--</p> <p>Catalog of Hazardous Chemicals (China): [2568, Ethanol, CAS No. 64-17-5].</p> <p>Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision,</p>

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

Distribution, and Control of Hazardous Substances: Usable hazardous and toxic material, [Ethanol, CAS No. 64-17-5].

Chemical Substances Control Law (Japan): This material contains no reportable components.

Industrial Safety and Health Act, Dangerous Substances (Japan): Labeling/Notification required, Flammable, [Ethanol, CAS No. 64-17-5].

Poisonous and Deleterious Substances Act (Japan): This material contains no reportable components.

Chemical Substances Subject to Permission (Korea): This material contains no reportable components.

Restricted or Prohibited Substances (Korea): This material contains no reportable components.

Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): Schedule I exposure standard, CLASS regulation, [Ethanol, CAS No. 64-17-5].

Philippine Inventory of Chemicals and Chemical Substances (PICCS): Toxic Substances and Hazardous and Nuclear Wastes Control Act (RA6969):, [Ethanol, CAS No. 64-17-5].

Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): This material contains no reportable components.

Hazardous Substances Act (Thailand): This material contains no reportable components.

Law on Chemicals (Vietnam): This material contains no reportable components.

--Australia and New Zealand--.

Australian Dangerous Goods Code: Class 3.

Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.

New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.

--European Union (EU) and the United Kingdom (UK)--.

Annex XVII for REACH: Restricted, Flammable, [Ethanol, CAS No. 64-17-5].

Article 95 of the Biocidal Products Regulation (BPR): Not applicable.

Authorization List (Annex XIV of REACH): This material contains no reportable components.

--North America--.

Domestic/Non-Domestic Substances Lists (DSL/NDSL): All ingredients listed or exempt.

Toxic Substances Control Act (TSCA): All ingredients listed or exempt.

Massachusetts Right-to-Know Hazardous Substance List: This material contains no reportable components.

New Jersey Worker and Community Right to Know Act: Ethyl alcohol.

Pennsylvania Right to Know Law: Ethanol.

Rhode Island Right-to-Know General Law: Ethyl alcohol.

California Prop 65: This material contains no reportable components.

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Ethanol	Y	Y	N	N	N	N	N	N	N

SECTION 16: Other information

Other information

Revision	<p>This document differs from the previous version in the following areas:.</p> <ul style="list-style-type: none"> 1 - Product Use. 2 - 2.1. Classification of the substance or mixture. 2 - 2.1.2. Classification - GHS. 2 - Signal Word. 2 - Precautionary Statement: Prevention.
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Other information

	<p>2 - Precautionary Statement: Response. 2 - Precautionary Statement: Disposal. 9 - 9.1. Information on basic physical and chemical properties (Boiling point). 9 - 9.1. Information on basic physical and chemical properties (Relative density). 9 - 9.1. Information on basic physical and chemical properties (Odor). 9 - 9.1. Information on basic physical and chemical properties (Flash point). 9 - 9.2. Other information (VOC (Volatile organic compounds)). 9 - 9.2. Other information (Product Subcategory). 11 - Carcinogenicity. 11 - Reproductive toxicity. 14 - DOT. 14 - IMDG. 14 - IATA. 15 - Labelling. 15 - Hazard Statements. 15 - Safety phrases. 15 - Chemical Inventories/Right-to-Know Lists:. 16 - Maximum content of VOC.</p>
<p>Acronyms</p>	<p>ACGIH: American Conference of Governmental Industrial Hygienists. ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR). CAS No.: Chemical Abstracts Service. CLASS: Classification, Labeling, and Safety Data Sheet of Hazardous Chemicals Regulation 2013 (Malaysia). GHS: Globally Harmonized System. HCS 2012: Hazard Communication Standard (2012 revision). IATA: International Air Transport Association. ICAO: International Civil Aviation Organization. IMDG: International Maritime Dangerous Goods. LC: Lethal concentration. LD: Lethal dose. OEL: Occupational exposure limit. OSHA: U.S. Occupational Safety and Health Administration. PEL: Permissible Exposure Limit. REACH: Registration, Evaluation, Authorization, and Restriction of Chemicals. SVHC: Substance of very high concern. UN: United Nations. US DOT: United States Department of Transportation. VOC: Volatile Organic Compound. WEL: Workplace Exposure Limit.</p>
<p>Text of Hazard Statements in Section 3</p>	<p>Flam. Liq. 2: H225 - Highly flammable liquid and vapour.</p>
<p>Maximum content of VOC</p>	<p>32.64 %.</p>

Further information

	<p>DISCLAIMER: The information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date issued. No representation is made regarding the completeness or accuracy of the Information. Further, because of the many factors that affect the use of this product, the Information is supplied upon the condition that the person(s) receiving it will make their own determination regarding its suitability for their own unique purpose(s), prior to use.</p>
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Further information

	<p>Except as expressly stated herein, NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, USAGE OF TRADE, OR RESULTS TO BE OBTAINED BY USE OF THIS PRODUCT are made with respect to this product or use of this product. The product covered is furnished "as is" and only subject to the warranties herein provided, no liability is assumed resulting from the use of this product.</p>
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SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

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Rapid Extraction Buffer, Type 5

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

1.1. Product identifier

Product name	Rapid Extraction Buffer, Type 5
Product code	T502411D

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

Product Use	[SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [PC21] Laboratory chemicals;
Description	Intended for laboratory use only.

1.3. Details of the supplier of the safety data sheet

Company	Neogen Corporation
Address	620 Leshler Place Lansing MI 48912 USA
Web	www.neogen.com
Telephone	517-372-9200/800-234-5333
Email	SDS@neogen.com

1.4. Emergency telephone number


	24 hours: Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international) Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - GHS	Skin Irrit. 2: H315; Eye Irrit. 2: H319;
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2.2. Label elements

Hazard pictograms	
Signal Word	Warning
Hazard Statement	Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation.
Precautionary Statement: Prevention	P264 - Wash thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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2.2. Label elements

Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.
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2.3. Other hazards

Other hazards	May be harmful if swallowed.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Sodium hydroxide	011-002-00-6	1310-73-2	215-185-5		0.5 - 1%	Skin Corr. 1A: H314;

Description

	Concentrations listed are not product specifications.
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Further information

	Full text of Hazard Statements listed in this Section is provided in Section 16.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration. Seek medical attention if irritation or symptoms persist.
Eye contact	Rinse immediately with plenty of water. Contact lenses should be removed. Seek medical attention if irritation or symptoms persist.
Skin contact	Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation or symptoms persist.
Ingestion	Do not induce vomiting unless told to do so by the poison control center or doctor. Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	May cause irritation to respiratory system.
Eye contact	Causes eye irritation.
Skin contact	Causes skin irritation.
Ingestion	Ingestion may cause nausea and vomiting. May cause oral mucosal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

	Remove the affected person from the source of contamination immediately. Transfer to hospital if there are burns or symptoms of poisoning. Seek medical attention if irritation or symptoms persist. If medical advice is needed, have product container or label at hand.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use extinguishing media appropriate to the surrounding fire conditions.
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5.2. Special hazards arising from the substance or mixture

Irritant. Do not breathe vapor or spray mist.

5.3. Advice for firefighters

Do not breathe vapor or spray mist. Wear suitable respiratory equipment when necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use as appropriate: Protective equipment, Protective clothing. Ensure adequate ventilation of the working area. Avoid prolonged or repeated exposure.

6.2. Environmental precautions

Prevent further spillage if safe. Clean spillage area thoroughly with plenty of water. Do not flush into surface water. Do not let product contaminate subsoil.

6.3. Methods and material for containment and cleaning up

Prevent further spillage if safe. Absorb spillage to prevent material damage. Clean spillage area thoroughly with plenty of water. Do not contaminate water by cleaning of equipment or disposal of wastes.

6.4. Reference to other sections

See Section(s) 2, 8, and 13 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with eyes. Do not eat, drink or smoke in areas where this product is used or stored. Ensure adequate ventilation of the working area. Do not contaminate water by cleaning of equipment or disposal of wastes. Use as appropriate: Protective clothing.
Read the entire label and follow all use directions, restrictions, and precautions.

7.2. Conditions for safe storage, including any incompatibilities

Store in correctly labelled containers. Keep container tightly closed. Do not contaminate water, food, or feed by storage or disposal. Follow label instructions.

7.3. Specific end use(s)

See Section(s) 1.2 for further information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limit Values


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Exposure Limit Values

Sodium hydroxide	ACGIH TLV TWA: - Notations: - OSHA PEL 8hr TWA mg m3: 2 NIOSH REL 10hr TWA ppm: NIOSH REL 15 min ST ppm:	ACGIH TLV STEL: C 2 mg/m ³ OSHA PEL 8hr TWA ppm: - Skin Designation: - NIOSH REL 10hr TWA mg m3: NIOSH REL 15 min ST mg m3:
Thimerosal	ACGIH TLV TWA: 0.01 Notations: OSHA PEL 8hr TWA mg m3: 0.05 NIOSH REL 10hr TWA ppm: NIOSH REL 15 min ST ppm:	ACGIH TLV STEL: OSHA PEL 8hr TWA ppm: Skin Designation: NIOSH REL 10hr TWA mg m3: NIOSH REL 15 min ST mg m3:

8.2. Exposure controls

	
Appropriate engineering controls	Ensure adequate ventilation of the working area.
Individual protection measures	Use as appropriate: Protective equipment.
Eye / face protection	Wear eye/face protection.
Skin protection - Hand protection	Wear suitable gloves. Wash the outside of gloves before removing them. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
Skin protection - Other	Use as appropriate: Protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Occupational exposure controls	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Protect clothing from contact with the product. Provide chemical shower. Provide eye wash station.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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9.1. Information on basic physical and chemical properties

State	Liquid
Color	Clear
Odor	Odorless/Slight
Odor threshold	No data available
pH	7.2
Melting point	No data available
Freezing Point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability limits	Not applicable.
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	No data available
Explosive properties	Not applicable.
Oxidizing properties	No data available
Solubility	Soluble in water

9.2. Other information

VOC (Volatile organic compounds)	Not applicable.
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SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.
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10.4. Conditions to avoid

	Keep away from extreme temperatures.
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10.5. Incompatible materials

	No data available.
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10.6. Hazardous decomposition products

	Carbon oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. However, this product does contain substance(s) that are classified as hazardous. For more information, see Section 3.
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11.1. Information on toxicological effects

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause allergic reactions in susceptible people.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Listed by the International Agency for Research on Cancer (IARC) as a Group 2 substance: suspected of being a human carcinogen, [Thimerosal (mercury compounds), CAS No. 54-64-8]. Not listed in the National Toxicology Program (NTP) 14th Report on Carcinogens. Not listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Guide to Occupational Exposure Values. Not listed in the OSHA standard 1910.1003 Carcinogens.
Reproductive toxicity	No teratogenic effects reported.
STOT-single exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT-repeated exposure	No Significant Hazard.
Aspiration hazard	No Significant Hazard.
Repeated or prolonged exposure	Avoid prolonged or repeated exposure. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.

11.1.2. Mixtures

	See Section(s) 3 for further information.
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11.1.3. Hazard Information

	See Section(s) 2 and 3 for further information.
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11.1.4. Toxicological information

	No data available
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11.1.5. Hazard Class

	See Section(s) 2 and 14 for further information.
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11.1.6. Classification Criteria

	Based on the Globally Harmonized System (GHS) considerations for the classification of mixtures. See Section 15 for regulatory citations.
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11.1.7. Information on likely routes of exposure

	Eye contact. Ingestion. Skin contact. Inhalation.
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11.1.8. Symptoms related to the physical, chemical and toxicological characteristics

	See Section(s) 4.2 for further information.
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11.1.9. Delayed and immediate effects as well as chronic effects from short and long-term exposure

	See Section(s) 4.2 for further information.
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11.1.10. Interactive effects

	No data available.
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11.1.11. Absence of specific data

	<1% of this mixture consists of ingredients of unknown acute toxicity.
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11.1.12. Mixture versus substance information

	See Section(s) 3 for further information.
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11.1.13. Other information

Caution - substance not yet fully tested.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

Rapid Extraction Buffer, Type 5 No data available **Thimerosal** No data available

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

Caution - substance not yet fully tested.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations. Follow label instructions.

Disposal methods

Do not contaminate water by cleaning of equipment or disposal of wastes. Do not flush into surface water. Dispose of in compliance with all local and national regulations.

Disposal of packaging

Nonrefillable container. Do not reuse or refill this container.
If empty: Do not reuse this container. Place in trash or offer for recycling, if available.
If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

SECTION 14: Transport information

14.1. UN number

The product is not classified as dangerous for carriage.

14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

14.4. Packing group

The product is not classified as dangerous for carriage.

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14.5. Environmental hazards

The product is not classified as dangerous for carriage.

14.6. Special precautions for user

The product is not classified as dangerous for carriage.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

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

Regulations	Hazard Communication Standard: 29 Code of Federal Regulations 1910.1200: Occupational Safety and Health Standards: Z: Toxic and Hazardous Substances: Hazard Communication.
Chemical Inventories/Right-to-Know Lists:	<p>--International--</p> <p>Basel Convention (Hazardous Waste): Not applicable.</p> <p>Chemical Weapons Convention (OPCW): This material contains no reportable components.</p> <p>Kyoto Protocol Greenhouse Gases: This material contains no reportable components.</p> <p>Mercosur Agreement: Applicable.</p> <p>Montreal Protocol: This material contains no reportable components.</p> <p>The Rotterdam Convention: Annex III, [Thimerosal (mercury compounds), CAS No. 54-64-8].</p> <p>The Stockholm Convention: This material contains no reportable components.</p> <p>--Asia and the ASEAN Nations--</p> <p>Catalog of Hazardous Chemicals (China): [2581, Thimerosal (mercury compounds), CAS No. 54-64-8].</p> <p>Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision, Distribution, and Control of Hazardous Substances: This material contains no reportable components.</p> <p>Chemical Substances Control Law (Japan): Water Pollution Control Law., [Sodium hydroxide (solution), CAS No. 1310-73-2], Class I environmental release, Air Pollution Control Law., Soil Contamination Countermeasures Act, Water Pollution Control Law., [Thimerosal (mercury compounds), CAS No. 54-64-8].</p> <p>Industrial Safety and Health Act, Dangerous Substances (Japan): This material contains no reportable components.</p> <p>Poisonous and Deleterious Substances Act (Japan): Poisonous, [Thimerosal (mercury compounds), CAS No. 54-64-8].</p> <p>Chemical Substances Subject to Permission (Korea): This material contains no reportable components.</p> <p>Restricted or Prohibited Substances (Korea): This material contains no reportable components.</p> <p>Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): Schedule I exposure standard, CLASS regulation, [Sodium hydroxide (solution), CAS No. 1310-73-2].</p> <p>Philippine Inventory of Chemicals and Chemical Substances (PICCS): Toxic Substances and Hazardous and Nuclear Wastes Control Act (RA6969), [Sodium hydroxide (solution), CAS No. 1310-73-2], [Thimerosal (mercury compounds), CAS No. 54-64-8].</p> <p>Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): This material contains no reportable components.</p> <p>Hazardous Substances Act (Thailand): This material contains no reportable components.</p> <p>Law on Chemicals (Vietnam): Annex I, Appendix V, Appendix VII, [Sodium hydroxide (solution), CAS No. 1310-73-2].</p> <p>--Australia and New Zealand--</p>

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

Australian Dangerous Goods Code: Not applicable.
 Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.
 New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.

--European Union (EU) and the United Kingdom (UK)--
 Authorization List (Annex XIV of REACH): This material contains no reportable components.
 Annex XVII for REACH: Restricted, [Thimerosal (mercury compounds), CAS No. 54-64-8].
 Article 95 of the Biocidal Products Regulation (BPR): Not applicable.

--North America--
 Domestic/Non-Domestic Substances Lists (DSL/NDSL): All ingredients listed or exempt.
 Toxic Substances Control Act (TSCA): All ingredients listed or exempt.
 Massachusetts Right-to-Know Hazardous Substance List: This material contains no reportable components.
 New Jersey Worker and Community Right to Know Act: This material contains no reportable components.
 Pennsylvania Right to Know Law: This material contains no reportable components.
 Rhode Island Right-to-Know General Law: This material contains no reportable components.

****California residents please note****
 WARNING: This product can expose you to chemicals, including thimerosal (mercury compounds), CAS No. 54-64-8, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Sodium hydroxide (Sodium hydroxide (Na(OH)))	Y	N	N	N	N	N	Y	N	N
Thimerosal (Mercurate(1-), ethyl[2-(mercapto-kappa.S)benzoato(2--kappa.O)]-, sodium)	Y	N	N	Y	N	N	N	N	N

SECTION 16: Other information

Other information

Revision	<p>This document differs from the previous version in the following areas:</p> <ul style="list-style-type: none"> 1 - Description. 1 - Product Use. 2 - Other hazards. 2 - Precautionary Statement: Response. 9 - 9.1. Information on basic physical and chemical properties (Odor). 9 - 9.1. Information on basic physical and chemical properties (Explosive properties). 9 - 9.1. Information on basic physical and chemical properties (Solubility). 9 - 9.2. Other information (Product Subcategory). 11 - Carcinogenicity. 15 - Chemical Inventories/Right-to-Know Lists:. 16 - Maximum content of VOC.
Acronyms	<p>ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR). CAS No.: Chemical Abstracts Service. CLASS: Classification, Labeling, and Safety Data Sheet of Hazardous Chemicals Regulation 2013 (Malaysia). GHS: Globally Harmonized System. HCS 2012: Hazard Communication Standard (2012 revision).</p>

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Other information

	<p>IATA: International Air Transport Association. ICAO: International Civil Aviation Organization. IMDG: International Maritime Dangerous Goods. LD: Lethal dose. OEL: Occupational exposure limit. OSHA: U.S. Occupational Safety and Health Administration. PEL: Permissible Exposure Limit. REACH: Registration, Evaluation, Authorization, and Restriction of Chemicals. SVHC: Substance of very high concern. US DOT: United States Department of Transportation. VOC: Volatile Organic Compound. WEL: Workplace Exposure Limit.</p>
<p>Text of Hazard Statements in Section 3</p>	<p>Skin Corr. 1A: H314 - Causes severe skin burns and eye damage. Skin Corr. 1B: H314 - Causes severe skin burns and eye damage. Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation.</p>

Further information

	<p>DISCLAIMER: The information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date issued. No representation is made regarding the completeness or accuracy of the Information. Further, because of the many factors that affect the use of this product, the Information is supplied upon the condition that the person(s) receiving it will make their own determination regarding its suitability for their own unique purpose(s), prior to use.</p> <p>Except as expressly stated herein, NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, USAGE OF TRADE, OR RESULTS TO BE OBTAINED BY USE OF THIS PRODUCT are made with respect to this product or use of this product. The product covered is furnished "as is" and only subject to the warranties herein provided, no liability is assumed resulting from the use of this product.</p>
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