

Solulink, Incorporated
9853 Pacific Heights Blvd, Suite H
San Diego, California 92121

Phone: (858) 625-0670
Fax: (858) 625-0770

DATE: March 5, 2012

MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION

Chemical Name: **ChromaLink Biotin (DMF Soluble)**
Catalog Number: B-1001
Molecular Formula: $C_{38}H_{50}N_8O_{10}S$
Molecular Weight: 810.92

2. COMPOSITION/INGREDIENTS

CAS Number: Custom synthesized compound. No CAS Number.
Components: single compound

3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow solid
Percent Purity: >90%
Boiling Point: NA
Melting Point: NA
Freezing Point: NA
pH: NA
Solubility: NA
Vapor Density: NA
Vapor Pressure: NA

4. REACTIVITY

Stability: stable when stored desiccated
Incompatibility:
Hazardous Decomposition Components:

5. EXPOSURE CONTROLS/EMPLOYEE PROTECTION

Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, and other protective clothing. Safety shower and eye bath required. Mechanical exhaust required. Wash thoroughly after handling.

6. HAZARDS IDENTIFICATION

Precautionary Statement:
Medical Conditions Aggravated:
Primary Routes of Entry:
PEL: NA
TLV: NA
LD50: NA
Carcinogenicity: NA
Toxicity: NA
RTECS #: NA
Acute Effects: NA
Chronic Effects: NA

Target Organs: NA

7. FIRST AID MEASURES

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes

Skin: Immediately wash skin with soap and copious amounts of water

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Other: Wash contaminated clothing before re-use

8. FIRE FIGHTING MEASURES

Upper Flammable Limit: NA

Lower Flammable Limit: NA

Upper Explosion Limit: NA

Lower Explosion Limit: NA

Flashpoint: NA

Auto ignition Temperature: NA

Fire Extinguishing Media: NA

Unusual Fire/Explosion Data: NA

9. ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

10. HANDLING AND STORAGE

Store desiccated at or below room temperature.

11. WASTE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Solulink, Inc. believes the above information to be accurate, but not necessarily all inclusive, and thus should only be used as a guide in the handling and use of this material. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Solulink, Inc. shall not take responsibility for any damage resulting from handling or from contact with the above product. The information in this material safety data sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder 29 CFR § 1910.1200.

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: 10X Modification Buffer

Catalog Number: S-4003-002

Company Identification

Solulink, Incorporated
9853 Pacific Heights Blvd, Suite H
San Diego, California 92121

Phone: (858) 625-0670

Fax: (858) 625-0770

In case of emergency Call CHEMTREC: USA 1-800-424-9300
OUTSIDE USA 202-483-7616

Validation Date: DATE: May 14, 2007

Section 2. COMPOSITION/INGREDIENTS

<u>Ingredient name:</u>	<u>CAS Number:</u>	<u>%:</u>
Sodium Phosphate, Dibasic	7558-79-4	12
Sodium Chloride	7647-14-5	12
Sodium Phosphate, Monobasic	10049-21-5	4.0
Water	7732-18-5	74

Section 3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
Percent Purity:	100%
Boiling Point:	100°C
Freezing Point:	0°C
pH:	7.2
Solubility:	Aqueous
Vapor Density:	NA
Vapor Pressure:	NA

Section 4. HAZARDS IDENTIFICATION

Emergency Overview: Warning

Contains material that causes damage to the following organs: mucus membranes, gastrointestinal tract, skin, eyes, stomach. Contains material that may cause damage to the following organ: Heart

Routes of entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Carcinogenic effects: None

Mutagenic effects: not available

Teratogenic effects: not available

Avoid contact with skin and clothing. Wash thoroughly after handling.

HMIS Rating:

Health: 2

Flammability: 1

Reactivity: 1

NFPA Rating:

Health: 2

Flammability: 1

Reactivity: 1

Section 5. EXPOSURE CONTROLS/EMPLOYEE PROTECTION

Wear chemical-resistant gloves, safety goggles, and protective lab clothing. Safety shower and eye bath required. Wash thoroughly after handling.

Section 6. FIRST AID MEASURES

Notice to Reader: Get immediate medical attention

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes (irritant)

Skin: Immediately wash skin with soap and copious amounts of water (irritant, permeator)

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel

Other: Wash contaminated clothing before re-use

Section 7. FIRE FIGHTING MEASURES

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Upper Explosion Limit: N/A

Lower Explosion Limit: N/A

Flashpoint: N/A

Auto ignition Temperature: N/A

Fire Extinguishing Media: Small fire: Dry chemical powder

Unusual Fire/Explosion Data: Large fire: Water spray, fog or foam

Not available – N/A

Section 8. ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 9. HANDLING AND STORAGE

Store in tightly sealed container at room temperature.

Section 10. WASTE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, State and local environmental regulations.

Section 11. Physical and Chemical Properties

Physical state and Appearance : Clear, colorless liquid

pH : 7.0

Melting/Freezing point 800.9 C for sodium chloride

Solubility: Partially soluble in cold water

Soluble in hot water

Soluble in methanol

Insoluble in n-octanol

Section 12. Toxicological Information

Toxic Effects on Humans: Slightly hazardous in case of eye contact, of ingestion, of inhalation
(lung irritant)

Special Remarks on Toxicity to Animals: Not available

Special Remarks on Chronic Effects on Humans: Not available

Special Remarks on Other Toxic Effects on Humans: Not available

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MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: 10X PBS Buffer

Catalog Number: S-4017-002

Company Identification

Solulink, Incorporated
9853 Pacific Heights Blvd, Suite H
San Diego, California 92121

Phone: (858) 625-0670

Fax: (858) 625-0770

In case of emergency Call CHEMTREC: USA 1-800-424-9300
OUTSIDE USA 202-483-7616

Validation Date: DATE: May 14, 2007

Section 2. COMPOSITION/INGREDIENTS

<u>Ingredient name:</u>	<u>CAS Number:</u>	<u>%:</u>
Sodium Phosphate, Dibasic	7558-79-4	12
Sodium Chloride	7647-14-5	12
Sodium Phosphate, Monobasic	10049-21-5	4.0
Water	7732-18-5	74

Section 3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
Percent Purity:	100%
Boiling Point:	100°C
Freezing Point:	0°C
pH:	7.2
Solubility:	Aqueous
Vapor Density:	NA
Vapor Pressure:	NA

Section 4. HAZARDS IDENTIFICATION

Emergency Overview: Warning

Contains material that causes damage to the following organs: mucus membranes, gastrointestinal tract, skin, eyes, stomach. Contains material that may cause damage to the following organ: Heart

Routes of entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Carcinogenic effects: None

Mutagenic effects: not available

Teratogenic effects: not available

Avoid contact with skin and clothing. Wash thoroughly after handling.

HMIS Rating:
Health: 2

Flammability: 1

Reactivity: 1

NFPA Rating:

Health: 2

Flammability: 1

Reactivity: 1

Section 5. EXPOSURE CONTROLS/EMPLOYEE PROTECTION

Wear chemical-resistant gloves, safety goggles, and protective lab clothing. Safety shower and eye bath required. Wash thoroughly after handling.

Section 6. FIRST AID MEASURES

Notice to Reader: Get immediate medical attention

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes (irritant)

Skin: Immediately wash skin with soap and copious amounts of water (irritant, permeator)

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel

Other: Wash contaminated clothing before re-use

Section 7. FIRE FIGHTING MEASURES

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Upper Explosion Limit: N/A

Lower Explosion Limit: N/A

Flashpoint: N/A

Auto ignition Temperature: N/A

Fire Extinguishing Media: Small fire: Dry chemical powder

Unusual Fire/Explosion Data: Large fire: Water spray, fog or foam

Not available – N/A

Section 8. ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 9. HANDLING AND STORAGE

Store in tightly sealed container at room temperature.

Section 10. WASTE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, State and local environmental regulations.

Section 11. Physical and Chemical Properties

Physical state and Appearance : Clear, colorless liquid

pH : 5.0

Melting/Freezing point 800.9 C for sodium chloride

Solubility: Partially soluble in cold water

Soluble in hot water

Soluble in methanol

Insoluble in n-octanol

Section 12. Toxicological Information

Toxic Effects on Humans: Slightly hazardous in case of eye contact, of ingestion, of inhalation
(lung irritant)

Special Remarks on Toxicity to Animals: Not available

Special Remarks on Chronic Effects on Humans: Not available

Special Remarks on Other Toxic Effects on Humans: Not available

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MATERIAL SAFETY DATA SHEET

SECTION 1 Chemical Product and Company Identification

Product Name: Bovine IgG (500 ug)
Catalog Number: P-1001-001

Company Identification

Solulink, Incorporated
9853 Pacific Heights Blvd, Suite H
San Diego, California 92121

Phone: (858) 625-0670
Fax: (858) 625-0770

In case of emergency Call CHEMTREC: USA 1-800-262-8200

Validation Date: DATE: Oct. 23, 2007

SECTION 2 COMPOSITION/INGREDIENTS

<u>Ingredient name:</u>	<u>CAS Number:</u>	<u>%:</u>
Sodium Phosphate, Dibasic	7558-79-4	42.2
Sodium Chloride	7647-14-5	42.2
Sodium Phosphate, Monobasic	10049-21-5	15.22
Bovine IgG (complex protein M.W 150kD)	N/A	0.38

SECTION 3 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: white solid residue
Percent Purity: 100%
Boiling Point: NA
Freezing Point: NA
Solubility: Aqueous
Vapor Density: NA
Vapor Pressure: NA

SECTION 4 HAZARDS IDENTIFICATION

Emergency Overview: Warning

Contains material that causes damage to the following organs: mucus membranes, gastrointestinal tract, skin, eyes, stomach. Contains material that may cause damage to the following organ: Heart
Routes of entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Carcinogenic effects: None
Mutagenic effects: not available
Teratogenic effects: not available

Avoid contact with skin and clothing. Wash thoroughly after handling.

HMIS Rating:

Health: 2

Flammability: 1

Reactivity: 1

NFPA Rating:

Health: 2

Flammability: 1

Reactivity: 1

SECTION 5 EXPOSURE CONTROLS - EMPLOYEE PROTECTION

Wear chemical-resistant gloves, safety goggles, and protective lab clothing. Safety shower and eye bath required. Wash thoroughly after handling.

SECTION 6 FIRST AID MEASURES

Notice to Reader: Get immediate medical attention

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes (irritant)

Skin: Immediately wash skin with soap and copious amounts of water (irritant, permeator)

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel

Other: Wash contaminated clothing before re-use

SECTION 7 FIRE FIGHTING MEASURES

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Upper Explosion Limit: N/A

Lower Explosion Limit: N/A

Flashpoint: N/A
Auto ignition Temperature: N/A
Fire Extinguishing Media: Small fire: Dry chemical powder
Unusual Fire/Explosion Data: Large fire: Water spray, fog or foam

SECTION 8 ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 9 HANDLING AND STORAGE

Store in tightly sealed container at room temperature. Store refrigerated if water is added.

SECTION 10 WASTE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, State and local environmental regulations.

Section 11 PHYSICAL AND CHEMICAL PROPERTIES

Physical state and Appearance : white residue
Melting/Freezing point 800.9 C for sodium chloride
Solubility: Partially soluble in cold water
Solution pH : 7.4

Section 12 TOXICOLOGICAL INFORMATION

Toxic Effects on Humans: Slightly hazardous in case of eye contact, of ingestion, of inhalation (lung irritant)

Special Remarks on Toxicity to Animals: Not available
Special Remarks on Chronic Effects on Humans: Not available
Special Remarks on Other Toxic Effects on Humans: Not available

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MATERIAL SAFETY DATA SHEET

SECTION 1 Chemical Product and Company Identification

Product Name: Biotinylated Bovine IgG (500 ug)
Catalog Number: P-1002-001

Company Identification

Solulink, Incorporated
9853 Pacific Heights Blvd, Suite H
San Diego, California 92121

Phone: (858) 625-0670
Fax: (858) 625-0770

In case of emergency Call CHEMTREC: USA 1-800-262-8200

Validation Date: DATE: Oct 23, 2008

SECTION 2 COMPOSITION/INGREDIENTS

<u>Ingredient name:</u>	<u>CAS Number:</u>	<u>%:</u>
Sodium Phosphate, Dibasic	7558-79-4	42
Sodium Chloride	7647-14-5	42
Sodium Phosphate, Monobasic	10049-21-5	15.88
Bovine IgG (complex protein M.W 150kD)	N/A	0.10
ChromaLink Biotin	N/A	0.02

N/A- not available

SECTION 3 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: white residue
Percent Purity: 100%
Boiling Point: not applicable (solid)
Freezing Point: not applicable
pH: not applicable
Solubility: Aqueous
Vapor Density: NA
Vapor Pressure: NA

SECTION 4 HAZARDS IDENTIFICATION

Emergency Overview: Warning

Contains material that causes damage to the following organs: mucus membranes, gastrointestinal tract, skin, eyes, stomach. Contains material that may cause damage to the following organ: Heart

Routes of entry: Absorbed through skin when aqueous, eye contact, inhalation, ingestion.

Carcinogenic effects: None

Mutagenic effects: not available

Teratogenic effects: not available

Avoid contact with skin and clothing. Wash thoroughly after handling.

HMIS Rating:

Health: 2

Flammability: 1

Reactivity: 1

NFPA Rating:

Health: 2

Flammability: 1

Reactivity: 1

SECTION 5 EXPOSURE CONTROLS - EMPLOYEE PROTECTION

Wear chemical-resistant gloves, safety goggles, and protective lab clothing. Safety shower and eye bath required. Wash thoroughly after handling.

SECTION 6 FIRST AID MEASURES

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes (irritant)

Skin: Immediately wash skin with soap and copious amounts of water (irritant, permeator)

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration breathing is difficult give oxygen

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel

Other: Wash contaminated clothing before re-use

SECTION 7 FIRE FIGHTING MEASURES

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Upper Explosion Limit: N/A

Lower Explosion Limit: N/A
Flashpoint: N/A
Auto ignition Temperature: N/A
Fire Extinguishing Media: Small fire: Dry chemical powder
Unusual Fire/Explosion Data: Large fire: water spray, fog or foam

SECTION 8 ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 9 HANDLING AND STORAGE

Store in tightly sealed container at room temperature.

SECTION 10 WASTE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, State and local environmental regulations.

Section 11 PHYSICAL AND CHEMICAL PROPERTIES

Physical state and Appearance : dry white residue
Melting/Freezing point 800.9 C for sodium chloride
Solubility: Soluble in cold water
Solution pH : 7.4

Section 12 TOXICOLOGICAL INFORMATION

Toxic Effects on Humans: Slightly hazardous in case of eye contact, ingestion, or inhalation

Special Remarks on Toxicity to Animals: Not available
Special Remarks on Chronic Effects on Humans: Not available
Special Remarks on Other Toxic Effects on Humans: Not available

Solulink, Inc. believes the above information to be accurate, but not necessarily all inclusive, and thus should only be used as a guide in the handling and use of this material. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Solulink, Inc. shall not take responsibility for any damage resulting from handling or from contact with the above product. The information in this material safety data sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder 29 CFR § 1910.1200.

Material Safety Data Sheet

1. Product and company identification

Product name : Zeba™ Desalting Resin
Synonym : Zeba™ Desalt Columns; Zeba™ 96-Well Desalt Plates; Chromix™ Desalting Columns; Zeba™ Desalt Columns, 7K MWCO

Supplier : Solulink
9853 Pacific Heights Blvd
Suite H
San Diego, CA 92121
United States
858-625-0670
or
800.625.0670

Manufacturer : Thermo Fisher Scientific
Pierce Biotechnology
P.O. Box 117
Rockford, IL 61105
United States
815.968.0747
800.874.3723

Product No. : 0089877 0089877S 0089878 0089882 0089882S 0089883 0089889 0089890 0089891 0089891S 0089892 0089893 0089894 0089934 0089935 1859836 1859837 1860080 1860739 1861573 1862296

MSDS # : 7593
Validation date : 2/26/2010.
Print date : 2/26/2010.
Responsible name : **MSDS Specialist**
In case of emergency : CHEMTREC: **Use of Substance/Preparation** 800.424.9300
OUTSIDE US: 202.483.7616

Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

2. Hazards identification

Physical state : Liquid. [slurry gel]
OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency overview : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.

Routes of entry : Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.

2/26/2010.

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eba™ Desalting Resin

2. Hazards identification

Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.
Medical conditions aggravated by over-exposure : None known.

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

See toxicological information (section 11)

3. Composition/information on ingredients

Substance/preparation : Preparation

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are

classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.
- See section 11 for more detailed information on health effects and symptoms.

2/26/2010.

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Zeba™ Desalting Resin

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : No specific data.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Zeba™ Desalting Resin**8 . Exposure controls/personal protection****Europe**

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

Recommended monitoring : If this product contains ingredients with exposure limits, personal, workplace atmosphere **procedures** or biological monitoring may be required to determine the effectiveness of the ventilation

or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection**Respiratory**

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties**Physical state**

: Liquid. [slurry gel]

Color

: White.

Relative density

: 1.22

Dispersibility properties

: Easily dispersible in the following materials: cold water and hot water.

Zeba™ Desalting Resin**10 . Stability and reactivity****Chemical stability**

: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid

: No specific data.

Incompatible materials

: No specific data.

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions

: Will not occur.

11 . Toxicological information**United States****Acute toxicity****Conclusion/Summary**

: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Chronic toxicity**Conclusion/Summary**

: Not available.

[Carcinogenicity](#)
Conclusion/Summary : Not available.
[Mutagenicity](#)
Conclusion/Summary : Not available.
[Teratogenicity](#)
Conclusion/Summary : Not available.
[Reproductive toxicity](#)
Conclusion/Summary : Not available.

[Europe](#)

Chronic effects : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

12. Ecological information

[Environmental effects](#) : No known significant effects or critical hazards.

[United States](#)

[Aquatic ecotoxicity](#)

Conclusion/Summary : Not available.
Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
DOT Classification	Not regulated.	-	-	-
IATA-DGR Class	Not regulated.	-	-	-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Not regulated.

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances : No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution – chemical inventory - hazard identification: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances : No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

Canada

WHMIS (Canada) Canadian lists : Not controlled under WHMIS (Canada).
: **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory : **Canada inventory**: All components are listed or exempted.

15 . Regulatory information

EU regulations

Risk phrases : This product is not classified according to EU legislation.
:

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Korea inventory (KECI): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Japan inventory (ENCS): All components are listed or exempted.

16 . Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Version : 1.04

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

2/26/2010.

7/7

MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION

Chemical Name: **DMF, Dimethylformamide**
Catalog Number: S 4001
Molecular Formula: $\text{HCON}(\text{CH}_3)_2$

2. COMPOSITION/INGREDIENTS

CAS Number: Custom synthesized compound. No CAS Number.
Components:

3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid
Percent Purity: 99.8%
Boiling Point: 153 C
Melting Point: -61 C
Vapor Density: 2.5
Vapor Pressure: 2.6 mm Hg at 20 C
Specific Gravity: 0.95
Flash Point: 58 C
Explosion limits: 2.2%- 15.2%
Autoignition Temperature: 445C

4. REACTIVITY

Stability: stable

5. EXPOSURE CONTROLS/EMPLOYEE PROTECTION

Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, and other protective clothing. Safety shower and eye bath required. Mechanical exhaust required. Wash thoroughly after handling.

6. HAZARDS IDENTIFICATION

Precautionary Statement:	May act as a carcinogen, exposure may result in fetal death. Long term exposure may result in kidney or liver damage
Primary Routes of Entry:	Harmful by inhalation, ingestion of skin contact
PEL:	NA
TLV:	NA
LD50:	NA
Carcinogenicity:	NA
Toxicity:	NA
RTECS #:	NA
Acute Effects:	NA
Chronic Effects:	NA
Target Organs:	NA

7. FIRST AID MEASURES

Eyes: Immediately flush eyes with copious amounts of water for at least 15 minutes
Skin: Immediately wash skin with soap and copious amounts of water
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen
Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Other: Wash contaminated clothing before re-use

8. FIRE FIGHTING MEASURES

Upper Flammable Limit:	NA
Lower Flammable Limit:	NA
Upper Explosion Limit:	NA
Lower Explosion Limit:	NA
Flashpoint:	NA
Auto ignition Temperature:	NA
Fire Extinguishing Media:	NA
Unusual Fire/Explosion Data:	NA

9. ACCIDENTAL RELEASE

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Sweep up, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

10. HANDLING AND STORAGE

Store desiccated at or below room temperature.

11. WASTE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Solulink, Inc. believes the above information to be accurate, but not necessarily all inclusive, and thus should only be used as a guide in the handling and use of this material. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Solulink, Inc. shall not take responsibility for any damage resulting from handling or from contact with the above product. The information in this material safety data sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder 29 CFR § 1910.1200.