



SAFETY DATA SHEET COVERSHEET

Revision date 3-Nov-2025

Effective date 04-Nov-2025

Revision Number 3

<u>Product identifier</u>		Product Code
Product Name	KPL Protein G Agarose Kit	5720-0004 (553-51-00)

Other means of identification

Product Code(s) SDS-10254

PR No

Kit Components	Product Code(s)	SDS
KPL Elution Buffer	5710-0006 (50-68-01)	-
KPL Storage Buffer Solution	5710-0007 (50-69-01)	SDS-10324
KPL Bind/Wash Buffer	5710-0008 (50-70-01)	-
KPL PD-10 COLUMN	5710-0010 (80-00-10)	-
KPL Protein G Agarose	5720-0001 (223-51-00)	SDS-10007

Details of the supplier of the safety data sheet

Supplier Address

LGC Clinical Diagnostics, Inc
910 Clopper Road
Gaithersburg, MD 20878
Phone #: (508) 244-6400
US Toll Free: (800) 676-1881
Fax #: (508) 634-3334
www.seracare.com

E-mail CDx-CustomerService@LGCGroup.com

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
OSHA HCS2012

Revision date 22-Oct-2025

Revision Number 4

1. Identification

Product identifier

Product Name KPL Protein G Agarose

Other means of identification

Product Code(s) SDS-10007

PR No

Product description	Product Code(s)
Protein G Agarose	5720-0003 (223-51-02)
Protein G Agarose	5720-0002 (223-51-01)
Protein G Agarose	5720-0001 (223-51-00)

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use This product is for research and development only

Restrictions on use Not to be used for human or animal consumption

Details of the supplier of the safety data sheet

Supplier Address

LGC Clinical Diagnostics, Inc.
910 Clopper Road
Gaithersburg, MD
20878
USA

Tel: +1 508-244-6400

E-mail CDx-CustomerService@LGCGroup.com

Emergency telephone number

Emergency Telephone

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Account number: CCN12505

2. Hazard(s) identification

Classification

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Classified according to OSHA.

Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2A

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Warning

Hazard statements

Classified according to OSHA.
Flammable liquid and vapor.
Causes serious eye irritation.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Ground and bond container and receiving equipment
Use non-sparking tools
Take action to prevent static discharges
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards classified under paragraph (d)(1)(i)(B) of 1910.1200

No information available.

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Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Ethanol	64-17-5	10 - 20	-
Methanol	67-56-1	0.1 - 1	-

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

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5. Fire-fighting measures

Suitable Extinguishing Media Large Fire	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

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7. Handling and storage

Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Methanol 67-56-1	TWA: 200 ppm STEL: 250 ppm pSk	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) Sk*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Biological occupational exposure limits

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Chemical name	ACGIH
Methanol 67-56-1	15 mg/L - urine (Methanol) - end of shift

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.

Hand protection The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective butyl rubber gloves. Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Liquid
Physical state Liquid
Color No information available
Odor (includes odor threshold) No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Boiling point (or initial boiling point or boiling range)	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air	No data available	None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known

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Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Solubility	No data available	None known
Water solubility	No data available	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapor pressure (includes evaporation rate)	No data available	None known
Density and/or relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

Information with regard to physical hazard classes

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

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Skin contact

Specific test data for the substance or mixture is not available.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	100,000.00 mg/kg
ATEmix (dermal)	300,000.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-dust/mist)	99,999.00 mg/l
ATEmix (inhalation-vapor)	3,000.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol 64-17-5	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h = 133.8 mg/L (Rat) 4 h
Methanol 67-56-1	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h

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

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	-	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

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A3 - Animal Carcinogen

Occupational Safety and Health Administration of the US Department of Labor

X - Present

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol 64-17-5	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: 13400 - 15100mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)
Methanol 67-56-1	-	LC50: =28200mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas) LC50: 19500 - 20700mg/L (96h, Oncorhynchus mykiss) LC50: 18 - 20mL/L (96h, Oncorhynchus mykiss) LC50: 13500 - 17600mg/L (96h, Lepomis macrochirus)	-	-

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Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Ethanol 64-17-5	-0.35
Methanol 67-56-1	-0.77

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN1170
Extended proper shipping name Ethanol mixture
Transport hazard class(es) 3
Packing group III
Special Provisions 24, B1, IB3, T2, TP1
DOT Marine Pollutant NP
Description UN1170, Ethanol mixture, 3, III
Emergency Response Guide Number 127

TDG

UN number or ID number UN1170
UN proper shipping name Ethanol mixture
Transport hazard class(es) 3
Packing group III
Description UN1170, Ethanol mixture, 3, III

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MEX

UN number or ID number	UN1170
UN proper shipping name	Ethanol mixture
Transport hazard class(es)	3
Packing group	III
Description	UN1170, Ethanol mixture, 3, III
Special Provisions	144, 223

ICAO (air)

UN number or ID number	UN1170
UN proper shipping name	Ethanol mixture
Transport hazard class(es)	3
Packing group	III
Description	UN1170, Ethanol mixture, 3, III
Special Provisions	A58, A180, A3

IATA

UN number or ID number	UN1170
UN proper shipping name	Ethanol mixture
Transport hazard class(es)	3
Packing group	III
Description	UN1170, Ethanol mixture, 3, III
Special Provisions	A180, A3, A58
ERG Code	3L

IMDG

UN number or ID number	UN1170
UN proper shipping name	Ethanol mixture
Transport hazard class(es)	3
Packing group	III
EmS-No.	F-E, S-D
Special Provisions	144, 223
Marine pollutant	NP
Description	UN1170, Ethanol mixture, 3, III

15. Regulatory information

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA

LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research

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and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Water	7732-18-5	Present	Active
Ethanol	64-17-5	Present	Active
Methanol	67-56-1	Present	Active
Propan-2-ol	67-63-0	Present	Active
Sodium chloride	7647-14-5	Present	Active
Phosphoric acid, monosodium salt, monohydrate	10049-21-5	Present	Active
Sodium hydroxide	1310-73-2	Present	Active
Potassium chloride	7447-40-7	Present	Active

DSL/NDSL

EINECS/ELINCS

ENCS

IECSC

KECL

PICCS

AIC

NZIoC

TCSI

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

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Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing Chemicals Inventory

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate

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classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CAA (Clean Air Act)

This product contains the following substances which are regulated pollutants to the Clean Air Act (CAA).

Chemical name	Hazardous air pollutants (HAPs)	Ozone-depleting substances (ODS)
Methanol 67-56-1	Present	-

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Methanol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Ethanol - 64-17-5	Carcinogen Developmental
Methanol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Ethanol 64-17-5	X	X	X
Methanol 67-56-1	X	X	X
Propan-2-ol 67-63-0	X	X	X
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

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NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection -

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development

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OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
Sen+	Sensitizer
Sk*	Skin designation
**	Hazard Designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set



**CLINICAL
DIAGNOSTICS**

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World Health Organization

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Revision Note No information available.

Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

End of Safety Data Sheet

Safety Data Sheet



Revision Date: 7/30/2014

SDS # SDS-10324-01

Storage Buffer Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

Storage Buffer Solution

Product Code

50-69-01

Hazardous Reagent

Storage Buffer Solution

Hazardous Reagent Product code

Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755

Fax #: 1-301-948-0169

Web: www.kpl.com

Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER
CANADIAN TRANSPORT EMERGENCY CENTER
UK – THE NATIONAL FOCUS
USA- NATIONAL RESPONSE CENTER

Telephone: 13 11 26
Telephone: (1) 613 996 6666
Telephone: (44) 029 2041 6388
Telephone: (1) 800 424 8802

Hours: 24 hours
Hours: 24 hours/day, 7 days/week
Hours: 09:00-17:00 GMT
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

Fire Hazard: Flammable

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

Classification

Flammable liquids, Category 2; H225

Hazard Statement

H225: Highly flammable liquid and vapour.

Precautionary Statement

P210: Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No smoking.

Symbols of Danger

GHS02 Dgr: Danger



Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE:	The substance can be absorbed into the body by inhalation of its vapour and by ingestion.
INHALATION RISK:	A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.
SHORT-TERM EXPOSURE	The substance irritates the eyes. Inhalation of high concentration of vapour may cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system .
LONG-TERM EXPOSURE:	The liquid defats the skin. The substance may have effects on the upper respiratory tract and central nervous system , resulting in irritation, headache, fatigue and lack of concentration. See Notes.

The product is a Mixture. It May Cause the following symptoms.

EYES: Redness. Pain. Burning.

SKIN: Dry skin.

INHALATION: Cough. Headache. Fatigue. Drowsiness.

INGESTION: Burning sensation. Headache. Confusion. Dizziness. Unconsciousness.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
Storage Buffer Solution	Ethyl Alcohol	20%	64-17-5

Classification Flammable liquids, Category 2; H225

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid:	Rinse mouth. Refer for medical attention.
Inhalation First Aid:	Fresh air, rest.
Skin First Aid:	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eye First Aid:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

Fire Acute Hazard:	Fire Prevention:	Fire Fighting:
Highly flammable.	NO open flames, NO sparks, and NO smoking. NO contact with strong oxidants.	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.	In case of fire: keep drums, etc., cool by spraying with water.
CHEMICAL DANGERS:	Reacts slowly with calcium hypochlorite, silver oxide and ammonia, causing fire and explosion hazard. Reacts violently with strong oxidants such as nitric acid, silver nitrate, mercuric nitrate or magnesium perchlorate, causing fire and explosion hazard.	
PHYSICAL DANGERS:	The vapour mixes well with air, explosive mixtures are easily formed.	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear appropriate personal protective clothing to prevent skin contact. Remove: Work clothing that becomes wet should be immediately removed due to its flammability hazard(i.e. for liquids with flash point < 100°F)
Environmental Precautions	Not Available
Method of Containment	Collect leaking and spilled liquid in sealable containers as far as possible.
Methods of Clean-up	Wash away remainder with plenty of water.
Other Information	Data for 100% Ethyl Alcohol: Non-Fire Response

Keep sparks, flames, and other sources of ignition away. Keep material out of water sources and sewers. Build dikes to contain flow as necessary. Attempt to stop leak if without undue personnel hazard. Use water spray to knock-down vapor.

Land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash, cement powder, or commercial sorbents.

Water spill: Use natural barriers or oil spill control booms to limit spill travel. Remove trapped material with suction hoses. (AAR, 2003)

Data for 100% Hazardous Chemical

**SPILLAGE
DISPOSAL**

Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.

7. HANDLING AND STORAGE

Handling: Wear appropriate PPE.

Storage: Keep tightly closed and store at 2 - 8°C.

Data for 100% Hazardous Chemical

STORAGE

Fireproof. Separated from strong oxidants.

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

- INHALATION** Ventilation, local exhaust, or breathing protection.
- EYES** Safety goggles.
- SKIN** Protective gloves.
- INGESTION** Do not eat, drink, or smoke during work.

Engineering Controls NIOSH/OSHA
Up to 3300 ppm:
(APF = 10) Any supplied-air respirator
(APF = 50) Any self-contained breathing apparatus with a full facepiece

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Colorless Solution

Physical State Liquid **pH:** 7.9 - 8.1

Data for 100% Hazardous Chemical

	Boiling point: 79°C	Melting point: -117°C	Relative density (water = 1): 0.8	Solubility in water:	miscible
Vapour pressure, kPa at 20°C: 5.8					
Relative vapour density (air = 1): 1.6	Relative density of the vapour/air-mixture at 20°C (air = 1): 1.03	Flash point: 13°C c.c.	Auto-ignition temperature: 363°C	Explosive limits, vol% in air: 3.3-19	Octanol/water partition coefficient as log Pow: -0.32

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions

Incompatibility Materials to Avoid Oxidizing agents, Peroxides, Acids, Acid Chlorides, Acid Anhydrides, Alkali Metals, and Ammonia.

Hazardous Decomposition Products Carbon Monoxide, Carbon Dioxide

Hazardous Polymerization Will not occur

Data for 100% Hazardous Chemical

CHEMICAL DANGERS: Reacts slowly with calcium hypochlorite, silver oxide and ammonia, causing fire and explosion hazard. Reacts violently with strong oxidants such as nitric acid, silver nitrate, mercuric nitrate or magnesium perchlorate, 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% Ethyl Alcohol: LD50 Mouse oral 3450 mg/kg; LD50 Guinea pig oral 5.6 g/kg

LD50 Dermal Data for 100% Ethyl Alcohol: LD50 Rat iv 1440 mg/kg; LD50 Mouse iv 1973 mg/kg

LC50 Inhalation Data for 100% Ethyl Alcohol: LC50 Mouse inhalation 39 mg/cu m/4 hr; LC50 Rat inhalation 20000 ppm/ 10 hr

Chronic Toxicity

Carcinogenicity Data for 100% Ethanol: MAK-COMMISSION - Category 5 (No considerable risk)

Irritation Data for 100% Ethanol: An eye and skin irritant

Corrosivity Not Available

Sensitization Not Available

Neurological Effects Not Available

Mutagenic Effects Data for 100% Ethyl Alcohol: MAK COMMISSION Germ Cell Mutagenic- Category 5 (Substance with minima effect)

Reproductive Effects Data for 100% Ethyl Alcohol: Ethanol consumption during pregnancy may adversely affect the unborn child. MAK COMMISSION - Group C (There is no reason to fear a risk of damage to the developing embryo or foetus when MAK and BAT values are adhered to.)

Developmental Effects Not Available

Target Organ Effects Data for 100% Ethyl Alcohol: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system

Other adverse effects Data for 100% Ethyl Alcohol:
Effects of short-term exposure
The substance irritates the eyes. Inhalation of high concentration of vapour may cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system.
Effects of long-term or repeated exposure
The liquid defats the skin. The substance may have effects on the upper respiratory tract and central nervous system, resulting in irritation, headache, fatigue and lack of concentration.

12. ECOLOGICAL MEASURES

Ecotoxicity Data for 100% Ethanol: Crustacean (Daphnia magna) EC50 (IMM) 48 hr 9.300 mg/L ; NOEC (Reproduction Rate) 9 day 9.6 mg/L (Slightly harmful in the aquatic environment or otherwise designed for biocidal action)

Persistence/Degradability Data for 100% Ethanol: Readily biodegradable (74% after 5 days)

Mobility in Environmental Media Not Available

Bioaccumulation/Accumulation Data for 100% Ethanol: Not likely to bioaccumulate (calculated logBCF=0.5).

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

14. TRANSPORTATION MEASURES

DOT: UN-Number : 1170
UN Hazard Class: 3 (Flammable Liquids)
UN Pack Group: II (Medium/ low danger)

IATA: Not Available

ADR (road)/ RID (rail): Not Available

IMDG (sea): Not Available

General Transport Regulations Data for 100% Ethyl Alcohol:
Transport Emergency Card: TEC (R)-30S1170
NFPA Code: H 0; F 3; R 0

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 q 2.C1.

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 and Title 40n of the Code of Federal Regulations, Part 372.

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

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act.

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: Not Listed

State Right to Know Act

Chemical Name	Ethyl Alcohol
Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed
New York	Listed
Rhode Island	Not Listed

International Inventories

Chemical Name	Ethyl Alcohol
TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#

Annex I Index# : 603-002-00-5

	Substance Name in Annex 1 : ethanol ethyl alcohol
Classification	Flammable liquids, Category 2; H225
Risk Phrases	H225: Highly flammable liquid and vapour.
Safety Phrases	P210: Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No smoking.
Symbols and Indications of Danger	GHS02 Dgr: Danger
Specific Concentration Limits	Not Available
Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
European Priority List	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 7/30/2014