

Safety Data Sheet

4 CN Peroxidase Substrate

SDS-10206

Rev. Number: 2

Rev. Date: Oct 4, 2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	Product Code
4-CN Substrate	5420-0017 (37-01-60)
4-CN Substrate	5420-0012 (37-00-85)

Hazardous Reagent

4 CN Substrate

Hazardous Reagent Product code

Catalog No. listed above

Recommended Use: Reference Reagent

Contact Manufacturer: SeraCare Life Sciences
910 Clopper Road
Gaithersburg, MD 20878

Phone #: (508) 244-6400
US Toll Free: (800) 676-1881

Fax #: (508) 634-3394

Web: www.seracare.com

Email: CDx-CustomerService@LGCGroup.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER

Telephone: 13 11 26 - Hours: 24 hours

CANADIAN TRANSPORT EMERGENCY CENTER

Telephone: (1) 613 996 6666 - Hours: 24 hours/day,
7 days/week

UK – THE NATIONAL FOCUS

Telephone: (44) 029 2041 6388 - Hours: 09:00-17:00 GMT

USA - NATIONAL RESPONSE CENTER

Telephone: (1) 800 424 8802 - Hours: 24 hours/day,
7 days/week

CHEMTREC: CHEMTREC Customer Number: - CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type: Health Hazard

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

GHS Classification: Flammable liquids, Category 2; H225
Acute toxicity, Category 3, inhalation; H331
Acute toxicity, Category 3, dermal; H311
Acute toxicity, Category 3, oral; H301
Specific Target Organ Toxicity (single exposure), Category 2; H371

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Biological Hazard:	None
Hazard Statements:	H225: Highly flammable liquid and vapour. H331: Toxic if inhaled. H311: Toxic in contact with skin. H301: Toxic if swallowed. H371: May cause damage to organs.
Precautionary Statements:	P210: Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ ventilating/ lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P271: Use only outdoors or in a well-ventilated area. P284: Wear respiratory protection. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.

Symbols and Indications of Danger: Dgr: Danger



Principle Route of Exposure:	The substance can be absorbed into the body by inhalation and through the skin and by ingestion.
Acute Effects: Eye	In case of contact, immediately flush eyes with a large amount of water for at least 15 minutes while holding the eyelids open to assure that the entire surface is flushed. Seek medical attention.
Acute Effects: Skin	Remove contaminated clothing and shoes. In case of contact, immediately wash the contact area thoroughly with soap and a large amount of water. Seek medical attention.
Acute Effects: Inhalation	Remove user to fresh air. If symptoms of intoxication or vision problems are apparent, seek immediate medical attention.
Inhalation Risk:	A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.
Short-Term Exposure:	The substance is irritating to the eyes, the skin and the respiratory tract. The substance may cause effects on the central nervous system, resulting in loss of consciousness.
Long-Term Exposure:	Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system, resulting in persistent or recurring headaches and impaired vision. Redness. Pain. MAY BE ABSORBED! Dry skin. Redness. Cough. Dizziness. Headache. Nausea. Weakness. Visual disturbance. Abdominal pain. Shortness of breath. Vomiting. Convulsions. Unconsciousness. (Further see Inhalation).
Ingestion:	Do not eat, drink, or smoke during work.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Chemical	% Weight	CAS #
4 CN Peroxidase Substrate	Methyl Alcohol	<20%	67-56-1
GHS Classification:	Flammable liquids, Category 2; H225 Acute toxicity, Category 3, inhalation; H331 Acute toxicity, Category 3, dermal; H311 Acute toxicity, Category 3, oral; H301 Specific Target Organ Toxicity (single exposure), Category 2; H371		

4. FIRST AID MEASURES

General Advice:	Wash contaminated clothing before reuse. Seek medical attention if necessary.
Oral Exposure:	Avoid swallowing the material. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person. If conscious, rinse mouth with water. Seek medical attention.
Ingestion First Aid:	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.
Inhalation Exposure:	Fresh air, rest. Refer for medical attention.
Skin Exposure:	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention
Eye Exposure:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Use dry chemical, alcohol-resistant foam or carbon dioxide for the surrounding fire
Fire Acute Hazard:	Highly flammable. See Notes.
Fire Prevention:	NO open flames, NO sparks, and NO smoking. NO contact with oxidants.
Fire Fighting:	Powder, alcohol-resistant foam, water in large amounts, carbon dioxide.
Explosion Acute Hazard:	Vapour/air mixtures are explosive. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools. In case of fire: keep drums, etc., cool by spraying with water.
CHEMICAL DANGERS:	Reacts violently with oxidants causing fire and explosion hazard.
PHYSICAL DANGERS:	The vapour mixes well with air, explosive mixtures are easily formed.
Unusual Fire and Explosive Hazards:	May emit toxic and/or explosive vapors under fire conditions
Flash Point:	80 °F (26.5 °C)
Auto Ignition Temperature:	725 °F (385 °C)
Flammability Statement:	This product is flammable (flammable limits LEL=6.7 and UEL=36)
Specific Hazards Arising from the Chemical:	Hazardous combustion products may include carbon monoxide, formaldehyde, and carbon dioxide.
Protective Equipment and Precautions for Firefighters:	Wear self-contained breathing apparatus and protective clothing to prevent exposure to eyes and skin. Flame invisible in daylight.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Data for 100% Methyl Alcohol (67-56-1): Precautionary Statement - P-phrases: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P309+P310: IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician. (Unofficial P-phrases combination)
Environmental Precautions:	Data for 100% Methyl Alcohol (67-56-1): Endangerment of drinking water and environment Maybe a hazard to drinking water sources when very large quantities get into groundwater. Inform the responsible authorities.
Method of Containment:	Collect leaking and spilled liquid in sealable containers as far as possible.
Method of Clean-up:	Clean up of spills requires no special equipment or procedures. Clean with copious amounts of water.
Other Information:	Not Applicable
SPILLAGE DISPOSAL	Evacuate danger area! Ventilation. Collect leaking liquid in sealable containers. Wash away remainder with plenty of water. Remove vapour with fine water spray. Chemical protection suit including self-contained breathing apparatus.

7. HANDLING AND STORAGE

Handling:	Wear appropriate PPE. See section 8
Storage:	Keep tightly closed and store at 2 - 8°C Fireproof. Separated from strong oxidants, food and feedstuffs: Cool.

8. EXPOSURE CONTROL

Respiratory Protection:	Ventilation. Local exhaust or breathing protection.
Eye Protection:	Safety goggles or eye protection in combination with breathing protection.
Skin Protection:	Protective gloves. Protective clothing.
Ingestion:	Do not eat, drink, or smoke during work. Wash hands before eating.
Engineering Controls:	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous Colorless Solution - Precipitation may occur.
Physical State:	Liquid.
Odor:	Not Available
Odor Threshold:	Not Available
pH:	5.4 - 5.8
Boiling Point:	°C
Melting point:	-98°C
Evaporation Rate:	>1
Vapor Density:	(air = 1): 1.1
Relative density of the vapour/air -mixture:	20°C (air = 1): 1.01

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Vapor Pressure:	kPa at 20°C: 12.3
Relative Density:	(water = 1): 0.79
Auto-Ignition Temperature:	464°C
Water Solubility:	Not Available
Flammability:	Flammable
Flash Point:	12°C c.c.
Viscosity:	Not Available
Oxidizing Properties:	Not Available
Explosive Properties:	vol% in air: 5.5-44
Octanol/water partition coefficient as log Pow:	0.82/-0.66
Additional Parameters:	See Datasheet/Product Insert for other Product Information.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions
Conditions to Avoid:	Data for 100% Methyl Alcohol: Reacts violently with oxidants. This generates fire and explosion hazard. The vapour mixes well with air, explosive mixtures are easily formed.
Incompatibility Materials to Avoid:	Strong oxidizing agents and reducing agents
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide
Hazardous Polymerization:	Will not occur
Possibility of Hazardous Reactions:	Data for 100% Methyl Alcohol: Reacts violently with oxidants. This generates fire and explosion hazard. The vapour mixes well with air, explosive mixtures are easily formed.
CHEMICAL DANGERS:	Reacts violently with oxidants causing fire and explosion hazard.
PHYSICAL DANGERS:	The vapour mixes well with air, explosive mixtures are easily formed.

11. TOXICOLOGY MEASURES**Acute Toxicity**

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral:	Data for 100% Methyl Alcohol: LD50 oral rat: 5630 mg/kg Reference: Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. Vol. 19(11), Pg. 27, 1975. Acutely Toxic
LD50 Dermal:	Data for 100% Methyl Alcohol: LD50 dermal Rabbit: 15800 mg/kg Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg.74, 1974. Acutely Toxic
LC50 Inhalation:	Data for 100% Methyl Alcohol: LC50 inhalation rat: 83,9 mg/l/4 h Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg.74, 1974. Acutely Toxic

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Chronic Toxicity**Carcinogenicity:** Not Applicable**Irritation:** Data for 100% Methyl Alcohol: Main toxic effects:
Acute: Irritation to the eyes, CNS depression, systemic damage to the eyes
Chronic: Neurological symptoms, irritation to the nasal mucous membranes through exposure to higher vapor concentrations, damage to the skin due to repeated contact.**Corrosivity:** Not applicable**Sensitization:** Not applicable**Neurological Effects:** Not applicable**Mutagenic Effects:** Not applicable**Reproductive Effects:** Not applicable**Developmental Effects:** This product contains the following Proposition 65 chemicals: Methanol Type of Toxicity: developmental CAS No. 67-56-1 Date Listed: March 16, 2012**Target Organ Effects:** Data for 100% Methyl Alcohol: Eyes, skin, respiratory system, central nervous system, gastrointestinal tract**Other adverse effects:** Data for 100% Methyl Alcohol: Effects of short-term exposure The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system. This may result in loss of consciousness. Exposure could cause blindness and death. The effects may be delayed. Medical observation is indicated
Effects of long-term or repeated exposure: Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system. This may result in persistent or recurring headaches and impaired vision**12. ECOLOGICAL MEASURES****Ecotoxicity:** Data for 100% Methyl Alcohol: Acute Toxicity to Fish - LC50 Fish (96 hours)
Minimum: 15000 mg/l
Maximum: 29400 mg/l
Median: 24000 mg/l
Study number: 8
Reference: Poirier, S.H., M.L. Knuth, C.D. Anderson-Buchou, L.T. Brooke, A.R. Lima, and P.J. Shubat 1986. Comparative Toxicity of Methanol and N,N-Dimethylformamide to Freshwater Fish and Invertebrates. Bull. Environ. Contam. Toxicol. 37(4):615-621;
Bengtsson, B.E., L. Renberg, and M. Tarkpea 1984. Molecular Structure and Aquatic Toxicity - an Example with C1-C13 Aliphatic Alcohols. Chemosphere 13(5/6):613-622**Persistence/Degradability:** Not Available**Mobility in Environmental Media:** Not Available**Bioaccumulation / Accumulation:** Not Available**13. DISPOSAL MEASURES****Waste Disposal Method:** Treatment, storage and transportation must comply with all Federal, State, and Local laws concerning health and pollution.**Contaminated Packaging:** Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.**US EPA Waste Number:** Not Available

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14. TRANSPORTATION MEASURES

DOT:	Data for 100% Methyl Alcohol: UN Classification UN Hazard Class: 3; UN Subsidiary Risks: 6.1; UN Pack Group: II
IATA:	UN1992; Flammable Liquids, Toxic, n.o.s (methanol solution), 3(6.1), E1, Excepted quantity label
ADR (road)/ RID (rail):	UN1992; Flammable Liquids, Toxic, n.o.s (methanol solution), 3(6.1), E1, Excepted quantity label
IMDG (sea):	UN1992; Flammable Liquids, Toxic, n.o.s (methanol solution), 3(6.1), E1, Excepted quantity label
General Transport Regulations	Data for 100% Methyl Alcohol: Transport Emergency Card: TEC (R)-30S1230

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372. SARA Section 311/312

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains no chemicals which are subject to the reporting requirements of the Clean Air Act. - Not Listed

State Regulations**California Proposition 65:**

This product contains the following Proposition 65 chemicals

Methanol Type of Toxicity: developmental CAS No. 67-56-1 Date Listed: March 16, 2012

State Right to Know Act

Chemical Name:	Methyl Alcohol
Massachusetts:	Listed
New Jersey:	Listed
Pennsylvania:	Listed
New York:	Listed
Rhode Island:	Listed

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International Inventories

Chemical Name:	Methyl Alcohol
TSCAL:	Listed
DSL:	Listed
NDSL:	Not Listed
EINECS:	Listed
CHINA:	Listed
KECL:	Listed
JAPAN:	Listed
AICS:	Listed

EU Regulations

Annex I Index #:	Data for 100% Methyl Alcohol:Annex I Index#: 603-001-00-X
Classification:	Flammable liquids, Category 2; H225 Acute toxicity, Category 3, inhalation; H331 Acute toxicity, Category 3, dermal; H311 Acute toxicity, Category 3, oral; H301 Specific Target Organ Toxicity (single exposure), Category 2; H371
Hazard Statements	H225: Highly flammable liquid and vapour. H331: Toxic if inhaled. H311: Toxic in contact with skin. H301: Toxic if swallowed. H371: May cause damage to organs.
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REACH (EU) 1907/2006

Product does not contain SVHC (substances with very high concern) substances per REACH regulation

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P280: Wear protective gloves/protective clothing/eye protection/face protection.

P260: Do not breathe dust/ fume/ gas/mist/ vapours/ spray.

P271: Use only outdoors or in a well-ventilated area.

P284: Wear respiratory protection.

P264: Wash skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

Symbols and Indications of Danger:

Dgr: Danger

Specific Concentration Limits:STOT SE 1; H370: C \geq 10 %STOT SE 2; H371: 3 % \leq C < 10 %**16. OTHER INFORMATION**

The above information is believed to be accurate, complete and current but does not purport to be all inclusive and shall be used as a guide. LGC SeraCare Life Sciences makes no representation or warranties with respect to the product described herein, including but not limited to any implied warranties or merchantability or fitness for a particular use. LGC SeraCare assumes no liability or responsibility and authorizes no other person to assume any additional liability or responsibility as a result of the use of this product or the information contained in the Safety Data Sheet.

Date of preparation / last revision: Feb 18, 2020 / Enter the previous Revision (e.g., 6 or N/A for Rev 1)