

# Safety Data Sheet



Revision Date: 9/16/2014

SDS # SDS-10132-02

Milk Diluent/Blocking Solution Concentrate

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Description:

### Product Code

Milk Diluent/Blocking Solution Concentrate (Sample)	SPL-MILK
Milk Diluent/Blocking Solution Concentrate	50-82-02
Milk Diluent/Blocking Solution Concentrate	50-82-01
Milk Diluent/Blocking Solution Concentrate	50-82-00

### Hazardous Reagent

Milk Diluent/Blocking Solution Concentrate

### 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	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** GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment.

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

**Classification** See Section 15 for Concentration Limits. The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per:  
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Regulation (EC) No 1272/2008

**Hazard Statement** H360FD: May damage fertility. May damage the unborn child.

**Precautionary Statement** P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P281: Use personal protective equipment as required.

**Symbols of Danger** GHS08; Dgr - Danger

**Data for 100% Hazardous Chemical**

<b>ROUTES OF EXPOSURE:</b>	The substance can be absorbed into the body by inhalation and by ingestion.
<b>INHALATION RISK:</b>	Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.
<b>SHORT-TERM EXPOSURE</b>	The substance irritates the eyes, the skin and the respiratory tract. The substance may cause effects on the central nervous system, kidneys and liver, when ingested. The effects may be delayed.
<b>LONG-TERM EXPOSURE:</b>	Repeated or prolonged contact with skin may cause dermatitis. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

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

**EYES:** Redness. Pain.

**SKIN:** Dry skin. Redness. Pain.

**INHALATION:** Cough. Shortness of breath. Sore throat. Nose bleeds.

**INGESTION:** Abdominal pain. Diarrhoea. Headache. Nausea. Vomiting. Weakness. Convulsions.

May cause redness and irritation

Dry skin.

Data for 100% Glycerol: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly on spraying.

Diarrhoea.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Component</b>	<b>CHEMICAL</b>	<b>% Weight</b>	<b>CAS #:</b>
Milk Diluent/Blocking Solution Concentrate	GLYCEROL	50%	56-81-5
	Disodium Tetraborate Decahydrate	<4%	1303-96-4

**Classification**

See Section 15 for Concentration Limits. The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per:  
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Regulation (EC) No 1272/2008

### 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. Half-upright position. Artificial respiration if indicated.
<b>Skin First Aid:</b>	First rinse with plenty of water, then remove contaminated clothes and rinse again.
<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> Not combustible.	<b>Fire Prevention:</b> Not Available	<b>Fire Fighting:</b> In case of fire in the surroundings: all extinguishing agents allowed.
<b>Explosion Acute Hazard:</b> Not Available	Not Available	Not Available
<b>CHEMICAL DANGERS:</b> The substance is a weak base.		
<b>WHITE CRYSTALS OR CRYSTALLINE POWDER.</b>	<b>PHYSICAL DANGERS:</b>	

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

#### Respiratory protection:

In an emergency (e.g.: unintentional release of the substance, exceeding the occupational exposure limit value) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Particle filter P2 or P3, colour code white.

Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

#### Eye protection:

Sufficient eye protection should be worn.

Wear glasses with side protection.

#### Hand protection:

Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location. Pay attention to skin care.

Skin protection cremes do not protect sufficiently against the substance.

The following information is valid for aqueous, saturated solutions of the substance.

The following materials are suitable for protective gloves (Permeation time  $\geq$  8 hours):

Natural rubber/Natural latex - NR (0,5 mm) (use non-powdered and allergen free products)

Polychloroprene - CR (0,5 mm)

Nitrile rubber/Nitrile latex - NBR (0,35 mm)

Butyl rubber - Butyl (0,5 mm)

Fluoro carbon rubber - FKM (0,4 mm)

Polyvinyl chloride - PVC (0,5 mm)

The times listed are suggested by measurements taken at 22 °C and constant contact.

Temperatures raised by warmed substances, body heat, etc. and a weakening of the effective layer thickness caused by expansion can lead to a significantly shorter breakthrough time. In case of doubt contact the gloves' manufacturer. A 1.5-times increase / decrease in the layer thickness doubles / halves the breakthrough time. This data only applies to the pure substance. Transferred to mixtures of substances, these figures should only be taken as an aid to orientation.

### Environmental Precautions

Not Applicable

### Method of Containment

Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place.

### Methods of Clean-up

Clean-up with copious amounts of water.

### Other Information

Not Applicable

### Data for 100% Hazardous Chemical

#### SPILLAGE DISPOSAL

Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. (Extra personal protection: P2 filter respirator for harmful particles).

## 7. HANDLING AND STORAGE

- Handling:** Handle in accordance with good industrial hygiene and safety practice.
- Storage:** Separated from strong oxidants. Store at 4°C, indoors, refrigerated.

### Data for 100% Hazardous Chemical

**STORAGE** Separated from acids.

## 8. EXPOSURE CONTROL

### Data for 100% Hazardous Chemical

- INHALATION** Local exhaust or breathing protection.
- EYES** Safety goggles, or eye protection in combination with breathing protection if powder.
- SKIN** Protective gloves.
- INGESTION** Do not eat, drink, or smoke during work.

**Engineering Controls** Not Available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** Clear to slightly opalescent solution.
- Physical State** Liquid **pH:** Not Applicable

### Data for 100% Hazardous Chemical

Boiling point: °C      Melting point: 75°C

Solubility in water,  
g/100 ml at 20°C: 5.1

Relative density (water  
= 1): 1.7

## 10. STABILITY AND REACTIVITY

- Chemical Stability** Stable
- Incompatibility Materials to Avoid** Data for 100% Disodium Tetraborate Decahydrate: The substance can react dangerously with:  
strong oxidizing agents, acids, moisture/water, metal salts
- Hazardous Decomposition Products** Carbon Monoxide, Carbon Dioxide, boron oxide, sodium oxide, metaboric acid.
- Hazardous Polymerization** Will not occur

### Data for 100% Hazardous Chemical

**CHEMICAL DANGERS:** The substance is a weak base.

**WHITE CRYSTALS OR CRYSTALLINE POWDER.**      **PHYSICAL DANGERS:**

## 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% Boric Acid: LD50 oral rat Value: 2660 mg/kg  
Reference: JAMA, Journal of the American Medical Association. Vol.

128, Pg. 266,  
1945.

Data for 100% Glycerol: LD50 oral rat: 12600 mg/kg Reference:  
Federation Proceedings, Federation of American Societies for  
Experimental Biology. Vol. 4, Pg. 142, 1945.

**LD50 Dermal**

Data for 100% Glycerol: LD50 dermal rat/rabbit: > 10000 mg/kg  
Species: Rabbit Reference: BIOFAX Industrial Bio-Test Laboratories, Inc., Data  
Sheets. Vol. 9-4/1970,

**LC50 Inhalation**

Data for 100% Boric Acid: LC50 Fish (96 hours)  
Minimum: 79 mg/l  
Maximum: 5600 mg/l  
Median: 487 mg/l  
Study number: 14  
Reference for median:  
Hamilton, S.J., and K.J. Buhl 1990. Acute Toxicity of Boron, Molybdenum, and  
Selenium to Fry of Chinook Salmon and Coho Salmon. Arch.Environ.Contam.Toxicol.  
19(3):366-373; Hamilton, S.J. 1995. Hazard Assessment of Inorganics to Three  
Endangered Fish in the Green River, Utah. Ecotoxicol.Environ.Saf. 30(2):134-142

LC50 Crustaceans (48 hours)  
Minimum: 133 mg/l  
Maximum: 226 mg/l  
Median: 180 mg/l  
Study number: 2  
Reference for median:  
Gersich, F.M. 1984. Evaluation of a Static Renewal Chronic Toxicity Test Method for  
Daphnia magna Straus Using Boric Acid. Environ.Toxicol.Chem. 3(1):89-94; Lewis,  
M.A., and L.C. Valentine 1981. Acute and Chronic Toxicities of Boric Acid to Daphnia  
magna Straus. Bull.Environ.Contam.Toxicol. 27(3):309-315

**Chronic Toxicity**

<b>Carcinogenicity</b>	Not Available
<b>Irritation</b>	No Data Available
<b>Corrosivity</b>	Not Available
<b>Sensitization</b>	Not Available
<b>Neurological Effects</b>	Not Available
<b>Mutagenic Effects</b>	Not Available
<b>Reproductive Effects</b>	Data for Boric Acid at Concentrations > 5.5% H360FD: May damage fertility. May damage the unborn child.
<b>Developmental Effects</b>	Data for Boric Acid at Concentrations > 5.5% H360FD: May damage fertility. May damage the unborn child.
<b>Target Organ Effects</b>	Respiratory Tract, Skin and Gastrointestinal Tract
<b>Other adverse effects</b>	Not Available

## 12. ECOLOGICAL MEASURES

<b>Ecotoxicity</b>	Data for 100% Glycerol: Toxicity threshold (cell multiplication inhibition test) Algae (Microcystis aeruginosa) 2900 mg/l ; Protozoa (Entosiphon sulcatum) 3200 mg/l ; LC50 Goldfish >5000 mg/l/24 hr - modified ASTM D 1345 [Verschuere, K. Handbook of Environmental Data of Organic Chemicals. 2nd ed. New York, NY: Van Nostrand Reinhold Co., 1983., p. 695]
<b>Persistence/Degradability</b>	Data for 100% Glycerol: Readily biodegradable
<b>Mobility in Environmental Media</b>	Data for 100% Glycerol: Very high mobility in soil [Swann RL et al; Res Rev 85: 17-28 (1983)]

Bioaccumulation/  
Accumulation

Not Available

**13. DISPOSAL MEASURES**

**Waste Disposal Method:** Observe 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:** Not Available

**IATA:** Not Available

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

**IMDG (sea):** Not Available

**General Transport Regulations** Not Applicable

**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)**

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act, Section 112 HAPS

**State Regulations****California Proposition 65:**

This product contains the following Proposition 65 chemicals: None Listed

**State Right to Know Act**

Chemical Name	GLYCEROL	Disodium Tetraborate Decahydrate
Massachusetts	Listed	Listed
New Jersey	Listed	Not Listed
Pennsylvania	Listed	Listed
New York	Not Listed	Listed
Rhode Island	Not Listed	Not Listed

**International Inventories**

Chemical Name	GLYCEROL	Disodium Tetraborate Decahydrate
TSCA	Listed	Listed
DSL	Listed	Listed
NDSL	Not Listed	Not Listed
EINECS	Listed	Listed
CHINA	Listed	Listed
KECL	Listed	Listed
JAPAN:	Listed	Listed

AICS

Listed

Listed

**EU Regulations**

<b>Annex I Index#</b>	Annex I Index# : 005-011-01-1 Substance Name in Annex 1 : disodium tetraborate decahydrate ; borax decahydrate
<b>Classification</b>	See Section 15 for Concentration Limits. The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Regulation (EC) No 1272/2008
<b>Risk Phrases</b>	H360FD: May damage fertility. May damage the unborn child.
<b>Safety Phrases</b>	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P281: Use personal protective equipment as required.
<b>Symbols and Indications of Danger</b>	GHS08; Dgr - Danger
<b>Specific Concentration Limits</b>	Repr. 1B; H360FD: C ≥ 8.5 %
<b>Export and Import</b>	Not available for this substance.
<b>European Priority List</b>	Not available for this substance.

<b>16. OTHER INFORMATION</b>
------------------------------

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: 9/16/2014