



**CARBOPOL 934 POLYMER**  
 Safety Data Sheet  
 Product Code: 390  
 Revision Date: April 13, 2015



Protameen Chemicals Inc.  
 375 Minnisink Road  
 Totowa, NJ 07511  
 (973) 256-4374  
 (973) 256-6764 FAX  
 www.protameen.com

**SECTION 1. MATERIAL AND MANUFACTURER IDENTIFICATION**

**Distributor:** Protameen Chemicals, Inc.  
**Manufacturer:** The Lubrizol Corporation  
 9921 Brecksville Rd.  
 Brecksville, OH 44141  
**Telephone:** 212-447-5000  
**Emergency Telephone No.:** CHEMTREC: 1-800-424-9300  
**Product Name:** CARBOPOL 934 POLYMER  
**CAS Number:** 9003-01-4  
**Generic Chemical Name:** Polyacrylic Acid  
**Issue Date:** October 26, 2009  
**Revision Date:** April 13, 2015

**SECTION 2. HAZARD IDENTIFICATION**

**Hazard Classification:**

**Health Hazards**

Germ Cell Mutagenicity: Category B1  
 Carcinogenicity: Category 1A

**Unknown Toxicity**

Acute Toxicity, Oral: 0.0%  
 Acute Toxicity, Dermal: 0.0%  
 Acute Toxicity, Inhalation, Vapor: 99.4%  
 Acute Toxicity, Inhalation, Dust: 99.9%

**OSHA Hazards:** Combustible dust

**Label Elements:**



**Hazard Symbol:**

**Signal Word:**

**Hazard Statement:**

Danger  
 May cause genetic defects.  
 May cause cancer.  
 May form combustible dust concentrations in air.

**Precautionary Statement:**

**Prevention:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Prevent dust accumulation to minimize explosion hazard. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.

**Response:**

**Storage:**

If exposed or concerned: Get medical advice/attention  
 Store locked up.



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**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other Hazards:** None identified.

**SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent by Weight
Benzene	71-43-2	0.1 – 0.5%

**SECTION 4. FIRST AID MEASURES**

**General Information:** If exposed or concerned: Get medical advice/attention.

**Ingestion:** Treat symptomatically. Get medical attention.

**Inhalation:** Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. If irritation persists or if toxic symptoms are observed, get medical attention.

**Skin Contact:** Wash with soap and water. If skin irritation occurs, get medical attention.

**Eye Contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Water (moisture) swells this product into a gelatinous film which may be difficult to remove from the eye using only water. Immediately flush eyes with plenty of one percent (1%) physiological saline solution for five (5) minutes while holding eyelids open. If no saline is available, flush with plenty of clean water for fifteen (15) minutes. See a physician.

**Most important symptoms/effects, acute and delayed:**

**Symptoms:** Symptoms may be delayed

**Indication of immediate medical attention and special treatment needed:**

**Treatment:** Treat symptomatically.

**SECTION 5. FIRE FIGHTING MEASURES**

**General Fire Hazards:** Avoid hose stream or any method which will create dust clouds.

**Suitable (and unsuitable) extinguishing media**

- Suitable:** Use water spray, dry chemical or foam for extinction. CO2 may be ineffective on large fires.
- Unsuitable:** Not determined

**Specific hazards arising from the chemical:**  
 See Section 10 for additional information.



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### Special protective equipment and precautions for firefighters:

**Special procedures:** This material has been evaluated and is considered to be a risk for dust explosion. It is categorized as Dust Explosion Class ST1. Material can form an explosive organic dust air mixture. As with all organic dusts, fine particles suspended in air in critical proportions and in the presence of an ignition source may ignite and/or explode. Dust may be sensitive to ignition by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. This product has a high volume resistivity and a propensity to build up static electricity which may be discharged as a spark. A spark can be an ignition source for solvent vapor/air mixtures. As a precaution, implement standard safety measures for handling finely divided organic powders. If you add this product to a solvent, ensure appropriate safe handling practices such as provision for inerting flammable vapors. Take care to minimize airborne dust. Solid does not readily release flammable vapors.

**Special equipment:** Recommend wearing self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Personal Protective Equipment must be worn, see Personal Protection (Section 8) for PPE recommendations.

### Methods and material for containment and cleaning up:

Pick up free solid for recycle and/or disposal. Sweep up and place in a clearly labeled container for chemical waste. Avoid dust formation. Use wet sweeping compound or water to avoid raising dust. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. Wash spill area with detergent. Material is slippery when wet. Prevent entry into sewers and waterways, dispose of in accordance with all federal, state and local environmental regulation.

### Environmental Protection:

Avoid release to the environment. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Prevent entry into sewers and waterways. Take precautions to avoid release to the environment.

## SECTION 7. HANDLING AND STORAGE

**Handling:** Avoid conditions which create dust. Avoid breathing dust. Avoid contact with eyes and prolonged or repeated contact with skin. Ground container and transfer equipment to eliminate static electric sparks. Keep away from heat, sparks, and open flame. Avoid drinking, tasting, swallowing or ingesting this product.

Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment as required. Launder contaminated clothing before reuse.

**Max. Handling Temp.:** Not determined

**Storage:** Store away from incompatible materials. See Section 10 for incompatible materials. Store in a dry, well-ventilated place. Keep containers closed when not in use

**Max. Storage Temp.:** < 80°C (< 176°F)



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## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control Parameters:

**Occupational Exposure Limits:** None of the components have assigned exposure limits.

### Other exposure limits:

Chemical Name	Type	Exposure Limit Values	Source
Polyacrylic Acid	TWA	0.05 mg/m3	

### Engineering Controls:

To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Minimize dust generation and accumulation. Provide adequate ventilation.

### Individual protection measures, personal protective equipment:

#### General information:

Use personal protective equipment as required.

#### Eye/Face protection:

Use tight fitting goggles if dust is generated. Wear approved chemical safety glasses or goggles when eye exposure is reasonably probable.

#### Hand protection:

Chemical resistant rubber gloves. Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur, wear chemically protective gloves.

#### Body protection:

Long sleeve shirt is recommended.

#### Respiratory protection:

Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely.

#### Hygiene measures:

Wash thoroughly after handling. Always observe good personal hygiene measures such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, White, Powder	Bulk Density:	0.24 g/mL @ 25°C (77°F)
Odor:	Slight Acetic	Dust Explosion:	157 – 193 m.b./s
Odor Threshold:	No data available	Min. Ignition Energy:	25 – 50 mJ
pH:	2.5 – 3.0 (1% Water)	Min. Ignition Temp.:	~ 480°C (896°F)
Melting Point:	No data available	Percent Solid:	98% (by weight)
Boiling Point:	No data available	Max. Rate of Pressure:	5500 pso/s (0.5oz/ft <sup>3</sup> )
Flash Point:	Not applicable	Volume Resistivity:	1.84x 10+16 ohm-cm
Evaporation Rate:	No data available	Percent Volatile:	2% (by weight)
Flammability:	No data available		
Vapor Pressure:	No data available		
Vapor Density:	No data available		
Relative Density:	1.4 @ 20°C (68°C)		
Solubility:	Material will swell in water		
Partition coefficient:	No data available		
Auto-ignition Temp.:	No data available		
Viscosity:	No data available		
Decomp. Temp.:	No data available		



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**SECTION 10. STABILITY AND REACTIVITY**

**Stability:** This product is stable under normal conditions.

**Reactivity:** No data available

**Incompatible Materials:** Strong bases. Heat may be generated if polymer comes in contact with strong basic materials like ammonia, sodium hydroxide or strong basic amines.

**Conditions to Avoid:** Static discharge. Moisture. Heat.

**Hazardous Decomposition:** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Routes of Exposure:**

- Inhalation:** No data available
- Ingestion:** No data available
- Skin Contact:** No data available
- Eye Contact:** No data available

**Toxicological Effects:**

**Acute Toxicity:**

- Oral:** Not classified for acute toxicity based on available data.
- Dermal:** Not classified for acute toxicity based on available data.
- Inhalation:** Avoid inhalation of dust. Animal studies indicate the inhalation of respirable polyacrylate dust may cause inflammatory changes in the lung. Persons with sensitive airways (eg. asthmatics) may react to vapors. Breathing dust may cause coughing, mucous production, and shortness of breath.  
Not classified for acute toxicity based on available data.
- Skin Irritation:** Classification: Not irritating; Rabbit  
Remarks: Pre-existing skin conditions may be aggravated by prolonged or repeated exposure. Contact dermatitis may occur in sensitive individuals under extreme and unusual conditions of prolonged and repeated contact, such as high exposure accompanied by elevated temperatures and occlusion by clothing. This effect may be the results of the products hygroscopic properties, abrasion, or pH.  
Not classified as a primary skin irritant.
- Eye Irritation:** Classification: Not irritating; Rabbit  
Remarks: Particles in eyes may cause irritating and smarting.  
Not classified as primary eye irritant.
- Respiratory Sensitization:** No data available



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**Skin Sensitization:**

Product: Classification: Not a skin sensitizer.  
Benzene: Classification: Not a skin sensitizer. (Literature)

**Specific Organ Toxicity:**

Product: No data available  
Benzene: Nose, throat and lung irritant

**Aspiration Hazard:**

No data available

**Other Effects:**

Product: This material readily absorbs moisture and may become thick and gelatinous upon contact with mucous membranes of the eye, or upon inhalation into the nasal passages.

**Chronic Effects:**

**Carcinogenicity:**

Benzene: IARC 1: Carcinogenic to humans.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Benzene: Overall evaluation: 1. Carcinogenic to humans.

**US National Toxicology Program (NTP) Report on Carcinogens:**

Benzene: Known To Be Human Carcinogen.

**US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

Benzene: Cancer

**Germ Cell Mutagenicity:**

Benzene: In vitro mutagenicity testing have yielded mixed results.  
Benzene: Mutagenic in vivo in both somatic cells and germ cells.

**Reproductive Toxicity:**

No data available

**Specific Target Organ Toxicity – Repeated Exposure:**

Product: A two-year inhalation study in rats exposed to a respirable, water-absorbent sodium polyacrylate dust resulted in lung effects such as inflammation, hyperplasia, and tumors. There were no observed adverse effects at exposures of 0.05 mg/m<sup>3</sup>. In addition, long-term medical monitoring of potentially exposed workers has not revealed lung effects such as those observed in the rat. However, the inhalation of respirable dusts should be avoided by implementing respiratory protection measures and observing the recommended permissible exposure limit of 0.05 mg/m<sup>3</sup>.



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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicological Information:**

Species	Specific	Test Type	Exposure Time	Results
Fish – Bluegill Sunfish	Product	LC 50	96 h	580 mg/l
Fish – Bluegill Sunfish	Benzene	LC 50	4 d	22 mg/l
Fish – Rainbow Trout	Benzene	LC 50	4 d	5.3 mg/l
Fish – Fathead Minnow	Benzene	LC 50	32 d	> 1.6 mg/l
Aquatic Invertebrates – Water Flea (Daphnia magna)	Product	EC 50	48 h	174 mg/l
Aquatic Invertebrates – Water Flea (Daphnia magna)	Benzene	EC 50	2 d	10 mg/l
Aquatic Plants – Green algae (Selenastrum capricornutum)	Benzene	EC 50	3 d	100 mg/l
Microorganisms – Bacteria	Benzene	EC 50	1 d	13 mg/l

**Soil Dwelling Organisms:** No data available  
**Sediment:** No data available  
**Terrestrial Plants:** No data available  
**Above-Ground Organisms:** No data available

**Persistence:** Benzene: OECD TG 301 F, 96%, 28 d; Readily biodegradable

**Bioaccumulation:** No data available

**Partition Coefficient, n-octanol/water (log Kow):**  
 Benzene: Log Kow: 2.13 (Calculated)

**Mobility:** No data available

**Other Adverse Effects:** No data available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal:** Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

**Contaminated Packaging:** Container packaging may exhibit hazards.



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### SECTION 14. TRANSPORT INFORMATION

#### DOT:

UN Number:	UN 3077
UN Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s. (Benzene)
Transport Hazard Class:	
Class:	9
Label:	9
Packing Group:	III
Marine Pollutant:	Yes
Special Precautions:	None established
Reportable Quantity:	Benzene, 10 lbs

#### IATA:

Not regulated

#### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

None known

Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Review classification requirement before shipping materials at elevated temperatures.

### SECTION 15. REGULATORY INFORMATION

#### US Federal Regulations

##### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities

##### Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories: Chronic (Delayed)

##### SARA 302 Extremely Hazardous Substance

##### SARA 304 Emergency Release Notification

##### SARA 311/312 Hazardous Chemicals

##### SARA 313 (TRI Reporting)

This product may contain chemicals regulated under the Superfund Amendments and Reauthorization Act (SARA). For additional information, please contact Lubrizol Customer Assistance:

Americas: AmerLZAMCustomerAssistance@Lubrizol.com  
Europe: EMEAICustomerAssistance@Lubrizol.com  
Asia: APCustomerAssistance@Lubrizol.com

#### US State Regulations

##### US California Proposition 65

This product may contain chemicals known to the state of California to cause cancer and/or birth defects. For additional information, please contact Lubrizol Customer Assistance:

Americas: AmerLZAMCustomerAssistance@Lubrizol.com  
Europe: EMEAICustomerAssistance@Lubrizol.com  
Asia: APCustomerAssistance@Lubrizol.com



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**Inventory Status**

Australia (AICS)	All components are in compliance with chemical notification requirements in Australia.
Canada (DSL/NDSL)	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.
China (IECSC)	All components are listed on the Inventory of Existing Chemical Substances in China.
European Union (REACH)	To obtain information on the REACH compliance status of this product, please visit <a href="http://Lubrizol.com/REACH">Lubrizol.com/REACH</a> or emails us at: <a href="mailto:REACH_MSDS_INQUIRIES@Lubrizol.com">REACH_MSDS_INQUIRIES@Lubrizol.com</a>
Japan (ENCS)	All components are in compliance with the Chemical Substances Control Law of Japan.
Korea (ECL)	All components are in compliance in Korea.
New Zealand (NZIoC)	All components are in compliance with chemical notification requirements in New Zealand.
Philippines (PICCS)	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (RA 6969).
Switzerland (SWISS)	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Taiwan (TCSCA)	All components of this product are listed on the Taiwan inventory.
United States (TSCA)	All components of this material are on the US TSCA Inventory.

*The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.*

**SECTION 16. OTHER INFORMATION**

**HMIS Labeling:**

Health:	1
Flammability:	1
Physical Hazards:	0

**NFPA Hazard ID:**

Health:	1
Flammability:	1
Reactivity:	0

**History:**

Issue Date: October 26, 2009  
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