

**Allen, Pam, NMENV**

 ENTERED

**From:** Maestas, Ricardo, NMENV  
**Sent:** Thursday, December 18, 2014 9:31 AM  
**To:** Allen, Pam, NMENV  
**Subject:** FW:  
**Attachments:** 5.19.14 - Combined -ES Transmittal of Neutralizers Used in NS Processin....pdf

Email and Att.

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**From:** Kliphuis, Trais, NMENV  
**Sent:** Thursday, May 22, 2014 2:00 PM  
**To:** Smith, Coleman, NMENV; Maestas, Ricardo, NMENV; Holmes, Steve, NMENV  
**Subject:**

Trais Kliphuis  
WIPP Staff Manager  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive E, Building 1  
Santa Fe, New Mexico 87505

Office: 505-476-6051  
Front Desk: 505-476-6000





**Date:** May 19, 2014

**To:** Dan Cox

**From:** Miles Smith *MCS*

**Subject:** Correction to Transmittal of Neutralizers Used in Nitrate Salt Processing

On May 17, 2014 I sent you the review of neutralizers used during nitrate salt processing. That document was found to contain two typographical errors. These were 1) exclusively was spelled incorrectly and 2) Spilfyter Kolosafe Base Neutralizer incorrectly identified that is was used prior to September, 2013 when it should have stated April, 2013.

Please find attached the corrected table. Please add this correction to the original submittal I sent you. Please call me if you have any questions.

TA-50 - WCRRF - Neutralizer Inventory

	Name	Type	Dates Used	MSDS
Acid Neutralizer	Spilfyter Kolorsafe Acid Neutralizer - Liquid Formula	Acid	Exclusively after Sep 2013	Approved MSDS Available
	Chemtex Acid Neutralizer - Dry Formula	Acid	Prior to Sep 2013	* Grandfathered in - MSDS Available
Base Neutralizer	Pig Base Encapsulating Neutralizer - Dry Formula	Base	Exclusively after April 2013	Approved MSDS Available
	Spilfyter Kolorsafe Benchtop Kits	Base	Used prior to April 2013	* Grandfathered in - MSDS Available

\* Grandfathered in = On-Site historically. No record of STR approved, but approved is assumed in that product was on-site prior to beginning 5706 Campaign

Updated 5/19/2014



**Date:** May 17, 2014  
**To:** Dan Cox  
**From:** Miles Smith *ms*  
**Subject:** Transmittal of Neutralizers Used in Nitrate Salt Processing

Attached is information related to the acid and base neutralizers that were used in TRU processing. These neutralizers were used for multiple solution packages whenever neutralization was required. We put together a quick reference matrix identifying the types of neutralizers used at WCRRF.

For neutralizers that were in use prior to the start of the 3706 Campaign and were already being used onsite, a copy of the MSDS/SDS is provided. In the two cases where EnergySolutions initiated the use of a new brand and type of neutralizer a copy of the STR approval is provided along with the MSDS/SDS. Additionally, we provide a chronological listing of neutralizer purchases with the invoices for backup.

Liquids found in nitrate salts were predominantly acidic with pH's between 3-4. In only one parent container were the liquids documented to be above neutral and it had a pH of 8. This information was obtained from review of LANL's operating records and interviews with employees.

TA-50 - WCRRF - Neutralizer Inventory

	Name	Type	Dates Used	MSDS
Acid Neutralizer	Spilfyter Kolorsafe Acid Neutralizer - Liquid Formula	Acid	Exclusively after Sept 2013	Approved MSDS Available
	Chemtex Acid Neutralizer - Dry Formula	Acid	Prior to Sep 2013	Grandfathered in - MSDS Available
Base Neutralizer	Pig Base Encapsulating Neutralizer - Dry Formula	Base	Exclusively after April 2013	Approved MSDS Available
	Spilfyter Kolorsafe Benchtop Kits	Base	prior to Sep 2013	Grandfathered in - MSDS Available

\* Grandfathered in = On-Site historically. No record of SIR approval, but approval is assumed in that product was on site when Robert arrived in 12/2011

# Spilfyter Kolorsafe Acid Neutralizer

## Robert M. Allred

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**From:** Zeke Wilmot  
**Sent:** Monday, May 12, 2014 1:21 PM  
**To:** Robert M. Allred  
**Subject:** FW: Request for STR approval to use aqueous neutralizers at WCRRF (Approval to Use Kolosafe® Liquid Acid Neutralizer, (MSDS No. 1006) / Kolosafe® Liquid Base Neutralizer (MSDS No. 1007))  
**Attachments:** KOLORSAFE Liquid Acid Neutralizer.pdf; KOLORSAFE Liquid Base Neutralizer.pdf

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**From:** Ezell, Andy [<mailto:ajezell@lanl.gov>]  
**Sent:** Thursday, September 12, 2013 8:47 PM  
**To:** Zeke Wilmot; Robert M. Allred; Leah K. Lavallee; Vince Rodriguez  
**Cc:** Frederici, Dave; Stone, Russell; English, Liz; Macrae, Hugh C; Stafford, Fern; Ezell, Andy  
**Subject:** RE: Request for STR approval to use aqueous neutralizers at WCRRF (Approval to Use Kolosafe® Liquid Acid Neutralizer, (MSDS No. 1006) / Kolosafe® Liquid Base Neutralizer (MSDS No. 1007))

Per Exhibit F; F19.0, Chemical and Hazardous Materials Management, Section F19.2, Kolosafe® Liquid Acid Neutralizer, (MSDS No. 1006) / Kolosafe® Liquid Base Neutralizer (MSDS No. 1007) has been approved.

Please note the comments from ES&H, which are noted below.

“Use of these products is approved. The subcontractor IH must perform initial surveys and/or exposure monitoring to identify appropriate PPE (Exhibit F subsections 52.1.1, 52.1.6, and other subsections of F52.0).”

Andrew J. Ezell (Andy)  
Environmental Programs  
Subcontract Technical Representative (STR)  
Los Alamos National Security, LLC  
Los Alamos National Laboratory  
Los Alamos, NM 87545  
Office: 505-665-0395  
Cell: 505-695-6755  
Fax: 505-665-6790  
E-mail: [ajezell@lanl.gov](mailto:ajezell@lanl.gov)

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**From:** Zeke Wilmot [<mailto:zwilmot@energysolutions.com>]  
**Sent:** Monday, August 26, 2013 1:11 PM  
**To:** Ezell, Andy  
**Cc:** Robert M. Allred; Leah K. Lavallee  
**Subject:** Request for STR approval to use aqueous neutralizers at WCRRF

Andy,

In an effort to better ensure acids and /or bases are neutralized, we would like approval for use of liquid acid and base neutralizers at WCRRF. When using the current dry neutralizers, often any free liquids are completely solidified before we are able to confirm a neutral pH has been achieved. Use of liquid neutralizers would be in relatively small quantities and immediately followed by solidification with absorbent once neutralization was verified.

I believe immediate solidification would resolve any criticality safety related concerns associated with the introduction of aqueous liquids. Another concern is the potential for water reactives. As we have received a significant amount of Pu

cemented waste, I have looked into the reactivity issues potentially associated with incidental contact with plutonium. From the limited research I have done, elemental plutonium and plutonium hydride (hydride is not likely to be encountered) are water reactive, but there should not be a significant reaction if an aqueous fluid makes contact with plutonium dioxide. I expect most of the cemented Pu waste we've handled is the oxide. As the water reactivity of plutonium and criticality safety issues are not my area of expertise it may be advisable to have LANL personnel weigh in on these issues as well.

Attached are the MSDSs for the neutralizers we would like to use.

Zeke Wilmot, CIH, CSP  
Industrial Hygienist-Energy **Solutions**

mobile-801-262-1829

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### Section 1. Chemical Product and Company Identification

Product Number: 4100 Series  
Product Name: **KOLORSAFE® Liquid Acid Neutralizer**

**Manufacturer:**  
NPS Corporation  
3303 Spirit Way  
Green Bay, WI 54304

**Emergency**

**Telephone Numbers:**  
CHEMTREC--Domestic (800)424-9300 24 hours  
--International (202)483-7616 24 hours  
Information (800) 558-5066 7:30am-4:30pm CDT M-F

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### Section 2. Composition/Information on Ingredients

<u>CAS Registry #</u>	<u>Component</u>
102-71-6	Triethanolam ine
72-48-0	Alizarin
7732-18-5	W ater

(NOTE: See Section 8 of this MSDS for Exposure Guidelines)

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### Section 3. Hazards Identification

**Emergency Overview**

Purple liquid with an ammonia-like odor. This product presents no unusual fire hazard.

#### Potential Health Effects

**Eye:** May cause slight to severe irritation.

**Skin:** May cause slight to severe irritation. Repeated skin contact may aggravate an existing dermatitis (skin condition) and/or sensitivity of the skin.

**Inhalation:** Exposure to vapors or mists in excess of the TLV (see Section 8) or in unusually high concentrations generated from spraying, heating the material, or from exposure in poorly ventilated areas or confined spaces may cause irritation of the nose, throat, and upper respiratory system.

**Signs and Symptoms:**

- Eyes: Redness, Tearing
- Skin: Redness, Swelling
- Inhalation: Discomfort of the nose and throat, headache, nausea, and drowsiness

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### Section 4. First Aid Measures

**Eyes:** Immediately flush with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.

**Skin:** Remove contaminated clothing. Wash affected area with plenty of soap and water for several minutes. If skin irritation develops or persists, seek medical attention.

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

**Ingestion:** If swallowed, call a physician or poison control center immediately.

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Flash Point: Not Tested

Flammable Limits: Not Tested

Auto-ignition Temperature: Not Tested

**NOTE:** This material is non-flammable as supplied.

Extinguishing Media: Water spray, ABC dry chemical, foam, or carbon dioxide. Use water fog or spray to cool exposed equipment and containers. Water or foam may cause frothing.

Special Fire Fighting Procedures: For large fires or fires in confined areas, full emergency equipment with self-contained breathing apparatus and full protective clothing should be used. Thermal decomposition of this product may produce hazardous or irritating byproducts. See Section 10.

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### **Section 6. Accidental Release Measures**

Avoid breathing vapors. Avoid contact with skin, eyes, or clothing. Contain the spill and collect the material using chemically resistant sorbent products. If this product is mixed with other materials, see Section 13.

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### **Section 7. Handling and Storage**

Avoid high heat and/or freezing conditions. Keep container tightly closed. Suitable for general chemical storage under normal warehouse conditions.

**NOTE:** If this product is stored at temperatures >150 °F or at elevations above 5000 feet, gas may form, increasing the pressure within the container, causing the container to bulge. If bulging occurs, remove the container from the work area and slowly open the container to release the gas. Be sure to wear proper personal protective equipment.

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### **Section 8. Exposure Controls/Personal Protection**

Exposure Limits: Triethanolamine

ACGIH TLV is 5 mg/M<sup>3</sup>.

OSHA PEL: Not Established

The end-user must determine the specific types of personal protective equipment needed according to 29 CFR 1910.132—Personal Protective Equipment (PPE) for General Industry. The following are only suggestions:

- Eyes: Safety glasses, goggles, or face shield
- Skin: Suitable chemically resistant gloves and protective clothing
- Inhalation: Air purifying respirator with appropriate chemical cartridge or canister

Adequate ventilation should be provided to meet the ACGIH exposure limits.

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### **Section 9. Physical and Chemical Properties**

Appearance: Purple liquid

Odor: Ammonia-like odor

Boiling Point: 218 °F

Vapor Pressure (mmHg): Not Tested

Vapor Density: Not Tested

Solubility in Water: Soluble

Specific Gravity (H<sub>2</sub>O=1): 1.09

Freezing Point: -4 °F

pH: 10.2

Evaporation Rate (Butyl Acetate=1): Not Tested

% Vaporizable by volume (H<sub>2</sub>O=100): 100

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Stable: Yes

Conditions to Avoid: See Section 7

Incompatibility (Materials to Avoid): None known

Hazardous Decomposition or Byproducts: In a limited air supply, thermal decomposition produces carbon monoxide, carbon dioxide, ammonia, irritating aldehydes and ketones.

Hazardous Polymerization: Will not occur

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### **Section 11. Toxicological Information**

This product is not listed by NTP or IARC. See Section 15.

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### **Section 12. Ecological Information**

No data available. See Section 15.

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### **Section 13. Disposal Considerations**

This product in itself is considered to be non-hazardous as defined by RCRA (40 CFR 261). Once used, this product may take on the characteristics of the chemical(s) it was used with and should be disposed of accordingly. Disposal of this product (used or unused) must be in compliance with all local, state, and federal regulations.

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### **Section 14. Transport Information**

Not regulated by DOT

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### **Section 15. Regulatory Information**

TSCA Inventory Status: All components are listed on the TSCA list.

SARA Title III

Section 302 Extreme Hazardous Substance List: Not listed

Section 311/312 Hazard Classification:

Immediate (acute): Yes

Delayed (chronic): No

Fire: No

Sudden Release of Pressure: No

Reactive: No

Section 313 Toxic Chemicals: Not listed

USEPA CERCLA—Reportable Quantity (RQ): Not listed

RCRA Hazardous Waste: Not listed

State/Int'l Right-to-Know Regulations: Canada's WHMIS—Triethanolamine 1%

California Proposition 65: Not listed

International Regulations: All components are listed on the following lists:

- Canada Inventory Status: Canadian Domestic Substance (DSL)
  - European Inventory of Existing Chemical Substances (EINECS)
  - Japan Inventory Status: Japanese MITI Inventory
-

**MATERIAL SAFETY DATA SHEET**  
**Spilfyter® Products**  
**Kolorsafe® Liquid Acid Neutralizer**

**Page 4**  
**Revision Date: 02/24/2011**  
**MSDS No. 1006**

**Abbreviations:**

CFR: Code of Federal Regulations  
OSHA: Occupational Safety and Health Administration  
MSDS: Material Safety Data Sheet  
PEL: Permissible Exposure Limit  
NA: Not Applicable  
ACGIH: American Conference of Governmental Industrial Hygienists  
TLV: Threshold Limit Value  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer  
RCRA: Resource Conservation and Recovery Act  
TSCA: Toxic Substances Control Act  
SARA: Superfund Amendments and Reauthorization Act  
USEPA: United States Environmental Protection Agency  
CERCLA: Comprehensive Response, Compensation, and Liability Act  
DOT: Department of Transportation  
WHMIS: Workplace Hazardous Materials Information System  
n.o.s.: Not Otherwise Specified  
NFPA: National Fire Protection Association  
HMIS: Hazardous Material Information System

**NFPA Ratings:**

Health: 1  
Fire: 1  
Reactivity: 0  
Special Hazard: None

**HMIS Ratings:**

1  
flammability: 1  
0  
Personal Protection: X

**NOTE:** This MSDS has been prepared only for the KOLORSAFE® Liquid Acid Neutralizer (4100 Series) of SPILFYTER® Products. The MSDS's of the chemicals used with this product must be reviewed completely, and precautions taken as described.

The information accumulated herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, NPS Corporation cannot give guarantees regarding the information from sources, and expressly does not make any warranties, nor assumes any liability for its uses of this product.

**Disclaimer**

You have purchased SPILFYTER® products from NPS Corporation  
You have been provided data, product labels, MSDS's, and other information about SPILFYTER® Products.

Some SPILFYTER® Products are hazardous. Information about SPILFYTER® Products that are hazardous is furnished without guarantee. NPS Corporation does not guarantee the accuracy of the information about hazardous SPILFYTER® Products.

Those products are only to be used by people having expertise in using the hazardous products.

**MATERIAL SAFETY DATA SHEET**  
**Spilfyter® Products**  
**Kolorsafe® Liquid Acid Neutralizer**

**Page 5**  
**Revision Date: 02/24/2011**  
**MSDS No. 1006**

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The information provided about the hazardous products is believed to be correct. You must perform your investigation as to the safety, toxicity, suitability, and proper shipping method for any hazardous SPILFYTER® Product.

No guarantee, expressed or implied, is made by NPS Corporation about the results of use of its products. No guarantee is made as to the safety and toxicity of any SPILFYTER® Product.

NPS Corporation does not assume any liability arising out of use of SPILFYTER® Products. Additional information and research may be necessary before you use the SPILFYTER® Products. NPS Corporation is not responsible for damages, direct or indirect, resulting from the use of SPILFYTER® Products or from reliance on data in the MSDS or product label.

If you resell SPILFYTER® Products, you must, by law, furnish your customers a copy of MSDS's and handling instructions.

You are also required by law to insure that all SPILFYTER® Products are properly shipped.

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# Chemtex Acid Neutralizer

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Products For a Clean and Safe Environment

[www.chemtexinc.com](http://www.chemtexinc.com)

Phone (877) 431-0200

Fax (401) 305-3033

## MATERIAL SAFETY DATA SHEET

### **SECTION I: IDENTIFICATION OF PRODUCT**

PRODUCT NAME: Acid Neutralizer (Polymer, socks, pillows, & pads)

#### **Distribution Location:**

Chemtex, Inc.  
1 Front Street  
Cumberland RI 02864

**Customer Service Telephone Number:** 1-877-431-0200

**Date Prepared:** January 20, 2009

### **SECTION II: HAZARDOUS INGREDIENTS**

Polymer, Sodium carbonate and alizarin. Product contains no hazardous ingredients.

### **SECTION III: HAZARDS IDENTIFICATION**

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATING:

HEALTH: 2  
FLAMMABILITY: 0  
REACTIVITY: 0

### **SECTION IV: FIRST AID MEASURES**

EYE CONTACT: Flush eyes with running water for 15 minutes.  
SKIN CONTACT: Wash with soap and water. Remove clothing.  
INHALATION: Remove to fresh air.  
INGESTION: Drink 2 glasses (16 oz) of water, call physician or poison control.

### **SECTION V: FIRE FIGHTING MEASURES**

FLASH POINT: N/A  
FLAMMABLE LIMITS: N/A  
FIRE EXTINGUISHING MEDIA: Water spray, dry chemical, foam, or carbon dioxide  
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus & full protective clothing.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposes to form carbon dioxide, a fire extinguishing agent.  
Polymer residue is slippery when wet.

**SECTION VI: ACCIDENTAL RELEASE MEASURES**

Avoid breathing dust. Contain spill or leaking material & place in an appropriate container. If wet, material is very slippery. Do not flush material to public sewer or waterways.

**SECTION VII: HANDLING AND STORAGE**

Store in a cool, dry well ventilated area away from chemicals listed in section X & away from flammables, heat source, foodstuffs, and animal feed.

**SECTION VIII: EXPOSURE CONTROLS/ PERSONAL PROTECTION EQUIPMENT**

VENTILATION:	Adequate ventilation should be available at all times of use.
PROTECTIVE GLOVES:	Chemically resistant gloves
EYE PROTECTION:	Chemical goggles/ Face shield
OTHER PROTECTIVE EQUIPMENT (SPECIFY):	Chemically resistant clothing in accordance with 29 CFR 1910-134. Also maintain sink, safety shower, and eye & face fountain in work area. Have oxygen readily available.

**SECTION IX: PHYSICAL DATA**

APPEARANCE AND ODOR:	Light orange or light purple crystalline powder, odorless
SPECIFIC GRAVITY (H <sup>2</sup> O=1):	2.2
BOILING POINT (C):	N/A
MELTING POINT (C):	1564° F
SOLUBILITY IN WATER:	5.5g/100g water at 0° C
EVAPORATION RATE:	N/A
VAPOR PRESSURE (mm Hg):	N/A
VAPOR DENSITY (Air = 1):	N/A

**SECTION X: REACTIVITY DATA**

STABILITY:	Stable
CONDITIONS TO AVOID:	Extreme heat
INCOMPATIBILITY:	Fluorine, Lithium & 2, 4, 6- Trinitrotoluene Contact with food products containing sugar may form deadly carbon monoxide gas. Contacts with acids will cause neutralization.
HAZARDOUS DECOMPOSITION OR BYPRODUCTS:	N/A
HAZARDOUS POLYMERIZATION:	Will occur

**SECTION XI: WASTE DISPOSAL METHOD**

Recovered spills should be placed in closed containers & disposed of in accordance with local, state, & federal regulations.

**SECTION XII: PREPARATION**

The information contained herein is given in good faith, but no warranty, expressed or implied, is made.

**UPDATED:** January 20, 2009

**PREPARED BY:** Chemtex, Inc.

# PIG Encapsulating Base Neutralizer

## Robert M. Allred

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**From:** Zeke Wilmot  
**Sent:** Monday, May 12, 2014 1:18 PM  
**To:** Robert M. Allred  
**Subject:** FW: STR Approval for Base Neutralizer (Approval to Use PIG Encapsulating / Neutralizing Absorbents (MSD-152))  
**Attachments:** Pig Base Encapsulating-Neutralizing Absorbants.pdf

**From:** Ezell, Andy [<mailto:ajezell@lanl.gov>]  
**Sent:** Sunday, June 02, 2013 4:27 PM  
**To:** Zeke Wilmot; Robert M. Allred; Vince Rodriguez  
**Cc:** Frederici, Dave; Bement, Rob; English, Liz; Macrae, Hugh C; Stafford, Fern; Ezell, Andy  
**Subject:** RE: STR Approval for Base Neutralizer (Approval to Use PIG Encapsulating / Neutralizing Absorbents (MSD-152))

Per Exhibit F; F19.0, Chemical and Hazardous Materials Management, Section F19.2, PIG Encapsulating / Neutralizing Absorbents (MSD-152,) has been approved.

Andrew J. Ezell (Andy)  
Environmental Programs  
Subcontract Technical Representative (STR)  
Los Alamos National Security, LLC  
Los Alamos National Laboratory  
Los Alamos, NM 87545  
Office: 505-665-0395  
Cell: 505-695-6755  
Fax: 505-665-8347  
E-mail: [ajezell@lanl.gov](mailto:ajezell@lanl.gov)

**From:** Zeke Wilmot [<mailto:zwilmot@energysolutions.com>]  
**Sent:** Wednesday, May 08, 2013 1:29 PM  
**To:** Ezell, Andy  
**Cc:** Robert M. Allred  
**Subject:** STR Approval for Base Neutralizer

Andy,

Attached is an MSDS for an absorbent/base neutralizer for which we would like approval at WCCRF.

Zeke Wilmot, CIH, CSP  
Industrial Hygienist-EnergySolutions

mobile-801-262-1829

# Safety Data Sheet

## 1. Product And Company Identification

**Product Identifier:** PIG Base Encapsulating / Neutralizing Absorbents (MSD-152)

**General Use:** PIG Base Encapsulating / Neutralizing Absorbents are designed to absorb, encapsulate and neutralize spilled bases rapidly. Product will turn from a cream color to a blue (high concentrations), red (medium concentrations), then back to a cream color when neutralized.

**Product Description:** Cream colored absorbents in pillow, sock, mat and loose form. Skin is polypropylene.

**COMPANY PROFILE:** **EMERGENCY TELEPHONE:**

New Pig Corporation	INFOTRAC
One Pork Avenue	200 North Palmetto Street
Tipton, PA 16684-0304	Leesburg, FL 34748
Information Number	24 hrs, 7 days/week
1-800-468-4647	1-800-535-5053

**Website:** www.newpig.com, **Email:** hothogs@newpig.com

## 2. Hazards Identification

**If outer material is punctured or if using loose powder:** Warning! Irritant: Product contains chemicals known to cause serious eye irritation, mild skin irritation and may be harmful if swallowed.

**GHS Classification for Mat, Sock or Pillow:** Not a dangerous substance according to GHS

**GHS Classification for Loose Form:** Eye irritation, category 2

### GHS Label Elements

**Signal Word:** Warning

H303 May be harmful if swallowed

H316 Causes mild skin irritation

H319 Causes serious eye irritation

### Precautionary Statements:

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 IF eye irritation persists: Get medical advice/attention



## 3. Composition/Information on Ingredients

### Filler or Loose:

CAS: 77-92-9	Citric acid	60-65%
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EC: 201-069-1

CAS : None	Super Absorbent	40-45%
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CAS : 89-83-8	Thymol	<1%
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EC : 201-944-8

### Skin:

CAS: 9003-07-0	Polypropylene	>99%
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CAS: None	Adhesive	<0.0001%
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CAS: 9003-07-0	Polypropylene stitching	<0.0001%
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## 4. First Aid Measures

**Eye Contact:** Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. Get medical attention if irritation persists.

**Ingestion:** If conscious, give two glasses of water and call physician or poison control.

**Inhalation:** Remove to fresh air if excessive amounts of dust inhaled.

**Skin Contact:** Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation persists.

## 5. Fire Fighting Measures

**Extinguishing Media:** Use media appropriate for surrounding fire.

**Special Fire Fighting Procedures:** Wear self contained breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Not established

**Unusual Hazards:** Polymer residue is slippery when wet. Refer to absorbed liquid(s) MSDS(s). The Base Encapsulating / Neutralizing Absorbents may help neutralize the base making it less hazardous but not less flammable.

## 6. Accidental Release Measures

**Spill or Leak Procedures:** Recovered spills should be placed in closed containers and disposed of in accordance with Federal, State and local regulations. Do not flush material to public sewer or waterways. If sweeping loose absorbent, dampen with water spray or vacuum to avoid creating dust

## 7. Handling and Storage

**Handling Precautions:** Store in cool, dry well ventilated area away from incompatible chemicals and away from flammables, heat sources, foodstuffs and animal feed. If outer material is punctured, avoid breathing dust. If wet, filler is very slippery.

**Storage Precautions:** Room temperature. Shelf Life: ~5 years when stored in a clean, dry environment out of direct sunlight.

**General:** The container can be hazardous when empty. Follow label cautions even after the container is empty. Do not re-use empty containers for food, clothing or products for human or animal consumption, or where skin contact can occur.

## 8. Exposure Controls/Personal Protection

**Engineering Controls:** General mechanical ventilation or local exhaust as appropriate.

### PERSONAL PROTECTION

**Eyes:** Safety glasses with side shields.

**Respirator:** If outer material is punctured or if using loose, use NIOSH/MSHA approved dust respirator in unventilated area.

**Gloves:** If outer material is punctured or if using loose, use of chemical resistant gloves is a good industrial practice.

**Other:** Eyewash facility.



# Safety Data Sheet

## 8. Exposure Controls/Personal Protection (Cont'd)

### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

EXPOSURE LIMITS 8 hrs. TWA (ppm)

	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Mineral nuisance dust:		
Total	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Respirable	5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>

## 9. Physical and Chemical Properties (Liquid)

**Appearance:** Cream colored pillow, mat or sock with purplish white crystalline powder filler or loose powder.

**Odor:** None                      **Odor Threshold:** Not applicable

**pH:** Not applicable

**MELTING POINT/Freezing Point:** Skin: 160°F (71°C),

Filler: 1564°F (851°C)

**Initial Boiling Point and Range:** Not applicable

**Flash Point:** Not established    **Method:** Not applicable

**Evaporation Rate:** Not applicable

**Flammable Limits:** Not established

**Conditions of Flammability:** Not established

**Explosive Properties:** None

**Vapor Pressure:** Not established

**Vapor Density:** Not established

**Relative Density (H<sub>2</sub>O = 1):** 2

**Solubility in Water:** 41% at 200°C (392°F)

**Auto Ignition Temperature:** Not established

**Coefficient of Water/Oil Distribution:** Not available

## 10. Stability and Reactivity

**General:** This is a stable material.

**Conditions of Reactivity:** Depending on the chemical being neutralized, significant quantities of heat may be generated, including some off-gassing.

**Incompatible Materials:** Metallic nitrates, cyanides, sulfides and strong oxidizers. Contact with sodium or calcium hypochlorite creates chlorine gas.

**Conditions to Avoid:** None known

**Hazardous Decomposition:** Carbon dioxide and carbon monoxide. Thermal decomposition may result in acid fumes.

**Hazardous Polymerization:** May occur

## 11. Toxicological Information

**Target Organs:** No data available

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** If outer material is punctured or if using loose powder, may cause irritation.

**Ingestion:** If outer material is punctured, may cause burns of mouth, nose, throat, stomach and esophagus. If large amounts are ingested, may cause nausea, vomiting, diarrhea.

## 11. Toxicological Information (Cont'd)

**Inhalation:** If outer material is punctured, may cause respiratory irritation. Pre-existing respiratory disorders may be aggravated by this product.

**Skin Contact:** If outer material is punctured or if using loose powder with contained absorbent, may cause irritation.

**Chronic:** Prolonged contact may cause burns and dermatitis.

**LD50:** Not established for mixture.

**LC50:** Not established for mixture.

**Carcinogenicity:** IARC: No

National Toxicology Program: No

OSHA: No

California Prop 65: No listed ingredient

**Reproduction Toxicity:** Not available

**Teratogenicity:** Not available

**Mutagenicity:** Not available

**Synergistic Products:** Not available

**Citric acid (CAS # 77-92-9):**

**Eye:** The draize eye irritation score for rabbits is 750 ug/24H

**Skin:** The dermal LD50 for rabbits: 500 mg/24H Mild

**Ingestion:** The oral LD50 for rats is 3000 mg/kg.

**Ingestion:** The oral LD50 for mice is 5040 mg/kg.

## 12. Ecological Information

No data available

## 13. Disposal Considerations

**Waste Disposal Method:** If material is unused, dispose of as a non-hazardous material in accordance with federal, state and local regulations. Refer to MSDS(s) of absorbed materials.

## 14. Transport Information

**DOT (Department of Transportation):**

**Proper Shipping Name:** Not regulated

**Hazard Class:** None

**Identification Number:** Not applicable

## 15. Regulatory Information

**CERCLA (Comprehensive Environmental Response Compensation and Liability Act):** No Reportable Quantity  
**OSHA Hazard Communication Standard, 29 CFR 1910.1200:** Mineral nuisance dust

**SARA Title III (Superfund Amendments and Reauthorization Act):** No listed ingredient

**TSCA (Toxic Substances Control Act):** All ingredients are listed.



# Safety Data Sheet

## 16. Other Information

**NFPA Hazard Ratings:** Health - 2  
none → extreme      Fire - 0  
0 → 4                  Reactivity - 0

**Reason for Issue:** Reviewed, changes to Sections 2, 4, 5, 8, 9 & 16. GHS changes to Sections 2, 3 & 11.

**Prepared by:** Dale Gatehouse, Entreprises Krenda Inc.

**Approved by:** Lisa Baxter, New Pig Corporation

**Previous Date of Issue:** 08/27/2012

**Revised Date:** 03/29/2013

**MSDS Number:** MSD-152

The following is in lieu of all warranties, expressed or implied: All information provided is based on testing and data believed to be accurate.

# Spilfyter Kolorsafe Base Neutralizer

---

**Section 1. Chemical Product and Company Identification**

Product Number: 4500 Series  
Product Name: KOLORSAFE® Dry Base Neutralizer

**Manufacturer:**  
NPS Corporation  
3303 Spirit Way  
Green Bay, WI 54304

**Emergency**

**Telephone Numbers:**  
CHEMTREC--Domestic (800)424-9300 24 hours  
--International (202)483-7616 24 hours  
Information (800) 558-5066 7:30am-4:30pm CDT M-F

---

**Section 2. Composition/Information on Ingredients**

<u>CAS Registry #</u>	<u>Component</u>
77-92-9	Citric Acid, anhydrous
76-61-9	Thymol Blue

(NOTE: See Section 8 of this MSDS for Exposure Guidelines)

---

**Section 3. Hazards Identification**

**Emergency Overview**

Odorless, pale purple crystalline powder. This product presents no unusual fire hazard.

**Potential Health Effects**

- Eye: May cause slight to severe irritation, possibly ulcerations.  
Skin: May cause slight to severe irritation. Repeated skin contact may aggravate an existing dermatitis (skin condition) and/or sensitivity of the skin.  
Inhalation: Exposure to excessive levels of airborne dust may irritate the nose, throat, and upper respiratory system.
- Signs and Symptoms:
- Eyes: Redness, Tearing, Possible burns
  - Skin: Redness, Swelling, Possible burns
  - Inhalation: Discomfort of the nose and throat, Coughing, Shortness of breath

---

**Section 4. First Aid Measures**

- Eyes: Immediately flush with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.  
Skin: Remove contaminated clothing. Brush off excess powder with a dry towel. Wash affected area with plenty of soap and water for several minutes. If skin irritation develops or persists, seek medical attention.  
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.  
Ingestion: If swallowed, call a physician or poison control center immediately.

---

**Section 5. Fire Fighting Measures**

Flash Point: NA

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Flammable Limits: Lower Explosive Limit (LEL): 8 gm/ft<sup>3</sup>

Upper Explosive Limit (UEL): 65 gm/ft<sup>3</sup>

Auto-ignition Temperature: 1850 °F

**NOTE:** This material is non-combustible as supplied.

Extinguishing Media: If the need exists, dry chemical, foam, or carbon dioxide can be used. Use water fog or spray to cool exposed equipment and containers.

Special Fire Fighting Procedures: For large fires or fires in confined areas, full emergency equipment with self-contained breathing apparatus and full protective clothing should be used. Thermal decomposition of this product may produce carbon dioxide gas.

---

### Section 6. Accidental Release Measures

Avoid breathing airborne dust. Avoid contact with skin and eyes. If unused material is spilled, collect by sweeping, shoveling or vacuuming and recycle the material for use. If this product is mixed with other materials, see Section 13.

**NOTE:** Do not flush material to public sewer systems or waterways.

---

### Section 7. Handling and Storage

Store in a cool, dry, and well ventilated area. Keep container tightly closed. Avoid contact with materials listed in Section 10.

---

### Section 8. Exposure Controls/Personal Protection

Exposure Limits: None specifically established for this product; treat as a nuisance dust as defined in 29 CFR 1910.1000.

OSHA PEL: Total Dust is 15 mg/M<sup>3</sup>.

Respirable Fraction is 5mg/M<sup>3</sup>.

ACGIH TLV: Not Established

The end-user must determine the specific types of personal protective equipment needed according to 29 CFR 1910.132—Personal Protective Equipment (PPE) for General Industry. The following are only suggestions:

- Eyes: Safety glasses, goggles, or face shield
- Skin: Suitable chemically resistant gloves and protective clothing
- Inhalation: Air purifying respirator with appropriate chemical cartridge or canister

Adequate ventilation should be provided to limit the threat of inhalation.

---

### Section 9. Physical and Chemical Properties

Appearance: Bluish-white crystalline powder

Odor: Odorless

Boiling Point: Not Tested

Vapor Pressure (mmHg): NA

Vapor Density: NA

Solubility in Water: Moderately Soluble (59.2% @ 68 °F)

Specific Gravity (H<sub>2</sub>O=1): 1.67

Melting Point: 307 °F

pH: 2.2

Evaporation Rate (Butyl Acetate=1): NA

% Vaporizable by volume (H<sub>2</sub>O=100): NA

---

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Stable: Yes

Conditions to Avoid: None known

Incompatibility (Materials to Avoid): Strong oxidizers, metallic nitrates, cyanides, sulfides, and hypochlorites.

**NOTES:** This material reacts with acids, releasing large volumes of carbon dioxide gas and heat. Reaction of this material with certain food products and their residues containing reducing sugars can create carbon monoxide.

Hazardous Decomposition or Byproducts: Thermal decomposition may produce carbon dioxide gas.

Hazardous Polymerization: Will not occur

---

### **Section 11. Toxicological Information**

This product is not listed by NTP or IARC. See Section 15.

---

### **Section 12. Ecological Information**

No data available. See Section 15.

---

### **Section 13. Disposal Considerations**

This product in itself is considered to be non-hazardous as defined by RCRA (40 CFR 261). Once used, this product may take on the characteristics of the chemical(s) it was used with and should be disposed of accordingly. Disposal of this product (used or unused) must be in compliance with all local, state, and federal regulations.

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### **Section 14. Transport Information**

Not regulated by DOT

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### **Section 15. Regulatory Information**

TSCA Inventory Status: All components are listed on the TSCA list.

SARA Title III

Section 302 Extreme Hazardous Substance List: Not listed

Section 311/312 Hazard Classification:

Immediate (acute): No

Delayed (chronic): No

Fire: No

Sudden Release of Pressure: No

Reactive: No

Section 313 Toxic Chemicals: Not listed

USEPA CERCLA—Reportable Quantity (RQ): Not listed

RCRA Hazardous Waste: Not listed

State/Int'l Right-to-Know Regulations: Canada's WHMIS—Citric Acid 1%

---

### **Section 16. Other Information**

Abbreviations:

CFR: Code of Federal Regulations

OSHA: Occupational Safety and Health Administration

MSDS: Material Safety Data Sheet

**MATERIAL SAFETY DATA SHEET**  
**Spilfyter® Products**  
**Kolorsafe® Dry Base Neutralizer**

**Page 4**  
**Revision Date: 02/24/2011**  
**MSDS No. 1009**

PEL: Permissible Exposure Limit  
NA: Not Applicable  
ACGIH: American Conference of Governmental Industrial Hygienists  
TLV: Threshold Limit Value  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer  
RCRA: Resource Conservation and Recovery Act  
TSCA: Toxic Substances Control Act  
SARA: Superfund Amendments and Reauthorization Act  
USEPA: United States Environmental Protection Agency  
CERCLA: Comprehensive Response, Compensation, and Liability Act  
DOT: Department of Transportation  
WHMIS: Workplace Hazardous Materials Information System  
n.o.s.: Not Otherwise Specified  
NFPA: National Fire Protection Association  
HMIS: Hazardous Material Information System

**NFPA Ratings:**

Health: 1  
Fire: 0  
Reactivity: 0  
Special Hazard: None

**HMIS Ratings:**

1  
mability: 0  
0  
Personal Protection: X

**NOTE:** This MSDS has been prepared only for the KOLORSAFE® Dry Base Neutralizer (4500 Series) of SPILFYTER® Products. The MSDS's of the chemicals used with this product must be reviewed completely, and precautions taken as described.

The information accumulated herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, NPS Corporation cannot give guarantees regarding the information from sources, and expressly does not make any warranties, nor assumes any liability for its uses of this product.

**Disclaimer**

You have purchased SPILFYTER® products from NPS Corporation  
You have been provided data, product labels, MSDS's, and other information about SPILFYTER® Products.

Some SPILFYTER® Products are hazardous. Information about SPILFYTER® Products that are hazardous is furnished without guarantee. NPS Corporation does not guarantee the accuracy of the information about hazardous SPILFYTER® Products.

Those products are only to be used by people having expertise in using the hazardous products.

The information provided about the hazardous products is believed to be correct. You must perform your investigation as to the safety, toxicity, suitability, and proper shipping method for any hazardous SPILFYTER® Product.

**MATERIAL SAFETY DATA SHEET**  
**Spilfyter® Products**  
**Kolorsafe® Dry Base Neutralizer**

**Page 5**  
**Revision Date: 02/24/2011**  
**MSDS No. 1009**

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No guarantee, expressed or implied, is made by NPS Corporation about the results of use of its products. No guarantee is made as to the safety and toxicity of any SPILFYTER® Product.

NPS Corporation does not assume any liability arising out of use of SPILFYTER® Products. Additional information and research may be necessary before you use the SPILFYTER® Products. NPS Corporation is not responsible for damages, direct or indirect, resulting from the use of SPILFYTER® Products or from reliance on data in the MSDS or product label.

If you resell SPILFYTER® Products, you must, by law, furnish your customers a copy of MSDS's and handling instructions.

You are also required by law to insure that all SPILFYTER® Products are properly shipped.

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# Neutralizer Purchase Chronology

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## Acid/Base Neutralizer Purchase History

Date	Date Received	Vendor	# Purchased	Item
6/19/2012	6/27/2012	Chemtex	1	Acid Polymer 5 gal 40lb OIL905
7/24/2012	7/31/2012	Chemtex	2	Acid Polymer 5 gal 40lb OIL905
12/12/2012	12/18/2012	Chemtex	2	Acid Polymer 5 gal 40lb OIL905
1/22/2013	1/30/2013	Chemtex	2	Acid Polymer 5 gal 40lb OIL905
4/1/2013	4/3/2013	New Pig.com	2	8-lb pail PIG Base Encap/Neu Loose Absorbant PLP803
4/3/2013	unknown	New Pig.com	16	8-lb pail PIG Base Encap/Neu Loose Absorbant PLP803
5/6/2013	5/8/2013	New Pig.com	4	8-lb pail PIG Base Encap/Neu Loose Absorbant PLP803
7/19/2013	7/25/2013	New Pig.com	20	8-lb pail PIG Base Encap/Neu Loose Absorbant PLP803
9/19/2013	9/23/2013	Grainger	1	Acid Chemical Neutralizer 1 gal. 3CNW8
10/2/2013	10/4/2013	Grainger	10	Acid Chemical Neutralizer 1 gal. 3CNW8
11/7/2013	11/12/2013	Grainger	12	Acid Chemical Neutralizer 1 gal. 3CNW8
12/17/2013	1/2/2014	Grainger	12	Acid Chemical Neutralizer 1 gal. 3CNW8

84

Total	7	Acid Polymer 5 gal 40lb OIL905
Total	42	8-lb pail PIG Base Encap/Neu Loos Absorbant PLP803
Total	35	Acid Chemical Neutralizer 1 gal. 3CNW8
	84	



1 Front Street • Cumberland, RI 02864  
 Phone: (401) 305-3030 • Fax: (401) 305-3033  
[www.chemtexinc.com](http://www.chemtexinc.com)

# INVOICE

Number	58975-1
Invoice Date	06/20/2012
Ordered Date	06/19/2012
Page	1

Bill to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Ship to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Phone: (505) 663-7217 Fax: (505) 661-2541

Phone: (505) 663-7217 Fax: (505) 661-2541

Cust Code	Ordered By	Salesman	Job/Rel#	Customer PO	Wanted Date	
ENERGY	GINA	LEN JOHNSON		CREDIT CARD	06/20/2012	
Entered By		Ship Via	FOB		Terms	
meredith sellechio		UPS			CREDIT CARD	
Quantity		U/M	Item #	Description	Price	Extension
Order	Ship	Back				
1	1	0	EA OIL905	ACID POLYMER 5 GAL PAIL 40LBS <sup>1</sup>	96.5000	96.50
*** SHIPPING INFORMATION ***						
Tracking#						
IZ5R884Y0349109616						

SubTotal 96.50

UPS FREIGHT CHARGE 46.19

\*145064.01.01.02.WCCR\*

Total USD \$ 142.69

Thank you for your order, we truly appreciate your business.

\*\* No returns allowed on emergency spill shipments. \*\*



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# INVOICE

Number	59477-1
Invoice Date	07/25/2012
Ordered Date	07/24/2012
Page	1

Bill to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Ship to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Phone: (505) 663-7217 Fax: (505) 661-2541

Phone: (505) 663-7217 Fax: (505) 661-2541

Cust Code	Ordered By	Salesman	Job/Rel#	Customer PO	Wanted Date
ENERGY	SAVANNAH	LEN JOHNSON		VERBAL SAVANNAH	07/25/2012
Entered By	Ship Via	FOB	Terms		
meredith sellechio	UPS	Factory	CREDIT CARD		
Quantity	U/M	Item #	Description	Price	Extension
Order	Shp	Back			
2	2	0	EA OIL905	ACID POLYMER 5 GAL PAIL 40LBS	96.5000 193.00
*** SHIPPING INFORMATION ***					
Tracking#					
1Z5R884Y0349085875					
1Z5R884Y0350149660					

SubTotal	193.00
UPS FREIGHT CHARGE	89.98
<b>Total</b>	<b>USD \$ 282.98</b>

145063.01.01.HN10 141.49  
 145064.01.01.02.WCCR 141.49

**Thank you for your order, we truly appreciate your business.**

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 Phone: (401) 305-3030 • Fax: (401) 305-3033  
 www.chemtexinc.com

# INVOICE

Number	61919-1
Invoice Date	12/12/2012
Ordered Date	12/11/2012
Page	1

Bill to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Ship to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Phone: (505) 663-7217 Fax: (505) 661-2541

Phone: (505) 663-7217 Fax: (505) 661-2541

Cust Code	Ordered By	Salesman	Job/Rel#	Customer PO	Wanted Date	
ENERGY	SAVANNAH	LEN JOHNSON		CREDIT CARD	12/12/2012	
Entered By		Ship Via	FOB	Terms		
meredith sellechio		BEST WAY	Factory	CREDIT CARD		
Quantity		U/M	Item #	Description	Price	Extension
Order	Ship	Back				
2	2	0	EA	ACID POLYMER 5 GAL PAIL 40LBS	96.5000	193.00
				*** SHIPPING INFORMATION ***		
				Tracking#		
				1Z5R884Y0349615426		
				1Z5R884Y0351614039		

SubTotal 193.00

UPS FREIGHT CHARGE 90.38

Total USD \$ 283.38

① 145063.01.01. HNOO = \$141.69

② 145064.01.01.02. WCCR = \$141.69

\$283.38

÷ 2  
141.69

Thank you for your order, we truly appreciate your business.

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 Phone: (401) 305-3030 • Fax: (401) 305-3033  
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**ORDER ACKNOWLEDGEMENT**

Order Number	62459-0
Printed Date	01/23/2013
Ordered Date	01/22/2013
Page	1

Bill to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Ship to: ENERGY SOLUTIONS  
 176 CENTRAL PARK SQUARE  
 LOS ALAMOS, NM 87544

Cust Code		Ordered By		Salesman		Job/Rel#		Customer PO		Wanted Date	
ENERGY		SAVANNAH		LEN JOHNSON						01/23/2013	
Entered By			Ship Via			FOB			Terms		
Rita Hino						FOB			CREDIT CARD		
Quantity	U/M	Item #	Description				Price	Extension			
2	EA	OIL905	ACID POLYMER 5 GAL PAIL 40LBS				96.5000	193.00			
							<b>SubTotal</b>	<b>193.00</b>			
							<b>Total USD \$</b>	<b>193.00</b>			

145064.01.01.02.WCCR

Please review and acknowledge any discrepancies within 24 hours.

Thank you for your order, we truly appreciate your business.

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**Order Details**

Confirm. #: 1292729  
 Entered Date: 04/01/2013  
 Ordered By: SANCHEZ, GINA M  
**PRODUCT SUBTOTAL: \$181.00**  
 Total Freight Charges: \$60.14  
 Tax: \$0.00  
**GRAND TOTAL: \$241.14**

This order has been sent in one shipment as shown below.

**Shipment #1    Shipped Date: 04/01/2013    Order #: 21097105-00**

Shipping Address:  
 EnergySolutions  
 176 Central Park SQ  
 ATTN: Gina Sanchez  
 Los Alamos, NM 87544  
 Billing Address:  
 ENERGY SOLUTIONS  
 176 CENTRAL PARK SQ  
 LOS ALAMOS, NM 87544  
 Payment Method:  
 P.O. #: INTERNET  
 Credit Card  
 Shipping Method(s):  
**Warehouse:** TIPTON, PA 16684  
**Carrier:** UPS 2ND DAY AIR  
 Order Comments:

Order #	Item # Qty	Description	Unit Price	Total Price
21097105-00	PLP803 2	PIG® Base Encapsulating/Neutralizing Loose Absorbent • 1 - 8-lb. Pail	\$90.50	\$181.00
<b>PRODUCT SUBTOTAL:</b>				<b>\$181.00</b>
Total Freight Charges:				\$60.14
Tax:				\$0.00
<b>TOTAL FOR THIS SHIPMENT:</b>				<b>\$241.14</b>

[Back to Order History](#)

**Who is New Pig and what's with that name?**

We hear it a lot: How did your company get that funny name? It's an interesting story that goes back to the 1980's, when a simple product we nicknamed the "pig" launched an industry. We've told it a thousand times — but we don't mind telling it again...

- Our Story
- News
- Discount Programs
- Careers
- Why New Pig?

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Order Details

Confirm. #: 1294471  
 Entered Date: 04/03/2013  
 Ordered By: JENSON, REED  
 PRODUCT SUBTOTAL: \$1,520.00  
 Total Freight Charges: \$143.93  
 Tax: \$0.00  
 GRAND TOTAL: \$1,663.93

This order has been sent in one shipment as shown below.

Shipment #1 Shipped Date: 04/03/2013 Order #: 21098818-00

Shipping Address:  
 EnergySolutions  
 176 central Park Square  
 ATTN: PO # 634499  
 Los Alamos, NM 87544

Billing Address:  
 ENERGY SOLUTIONS  
 176 CENTRAL PARK SQ  
 LOS ALAMOS, NM 87544

Payment Method:  
 P.O. #: PO # 634499  
 Credit Card

Shipping Method(s):  
 Warehouse: TIPTON, PA 16684  
 Carrier: UPS GROUND

Order Comments:

Order #	Item # Qty	Description	Unit Price	Total Price
21098818-00	PLP803 16	PIG® Base Encapsulating/Neutralizing Loose Absorbent • 1 - 8-lb. Pail	\$95.00	\$1,520.00
<b>PRODUCT SUBTOTAL:</b>				<b>\$1,520.00</b>
Total Freight Charges:				\$143.93
Tax:				\$0.00
<b>TOTAL FOR THIS SHIPMENT:</b>				<b>\$1,663.93</b>

Back to Order History

Who is New Pig and what's with that name?

We hear it a lot: How did your company get that funny name? It's an interesting story that goes back to the 1980's, when a simple product we nicknamed the "pig" launched an industry. We've told it a thousand times — but we don't mind telling it again...

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**Order Details**

**Confirm. #:** 1323608  
**Entered Date:** 05/06/2013  
**Ordered By:** SANCHEZ, GINA M  
**PRODUCT SUBTOTAL:** \$371.00  
 Total Freight Charges: \$119.21  
 Tax: \$0.00  
**GRAND TOTAL:** \$490.21

This order has been sent in one shipment as shown below.

**Shipment #1    Shipped Date: 05/06/2013    Order #: 21122396-00**

**Shipping Address:**  
 EnergySolutions  
 176 Central Park SQ  
 ATTN: Gina Sanchez  
 Los Alamos, NM 87544  
**Billing Address:**  
 ENERGY SOLUTIONS  
 176 CENTRAL PARK SQ  
 LOS ALAMOS, NM 87544  
**Payment Method:**  
 P.O. #: INTERNET  
 Credit Card  
**Shipping Method(s):**  
**Warehouse:** TIPTON, PA 16684  
**Carrier:** UPS 2ND DAY AIR  
**Order Comments:**

Order #	Item # Qty	Description	Unit Price	Total Price
21122396-00	PLP803 4	PIG® Base Encapsulating/Neutralizing Loose Absorbent • 1 - 8-lb. Pall	\$92.75	\$371.00
<b>PRODUCT SUBTOTAL:</b>				<b>\$371.00</b>
Total Freight Charges:				\$119.21
Tax:				\$0.00
<b>TOTAL FOR THIS SHIPMENT:</b>				<b>\$490.21</b>

[Back to Order History](#)

**Who is New Pig and what's with that name?**

We hear it a lot: How did your company get that funny name? It's an interesting story that goes back to the 1980's, when a simple product we nicknamed the "pig" launched an industry. We've told it a thousand times — but we don't mind telling it again...

- Our Story
- News
- Discount Programs
- Careers
- Why New Pig?

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What's new? Pigs in the D.R.



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**New Pig**

World's Best Stuff for Leaks, Drips and Spills

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**Order Details**

Confirm. #: 1479152  
 Entered Date: 07/19/2013  
 Ordered By: GRECH, ANN  
**PRODUCT SUBTOTAL: \$4,440.00**  
 Total Freight Charges: \$460.40  
 Tax: \$0.00  
**GRAND TOTAL: \$4,900.40**

This order has been sent in more than one shipment as shown below.

All items will ship as requested.

**Shipment #1 Shipped Date: 07/22/2013 Order #: 21175070-00**

Shipping Address:  
 EnergySolutions  
 176 Central Park Avenue  
 ATTN: Curtis Schultz  
 Los Alamos, NM 87544  
 Billing Address:  
 ENERGY SOLUTIONS  
 176 CENTRAL PARK SQ  
 LOS ALAMOS, NM 87544  
 Payment Method:  
 P.O. #: 637466  
 Credit Card  
 Shipping Method(s):  
**Warehouse:** TIPTON, PA 16684  
**Carrier:** PITT-OHIO TRUCKING

Order Comments:  
 Due to the total weight of this shipment your order will be shipping by trucking carrier.

Order #	Item # Qty	Description	Unit Price	Total Price
21175070-00	PLP803 20	PIG® Base Encapsulating/Neutralizing Loose Absorbent		
		• 1 - 8-lb. Pail	\$95.00	\$1,900.00
21175070-00	PLP801 20	PIG® Acid Encapsulating/Neutralizing Loose Absorbent		
		• 1 - 40-lb. Pail	\$127.00	\$2,540.00

*Not used on WREF Project - Arralen 5/14/14*

**PRODUCT SUBTOTAL: \$4,440.00**  
 Total Freight Charges: \$460.40  
 Tax: \$0.00  
**TOTAL FOR THIS SHIPMENT: \$4,900.40**

**Shipment #2 Shipped Date: 07/22/2013 Order #: 21175071-00**

Shipping Address:  
 EnergySolutions  
 176 Central Park Avenue  
 ATTN: Curtis Schultz  
 Los Alamos, NM 87544  
 Billing Address:  
 ENERGY SOLUTIONS  
 176 CENTRAL PARK SQ  
 LOS ALAMOS, NM 87544  
 Payment Method:  
 P.O. #: COMPLIMENTARY

Shipping Method(s):  
**Warehouse:** TIPTON, PA 16684  
**Carrier:** FIRST CLASS MAIL

Order Comments:

Order #	Item #	Qty	Description	Unit Price	Total Price
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# GRAINGER

11200 E 210 HWY  
KANSAS CITY, MO 64181-9370  
www.grainger.com

PAGE 1 OF 1

## INVOICE

GRAINGER ACCOUNT NUMBER 877455642  
INVOICE NUMBER 9248386733  
INVOICE DATE 09/19/2013  
**NO AMOUNT DUE**

SHIP TO  
ENERGY SOLUTIONS  
176 CENTRAL PARK SQ  
LOS ALAMOS NM 87544-4031

PO NUMBER:  
CALLER:  
CUSTOMER PHONE:  
ORDER/DELIVERY#:  
INCO TERMS:

CURTIS  
CURTIS SCHULTZ  
8016492000  
6239584770  
FOB ORIGIN

BILL TO  
ENERGY SOLUTIONS  
176 CENTRAL PARK SQ  
LOS ALAMOS NM 87544-4031

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THANK YOU FOR QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL 877-202-2594  
FBI NUMBER 36-4190280

PO LINE #	ITEM #	DESCRIPTION	QUANTITY	BACK ORDERED	UNIT PRICE	TOTAL
	3CNW8 ✓	CHEMICAL NEUTRALIZER ACIDS, 1 GAL. ✓ MANUFACTURER # 410004	1		42.40	42.40
	3CNX2 ✓	CHEMICAL NEUTRALIZER BASES, 1 GAL. ✓ MANUFACTURER # 430004	1		49.00	49.00

*Not used  
w/ nitrate  
salts  
Appalen  
5/14/14*

NUMBER OF PKGS:	WEIGHT:	INVOICE SUB TOTAL	81.40
DATE SHIPPED: 09/19/2013		SHIPPING CHARGE	13.89
CARRIER: UPS GROUND		TAX	6.38
TRACKING NO: 1288127303704 82832	1288127303704 53028	CR. CARD OR CASH RECEIVED	110.68

These items are sold for domestic consumption in the United States. If exported, purchaser assumes full responsibility for compliance with US export controls.  
Reprint

PAYMENT TERMS VISA - PAY THIS INVOICE. NO STATEMENT SENT. PAYABLE IN U.S. DOLLARS. **AMOUNT DUE \$0.00**

**NO PAYMENT DUE - THIS INVOICE FOR YOUR RECORDS**

\*R145064.01.01.02.WCCR\*

# GRAINGER

## ORIGINAL INVOICE

201 FREEDOM DRIVE  
ROANOKE, TX 76262-3320  
www.grainger.com

GRAINGER ACCOUNT NUMBER 819607060  
INVOICE NUMBER 9259259266  
INVOICE DATE 10/02/2013  
DUE DATE 11/01/2013  
AMOUNT DUE 401.16

Ship to information is listed below  
in the description section

PO NUMBER: 14063.01.01.HN00  
CALLER: GINA SANCHEZ  
CUSTOMER PHONE: (801) 532-1330  
ORDER/DELIVERY#: 6240756242  
INCO TERMS: FOB ORIGIN

BILL TO  
MDG2013 00007046 1 AT 0384

ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

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THANK YOU!

FEI NUMBER 36-1150280

FOR ANY QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL 1-877-202-2594

PO LINE #	ITEM #	DESCRIPTION	QUANTITY	BACK ORDERED	UNIT PRICE	TOTAL
1	3CNW8	The following items were shipped to: GINA SANCHEZ ENERGY SOLUTIONS 176 CENTRAL PARK SQ LOS ALAMOS NM 87544-4031  CHEMICAL NEUTRALIZER, ACIDS, 1 GAL. MANUFACTURER # 410004	10		38.16	381.60
AUTHORIZED CONTRACT PAYMENT Los Alamos Office PROJECT / TASK ACCOUNT #: Project # 145063 Task # 01.01.HN00 Total Authorized \$ 381.60 NMGRT \$ 19.56 Date: 10/29/13						

RECEIVED  
OCT 07 REC'D  
By \_\_\_\_\_

NUMBER OF PKGS: 0 WEIGHT: 93.50  
DATE SHIPPED: 10/02/2013  
CARRIER: UPS GROUND  
TRACKING NO: 1Z394E280386687797 1Z394E280386687813 1Z394E280386687966  
INVOICE SUB TOTAL 381.60  
TAX 19.56

These items are sold for domestic consumption in the United States. If exported, purchaser assumes full responsibility for compliance with US export controls.

PAYMENT TERMS NET 30 DAYS. PAY THIS INVOICE NO STATEMENT SENT. PAYABLE IN U.S. DOLLARS.

AMOUNT DUE 401.16

PLEASE DETACH THIS PORTION AND RETURN WITH YOUR PAYMENT.

(Jon Ruberson request)

BILL TO:  
ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

REMIT TO:  
GRAINGER  
DEPT. 819607060  
P.O. BOX 419267  
KANSAS CITY, MO 64141-6267

819607060925925926610000401161000195610000000100000013110111

X

ACCOUNT NUMBER 819607060 DATE 10/02/2013 INVOICE NUMBER 9259259266 AMOUNT DUE 401.16

FOR COMMENTS OR CHANGE OF ADDRESS, ENTER INFORMATION ON REVERSE SIDE.



11200 E. 210 HWY  
KANSAS CITY, MO 64161-9370  
www.grainger.com

GRAINGER ACCOUNT NUMBER 819607060  
INVOICE NUMBER 9289623796  
INVOICE DATE 11/07/2013  
DUE DATE 12/07/2013  
AMOUNT DUE 481.39

Ship to information is listed below  
in the description section

BILL TO  
MDG2013 00007799 1 AT 0384

ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

PO NUMBER: 145064.01.01.02.WCCR  
CALLER: GINA SANCHEZ  
CUSTOMER PHONE: (505) 663-7221  
ORDER/DELIVERY#: 6243971312  
INCO TERMS: FOB ORIGIN



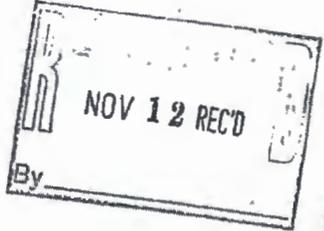
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THANK YOU!

FEI NUMBER 38-1160280

FOR ANY QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL 1-877-202-2594

PO LINE #	ITEM #	DESCRIPTION	QUANTITY	BACK ORDERED	UNIT PRICE	TOTAL
145064	3CNW8	<p>The following items were shipped to: CURTIS ENERGYSOLUTIONS 176 CENTRAL PARK SQ LOS ALAMOS NM 87544</p> <p>CHEMICAL NEUTRALIZER, ACIDS, 1 GAL. MANUFACTURER # 410004</p>	12		38.16	457.92
<p>AUTHORIZED CONTRACT PAYMENT Los Alamos Office PROJECT / TASK ACCOUNT #: Project # <u>145064</u> Task # <u>01.01.02.WCCR</u> Total Authorized \$ <u>457.92</u> NMGR \$ <u>23.47</u> (Ases thru) By: <u>[Signature]</u> Date: <u>11/14/13</u></p>						



NUMBER OF PKGS: 0 WEIGHT: 112.20  
DATE SHIPPED: 11/07/2013  
CARRIER: UPS GROUND  
TRACKING NO: 1Z6812730372400563 1Z6812730372400581 1Z6812730372400607

INVOICE SUB TOTAL 457.92  
TAX 23.47

These items are sold for domestic consumption in the United States. If exported, purchaser assumes full responsibility for compliance with US export controls.

PAYMENT TERMS NET 30 DAYS. PAY THIS INVOICE NO STATEMENT SENT. PAYABLE IN U.S. DOLLARS.

AMOUNT DUE 481.39

PLEASE DETACH THIS PORTION AND RETURN WITH YOUR PAYMENT.

BILL TO:  
ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

REMIT TO:  
GRAINGER  
DEPT. 819607060  
P.O. BOX 419267  
KANSAS CITY, MO 64141-6267

819607060928962379610000481391000234710000000100000013120758

X

ACCOUNT NUMBER 819607060 DATE 11/07/2013 INVOICE NUMBER 9289623796 AMOUNT DUE 481.39

FOR COMMENTS OR CHANGE OF ADDRESS, ENTER INFORMATION ON REVERSE SIDE.

# GRAINGER.



2775 S. 900 W.  
SALT LAKE CITY, UT 84119-2447  
www.grainger.com

PAGE 1 OF 1

## ORIGINAL INVOICE

GRAINGER ACCOUNT NUMBER 819607060  
INVOICE NUMBER 9321418809  
INVOICE DATE 12/17/2013  
DUE DATE 01/16/2014  
AMOUNT DUE 481.39

Ship to information is listed below  
in the description section

BILL TO  
MDG2013 00006257 1 AT 0384

ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

PO NUMBER: 145063/145064  
CALLER: GINA SANCHEZ  
CUSTOMER PHONE: (505) 663-7221  
ORDER NUMBER: 1197959168  
INCO TERMS: FOB ORIGIN

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THANK YOU!

FEI NUMBER 36-1150260

FOR ANY QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL 1-800-472-4643

PO LINE #	ITEM #	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
145063	3CNW8	<p>The following items were shipped to: CURTIS SCHULTZ ENERGYSOLUTIONS 176 CENTRAL PARK SQ LOS ALAMOS NM 87544</p> <p>CHEMICAL NEUTRALIZER,ACIDS,1 GAL. MANUFACTURER # 410004 Delivery# 6247340492 Date shipped: 12/17/2013 Carrier: UPS GROUND No. of pkgs: 0 Wt: 112.20 Trk #: 1Z394E260300393818 1Z394E260300393827 1Z394E260300393836</p> <p><b>(NO PO#)</b> <b>AUTHORIZED CONTRACT PAYMENT</b> Los Alamos Office PROJECT / TASK ACCOUNT #: Project # <u>145063</u> Task # <u>01.01.HNOC</u> Total Authorized \$ <u>457<sup>92</sup></u> NMGRT \$ <u>23<sup>42</sup></u> (Ass thru) By: <u>L. Vince Rodriguez</u> Date: <u>1/6/14</u></p>	12	38.16	457.92
INVOICE SUB TOTAL					457.82
TAX					23.47

These items are sold for domestic consumption in the United States. If exported, purchaser assumes full responsibility for compliance with US export controls.

PAYMENT TERMS NET 30 DAYS. PAY THIS INVOICE NO STATEMENT SENT. PAYABLE IN U.S. DOLLARS.

AMOUNT DUE 481.39

PLEASE DETACH THIS PORTION AND RETURN WITH YOUR PAYMENT.

BILL TO:  
ENERGY SOLUTIONS LLC  
423 W 300 S STE 200  
SALT LAKE CITY, UT 84101-1297

REMIT TO:  
GRAINGER  
DEPT. 819607060  
P.O. BOX 419267  
KANSAS CITY, MO 64141-6267

819607060932141880910000481391000234710000000100000014011615

X

ACCOUNT NUMBER 819607060 DATE 12/17/2013 INVOICE NUMBER 9321418809 AMOUNT DUE 481.39

FOR COMMENTS OR CHANGE OF ADDRESS, ENTER INFORMATION ON REVERSE SIDE.