Material Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product Name:	CARBOMER 40/340/940
1.2 INCI Name:	CARBOMER
1.3 CAS NO.:	9003-01-4
1.4 Chemical family:	Polyacrylic acid
1.5 Company Details:	
Manufacture/Supplier:	**McKinley Resources, Incorporated**
Address:	P.O. Box 810472 Dallas, TX 75381
Telephone Number:	(972) 620 – 9730
Fax Number:	(972) 421 – 1860
Emergency Telephone Number:	
Contact Person:	**Technical support engineer**
1.6 Date issued:	June 2008

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1 Chemical characterization:	Acrylic polymer	
2.2 Physical Form:	White powder	
2.3 Color:	White	
2.4 Odor:	Slight, mild odor	
2.5 Use:	Thickeners as rheology modifiers	
2.6 Hazardous Ingredients:		
Chemical Name	CAS No.	Weight % less Than
Residual acrylic acid	79-10-7	0.25
Residual Benzene	71-43-2	0.50

3. HAZARDS IDENTIFICATION

3.1 Acute health effects	Powder/dust eye irritation is a physical, not a chemical effect. Solid particles in the eye may cause pain and be accompanied by irritation. Dust inhalation may cause coughing, mucous production and shortness of breath.
3.2Chronic health effects	Contact dermatitis may occur in individuals under extreme conditions of prolonged and repeated contact, high exposure and temperature, and occlusion (held onto the skin) by cloth. No evidence of adverse lung effects from polyacrylate dust exposure was observed in studies of workers. Only a small increase in upper respiratory symptoms appeared to be related to exposure. However, various lung effects such as inflammation, hyperplasia (abnormal increases in the number of cells composing a tissue or organ), scarring (fibrosis), changes in the air sac (alveolar) ducts of the lung, and tumors were noted in laboratory studies with rodents inhaling concentrations of a water absorbent sodium polyacrylate dust greater than 0.05 mg/m3 for the majority of their lives. Furthermore, some lung or lung cell effects were found in rodent laboratory studies of shorter duration.
3.3Primary Route of Exposure:	Skin Contact, Inhalation, Ingestion, Eye Contact
3.4 Target organs:	Respiratory system, Skin
3.5 Medical conditions aggravated by exposure:	Pre-existing skin problems may be aggravated by prolonged or repeated contact. Pre-existing respiratory disease (s) may be aggravated by prolonged or repeated inhalation of airborne dust.
Reproductive effects:	None Expected.

4. FIRST AID MEASURES

If irritation or other symptoms (as noted above) occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.	
4.1 Eye Contact:	Immediately flush eyes with plenty of one percent (1%) physiological saline for five minutes while holding eyelids open; see a physician. If no saline is easily available, flush eyes with plenty of clean water for 15 minutes; see a physician. Water (moisture) swells this product into a gelatinous film and, when in contact with the eye, may be difficult to remove using only water.
4.2 Skin Contact:	Wash the affected area thoroughly with plenty of water and soap.
4.3 Inhalation:	If any processing vapors, decomposition products or particulates are inhaled, remove individual(s) to fresh air. Provide protection before allowing reentry.
4.4 Ingestion:	No ingestion effects known. Treat symptomatically.
4.5 Note to physicians:	No Additional Information
5. FIRE FIGHTING MEASURES	
5.1 Flammability:	None.
5.2 Autoignition:	None.
5.3 Flash Point:	Not Applicable
5.4 Explosive range:	**LEL** See fire and expl. properties
5.5Fire and explosive properties	Typical results expected for this family of products: Minimum explosive concentration: 0.13 oz/ft3 (130 g/m3). Minimum ignition energy: 1.60 joules (dispersed dust cloud). Maximum explosion pressure: 70 psi @ 0.5 oz/ft3 (4.8 bars @ 500 g/m3). Ignition temperature of dust cloud: 968 F (520 C). National Electrical Code (NFPA 70): Group G dust. 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. If you add this product to a solvent, ensure appropriate safe handling practices such as provision for inerting flammable vapors and measures such as those cited above. 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. As a precaution, implement standard safety measures for handling finely divided organic powders. See Section 7 for suggested measures.
5.6 Extinguishing Media:	Use water spray, dry chemical, or foam. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity which may result in reignition.
5.7 Fire fighting instructions:	Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. Avoid hose streams or any method which will create dust clouds.
5.8 Unusual fire/explosion hazards:	No Information.
6. ACCIDENTAL RELEASE MEASURES	

6.1Containment techniques:	Using care to avoid dust generation, vacuum or sweep into a closed container for reuse or disposal. Do not sweep or flush spilled product into public sewer, streams or other water systems.
6.2Clean-up techniques:	If inhalation of dust cannot be avoided, wear a particulate respirator approved by NIOSH/MSHA. CAUTION: Contact with water creates a slippery film. If this occurs, the film can be cleaned-up with detergent solution.
6.3 Evacuation instructions:	Not Applicable.
7. HANDLING AND STORAGE	
7.1 Handling:	Do not get in eyes. Do not ingest, taste, or swallow. Avoid repeated or prolonged skin contact. Avoid routine inhalation of dust of any kind. Exercise care when emptying containers, sweeping, mixing or doing other tasks which can create dust. Bond, ground and properly vent conveyors, dust control devices and other transfer equipment. Eliminate ignition sources (e.g., sparks, static buildup, excessive heat, etc.). Although the risk of a dust explosion is low, as a precaution, implement the following safety measures: Prohibit flow of polymer, powder or dust through non-conductive ducts, vacuum hoses or pipes, etc.; only use grounded, electrically conductive transfer lines when pneumatically conveying product. Prevent accumulation of dust (e.g., well-ventilated conditions, promptly vacuuming spills, cleaning overhead horizontal surfaces, etc.). Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions.
7.2 Storage:	Store in dry area. Keep container closed when not in use.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION	
8.1 Engineering Controls:	Always provide effective general and, when necessary, local exhaust ventilation to draw dust away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.
8.2 Personal Protective Equipment for Routine Handling	
Respiratory Protection:	Respiratory protection is not normally needed since volatility and toxicity are low. If significant vapors, mists, or aerosols are present, use proper respirator or equivalent.
Eye/face protection:	Eye protection (e.g., goggles) suitable for keeping dust out of the eyes.
Skin Protection:	Wear protective gloves.
Respiratory protection:	Respiratory protection, such as a NIOSH/MSHA approved positive pressure self-contained breathing apparatus, is necessary to prevent inhalation of decomposition or combustion gases. If respirable dust exposures exceed 0.05 mg/m3 (8-hour TWA), wear a NIOSH-approved respirator equipped with high efficiency particulate (HEPA) filters. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).
General protection:	No Additional Information.
9. PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Physical State:	White powder
9.2 Odor:	Slight acetic
9.3 PH (@ 0.5% in H_2O):	3.0 – 4.5
9.4 Evaporation rate:	Non-volatile

9.5 Water Solubility:	Appreciable
9.6 Volatile by weight:	(moisture) < 2.0 %
9.7 Vapor pressure:	Not Applicable
9.8 Melting point	Not available
9.9 Vapor density:	Non-volatile
9.10 Bulk Density:	0.215 - 0.235 g/mL
10. STABILITY AND REACTIVITY	
10.1 Chemical Stability:	Stable under normal conditions.
10.2 Incompatibility with other materials:	Heat may be generated if polymer comes in contact with strong basic materials such as ammonia, sodium hydroxide, potassium hydroxide or strongly basic amines. Precautions beyond those described herein, such as chemical splash goggles or protective clothing, must be considered as the need exists.
10.3 Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, hydrocarbons, and irritating vapors.
11. TOXICOLOGICAL INFORMATION	
11.1 Possible Health Effects:	Refer to Section 3.2&3.3
11.2 Chronic oral toxicity:	No significant effects in rats or dogs fed with resin as 5% of diet for 6-1/2 months.
11.3 Skin:	No evidence of irritation or sensitization during human patch testing.
11.4 Empirical Data on Effects on Humans:	Considered non toxic in normal use.
12. ECOLOGICAL INFORMATION	
12.1 Potential To Bioaccumulation:	Crosslinked polyacrylic acid polymers in this product are not biodegradable; do not inhibit wastewater treatment bacteria; and do not pass through typical wastewater treatment to the environment, but are instead removed with the biomass.
13. DISPOSAL CONSIDERATIONS	
13.1 Disposal Method:	For waste disposal purposes, this product is not known to be defined or designated as hazardous. In appropriate dust/air ratio, dust cloud in air has explosion potential. Therefore, land disposal must be in closed containers. If disposal is in bulk form, recognize that this polymer absorbs moisture resulting in a gelatinous mass that is unable to support human weight..
14. TRANSPORT INFORMATION	
14.1 Transport Information:	Non-Hazardous, Non-Regulated
15. REGULATORY INFORMATION	
This MSDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200	
15.1 Applicable Laws:	Provisions of the Regulations for the Safe Handling of Chemicals in the Workplace, particularly those relating to the safe use, production, storage and transportation of dangerous chemicals.
16. OTHER INFORMATION	

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable state, and local laws and local regulations remains the responsibility of the user.

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.