

# Safety Data Sheet



Revision Date: 7/31/2014

SDS #: SDS-10253-01

Protein A Agarose Kit

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Description:**

Protein A Agarose Kit

**Product Code**

553-50-00

**Kit Components:**

Protein A Agarose	223-50-00
Elution Buffer	50-68-01
Storage Buffer Solution	50-69-01
Bind/Wash Buffer	50-70-01
PD-10 COLUMN	80-00-10

**Recommended Use** Kit (See Attached Safety Data Sheets For Components Listed Above)

**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	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)

# Safety Data Sheet



Revision Date: 7/30/2014

SDS # SDS-10324-01

Storage Buffer Solution

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Description:**

**Product Code**

Storage Buffer Solution

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

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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**

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**

<b>Ingestion First Aid:</b>	Rinse mouth. Refer for medical attention.
<b>Inhalation First Aid:</b>	Fresh air, rest.
<b>Skin First Aid:</b>	Remove contaminated clothes. Rinse and then wash skin with water and soap.
<b>Eye First Aid:</b>	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**

<b>Fire Acute Hazard:</b>	<b>Fire Prevention:</b>	<b>Fire Fighting:</b>
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.
<b>Explosion Acute Hazard:</b>		
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.
<b>CHEMICAL DANGERS:</b>	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.	
<b>PHYSICAL DANGERS:</b>	The vapour mixes well with air, explosive mixtures are easily formed.	

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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)
<b>Environmental Precautions</b>	Not Available
<b>Method of Containment</b>	Collect leaking and spilled liquid in sealable containers as far as possible.
<b>Methods of Clean-up</b>	Wash away remainder with plenty of water.
<b>Other Information</b>	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**

<b>SPILLAGE DISPOSAL</b>	Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Wash away remainder with plenty of water.
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**7. HANDLING AND STORAGE**

**Handling:** Wear appropriate PPE.

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

**Data for 100% Hazardous Chemical**

<b>STORAGE</b>	Fireproof. Separated from strong oxidants.
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**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

<b>CHEMICAL DANGERS:</b>	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.
<b>PHYSICAL DANGERS:</b>	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.

<b>LD50 Oral</b>	Data for 100% Ethyl Alcohol: LD50 Mouse oral 3450 mg/kg; LD50 Guinea pig oral 5.6 g/kg
<b>LD50 Dermal</b>	Data for 100% Ethyl Alcohol: LD50 Rat iv 1440 mg/kg; LD50 Mouse iv 1973 mg/kg
<b>LC50 Inhalation</b>	Data for 100% Ethyl Alcohol: LC50 Mouse inhalation 39 mg/cu m/4 hr; LC50 Rat inhalation 20000 ppm/ 10 hr

### Chronic Toxicity

<b>Carcinogenicity</b>	Data for 100% Ethanol: MAK-COMMISSION - Category 5 (No considerable risk)
<b>Irritation</b>	Data for 100% Ethanol: An eye and skin irritant
<b>Corrosivity</b>	Not Available
<b>Sensitization</b>	Not Available
<b>Neurological Effects</b>	Not Available
<b>Mutagenic Effects</b>	Data for 100% Ethyl Alcohol: MAK COMMISSION Germ Cell Mutagenic- Category 5 (Substance with minima effect)
<b>Reproductive Effects</b>	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.)
<b>Developmental Effects</b>	Not Available
<b>Target Organ Effects</b>	Data for 100% Ethyl Alcohol: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
<b>Other adverse effects</b>	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

<b>Ecotoxicity</b>	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)
<b>Persistence/Degradability</b>	Data for 100% Ethanol: Readily biodegradable (74% after 5 days)
<b>Mobility in Environmental Media</b>	Not Available
<b>Bioaccumulation/Accumulation</b>	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**

<b>Chemical Name</b>	<b>Ethyl Alcohol</b>
<b>Massachusetts</b>	Listed
<b>New Jersey</b>	Listed
<b>Pennsylvania</b>	Listed
<b>New York</b>	Listed
<b>Rhode Island</b>	Not Listed

### **International Inventories**

<b>Chemical Name</b>	<b>Ethyl Alcohol</b>
<b>TSCA</b>	Listed
<b>DSL</b>	Listed
<b>NDSL</b>	Not Listed
<b>EINECS</b>	Listed
<b>CHINA</b>	Listed
<b>KECL</b>	Listed
<b>JAPAN:</b>	Listed
<b>AICS</b>	Listed

### **EU Regulations**

Annex I Index#

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

	Substance Name in Annex 1 : ethanol ethyl alcohol
<b>Classification</b>	Flammable liquids, Category 2; H225
<b>Risk Phrases</b>	H225: Highly flammable liquid and vapour.
<b>Safety Phrases</b>	P210: Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No smoking.
<b>Symbols and Indications of Danger</b>	GHS02 Dgr: Danger
<b>Specific Concentration Limits</b>	Not Available
<b>Export and Import</b>	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
<b>European Priority List</b>	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

# Safety Data Sheet



Revision Date: 7/30/2014

SDS # SDS-10015-02

Protein A Agarose

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Description:

### Product Code

Protein A Agarose

223-50-02

Protein A Agarose

223-50-01

Protein A Agarose

223-50-00

### Hazardous Reagent

PROTEIN A AGAROSE

### 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:

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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**

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





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>
Protein A Agarose	Ethyl Alcohol	14 - 19%	64-17-5

**Classification** Flammable liquids, Category 2; H225

### 4. FIRST AID MEASURES

**Data for 100% Hazardous Chemical**

<b>Ingestion First Aid:</b>	Rinse mouth. Refer for medical attention.
<b>Inhalation First Aid:</b>	Fresh air, rest.
<b>Skin First Aid:</b>	Remove contaminated clothes. Rinse and then wash skin with water and soap.
<b>Eye First Aid:</b>	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**

<b>Fire Acute Hazard:</b>	<b>Fire Prevention:</b>	<b>Fire Fighting:</b>
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.
<b>Explosion Acute Hazard:</b>		
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.
<b>CHEMICAL DANGERS:</b>	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.	
<b>PHYSICAL DANGERS:</b>	The vapour mixes well with air, explosive mixtures are easily formed.	

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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)
<b>Environmental Precautions</b>	Not Available
<b>Method of Containment</b>	Collect leaking and spilled liquid in sealable containers as far as possible.
<b>Methods of Clean-up</b>	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. See section 8

**Storage:** Store at 2-8 °C separated from strong oxidants.

**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** White beads in suspension.

**Physical State** Liquid Suspension

**pH:** Not Available

**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

<b>CHEMICAL DANGERS:</b>	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.
<b>PHYSICAL DANGERS:</b>	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.

<b>LD50 Oral</b>	Data for 100% Ethyl Alcohol: LD50 Mouse oral 3450 mg/kg; LD50 Guinea pig oral 5.6 g/kg
<b>LD50 Dermal</b>	Data for 100% Ethyl Alcohol: LD50 Rat iv 1440 mg/kg; LD50 Mouse iv 1973 mg/kg
<b>LC50 Inhalation</b>	Data for 100% Ethyl Alcohol: LC50 Mouse inhalation 39 mg/cu m/4 hr; LC50 Rat inhalation 20000 ppm/ 10 hr

### Chronic Toxicity

<b>Carcinogenicity</b>	Data for 100% Ethanol: MAK-COMMISSION - Category 5 (No considerable risk)
<b>Irritation</b>	Data for 100% Ethanol: An eye and skin irritant
<b>Corrosivity</b>	Not Available
<b>Sensitization</b>	Not Available
<b>Neurological Effects</b>	Not Available
<b>Mutagenic Effects</b>	Data for 100% Ethyl Alcohol: MAK COMMISSION Germ Cell Mutagenic- Category 5 (Substance with minima effect)
<b>Reproductive Effects</b>	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.)
<b>Developmental Effects</b>	Not Available
<b>Target Organ Effects</b>	Data for 100% Ethyl Alcohol: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
<b>Other adverse effects</b>	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

<b>Ecotoxicity</b>	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)
<b>Persistence/Degradability</b>	Data for 100% Ethanol: Readily biodegradable (74% after 5 days)
<b>Mobility in Environmental Media</b>	Not Available
<b>Bioaccumulation/Accumulation</b>	Data for 100% Ethanol: Not likely to bioaccumulate (calculated logBCF=0.5).

## 13. DISPOSAL MEASURES

**Waste Disposal Method:** Observe all Federal, State, and Local laws concerning health and pollution.

**Contaminated Packaging:** Dispose of in compliance with the respective national and local regulations.

**US EPA Waste Number:** Not Available

## 14. TRANSPORTATION MEASURES

**DOT:** Data for 100% Ethyl Alcohol  
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 (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 and Title 40n of the Code of Federal Regulations, Part 372.

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

Not Listed

### **State Regulations**

#### **California Proposition 65:**

This product contains the following Proposition 65 chemicals: Not Listed

### **State Right to Know Act**

<b>Chemical Name</b>	<b>Ethyl Alcohol</b>
<b>Massachusetts</b>	Listed
<b>New Jersey</b>	Listed
<b>Pennsylvania</b>	Listed
<b>New York</b>	Listed
<b>Rhode Island</b>	Not Listed

### **International Inventories**

<b>Chemical Name</b>	<b>Ethyl Alcohol</b>
<b>TSCA</b>	Listed
<b>DSL</b>	Listed
<b>NDSL</b>	Not Listed
<b>EINECS</b>	Listed
<b>CHINA</b>	Listed
<b>KECL</b>	Listed
<b>JAPAN:</b>	Listed
<b>AICS</b>	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