CARBOPOL ULTREZ 21
Safety Data Sheet
Product Code: 511
Revision Date: March 10, 2015

Protameen Chemicals Inc.
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Section 1. Material and Manufacturer Identification

Distributor:	**Protameen Chemicals Inc.**
Manufacturer:	The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092
Telephone:	(440) 943-4200
Emergency Phone No.:	CHEMTREC 1-800-424-9300
Product Trade Name:	**CARBOPOL ULTREZ 21 POLYMER**
INCI:	Acrylates/C10-30 Alkyl Acrylate Crosspolymer
CAS Number:	Proprietary
Chemical Name:	Modified Acrylic Polymer
Issue Date:	October 1, 2012
Revision Date:	March 10, 2015

Section 2. Hazards Identification

Hazard Classification

Health Hazards

Serious Eye Damage Irritation	Category 2A

Unknown Toxicity

Acute Toxicity, Oral	0.0%
Acute Toxicity, Dermal	0.0%
Acute Toxicity, Inhalation, Vapor	99.5%
Acute Toxicity, Inhalation, Dust/Mist	99.5%

OSHA Hazards

Combustible dust

Label Elements:

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Causes serious eye irritation.
May form combustible dust concentrations in air.

Precautionary Statement:

Prevention: Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection, face protection. Prevent dust accumulation to minimize explosion hazard. Keep away from heat/sparks/open flame/hot surface. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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rinsing. If eye irritation persists: Get medical advice/attention.

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: None identified.

Section 3. Composition / Information on Ingredients

Hazardous Ingredients:

Chemical name	CAS Number	Percent by Weight
Alcohol Ethoxylate	Confidential	1 – 5%
Cyclohexane	110-82-7	0.1 – 0.5%

Trader Secret Information: *A specific chemical identity and/or percentage of composition has been withheld as a Trade Secret.*

Section 4. First Aid Measures

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. 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.

Skin Contact: Wash with water and soap. Get medical attention if irritation develops. Launder contaminated clothing before reuse.

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.

Ingestion: Treat symptomatically. Get medical attention.

Symptoms: See Section 11.
Treatment: Treat symptomatically.

Section 5. Fire Fighting Measures

General Fire Hazards: Avoid hose stream or any method which will create dust clouds.
Suitable Extinguishing Media: Use water spray, dry chemical or foam for extinction. CO_2 may be ineffective on large fires.
Unsuitable Extinguishing Media: Not determined.
Specific Hazards: See Section 10 for additional information.

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Special Fire Fighting 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 Protective Equipment: In the case of fighting any fire, it is recommended that self-contained breathing apparatus be worn.

Section 6. Accidental Release Measures

Personal Precautions: Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations.

Methods for Containment And Clean-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 a 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. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

Environmental Precautions: Avoid release to the environment. Do not contaminate water sources or sewer. 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

Precautions for Safe Handling: Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid environmental contamination. 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.

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Maximum Handling Temp.: Not determined

Safe 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.

Maximum Storage Temp.: < 80°C (< 170°F)

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
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.

General Information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/Face Protection: Use tight fitting goggles if dust is generated. Wear approved chemical safety glasses or goggles where eye exposure is reasonably probable.

Skin Protection: Suitable gloves can be recommended by the glove supplier. Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur, wear chemically protective gloves. Long sleeve shirt is recommended.

Respiratory Protection: A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require use of a respirator. Use respirator with a dust/mist cartridge if the recommended exposure limit is exceeded. 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: Observe good industrial hygiene practices. Avoid contact with eyes. Wash thoroughly after handling.

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Section 9. Physical and Chemical Properties

The below data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted.

Appearance:	Solid, white Powder	**Explosive Limit:**	No data available
Odor:	Characteristic, Slight acrylic	**Vapor Pressure:**	No data available
pH:	2.5 – 3.5 (1% Water)	**Vapor Density:**	No data available
Melting Point:	No data available	**Relative Density:**	1.4 (68°F, 20°C)
Boiling Point:	No data available	**Solubility in Water:**	Will Swell in Water
Flash Point:	Not applicable	**Partition Coefficient:**	No data available
Evaporation rate:	No data available	**Auto-Ignition Temp.:**	~ 896°F (480°C)
Flammability:	No data available	**Viscosity:**	No data available
Flammable Limit:	No data available		

Other Information:

Bulk Density:	0.24 g/ml (77°F, 25°C)
Dust Explosion Properties:	157 – 196 m/b_/s
Minimum Ignition Energy:	5 – 100 mJ
Minimum Ignition Temp.:	Approximately 896°F (480°C)
Volume Resistivity:	5.23x 10+15 ohm-cm

Section 10. Stability and Reactivity

Stability: Material is stable under normal conditions.

Hazardous Reactions: Will not occur.

Conditions to Avoid: Static discharge, moisture, heat.

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

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

Section 11. Toxicological Information

Information on likely routes of exposure:

Inhaltion:	No data available
Ingestion:	No data available
Skin Contact:	No data available
Eye Contact:	Causes serious eye irritation

Acute Toxicity

Oral

Product: Not classified for acute toxicity based on available data.

Dermal

Product: Not classified for acute toxicity based on available data

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Inhalation

Product: Not classified for acute toxicity based on available data.Persons with sensitive airways (e.g., asthmatics) may react to vapors. Avoid inhalation of dust. Animal studies indicate the inhalation of respiratble polyacrylate dust may cause inflammatory changes in the lung.

Skin Corrosion/Irritation

Product: Classification: Not irritating. (Read across); Rabbit. Not expected to be a primary skin irritant.
Remarks: Pre-Existing skin conditions may be aggravated by prolonged or repeated exposure. Prolonged or repeated exposure may cause severe irritation.

Serious Eye Damage/Eye Irritation

Product: Classifcation: Strongly irritating. (Read across); Rabbit.
Remarks: Causes serious eye irritation.

Respiratory Sensitization No data available

Skin Sensitization

Product: Classification: Not a skin sensitizer. (Read across) Not a skin sensitizer.
Cyclohexane: Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

Specific Target Organ Toxicity – Single Exposure

Alcohol ethoxylate: May cause irritation to the mucous membranes and upper respiratory tract.

Aspiration Hazard

Cyclohexane: Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Other effects

Cyclohexane: Central nervous system – Narcotic effect.
Polyacrylic Acid: Persons with sensitive airways (e.g., asthmatics) may react to vapors. This material readily aborbs 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: No data available

IARC Monographs on the Evaluation of Carcinogenic Riskts to Humans:
No carcinogenic components identified

US National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

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Germ Cell Mutagenicity:

Cyclohexane: This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

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/m3. 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 shoul dbe avoided by implementing respiratory protection measures and observing the recommended permissible exposure limit of 0.05 mg/m3.

Section 12. Ecological Information

Ecotoxicity

Fish

Alcohol Ethoxylate: LC50 (Rainbow Trout, 4 d): 5.6 mg/l
LC50 (Rainbow Trout, 4 d): 7.5 mg/l

Cyclohexane: LC50 (Fathead Minnow, 4 d): 4.5 mg/l

Aquatic Invertebrates

Alcohol Ethoxylate: EC50 (Water flea (Daphnia magna), 2 d): 2 – 10 mg/l

Cyclohexane: EC50 (Water flea (Daphnia magna), 2 d): 0.9 mg/l

Toxicity to Aquatic Plants

Alcohol Ethoxylate: EC50 (Algae, 96 h): 2 – 10 mg/l

Cyclohexane: EC50 (Green Algae (Selenastrum capriconutum), 3 d): 9.317 mg/l

Toxicity to Soil Dwelling Organisms:

No data available

Sediment Toxicity:

No data available

Toxicity to Terrestrial Plants:

No data available

Toxicity to Above-Ground Organisms:

No data available

Toxicity to Microorganisms:

Alcohol Ethoxylate: EC50 (Pseudomonas putida, 0.1 d): > 100 mg/l

Persistence and Degradability:

Biodegradation

Alcohol Ethoxylate: OECD TG 301 C, 79%, readily biodegradable

Cyclohexane: OECD TG 301 F, 77%, 28 d
Miscellaneous, 9%, 28 d, not readily degradable

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol/water (log Kow)

Cyclohexane: Log Kow: 3.44 (Measured)

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Mobility: No data available
Other Adverse Effects: No data available

Section 13. Disposal Considerations

Disposal Instructions: 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, nation and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

Section 14. Transport Information

ICAO/IATA I: Not regulated
ICAO/IATA II: Not regulated
IMDG: Not regulated
IMDG EMS Fire: Not applicable
IMDG EMS Spill: Not applicable
IMDG MFAG: Not applicable
MARPOL Annex II: Not determined
USCG Compatibility: Not determined
U.S. DOT Bulk: Not regulated
DOT NAERG: Not applicable
U.S. DOT (Intermediate): Not regulated
U.S. DOT intermediate NAERG: Not applicable
Canada: Not regulated
Mexico: Not regulated
Bulk Quantity: 85000 kg / 187391 lbs
Intermediate Quantity: 11000 kg / 24251 lbs
Non-Bulk Quantity: 400 kg / 882 lbs

Review classification requirements before shipping materials at elevated temperatures.

Section 15. Regulatory Information

Global Chemical Inventories:
United States (TSCA): All components of this material are on the US TSCA Inventory.
European Union (REACh): All components are in compliance with the EC Seventh ammendment Directive 92/32/EEC. To obtain information on the REACh compliance status of this product, please visit Lubrizol.com/REACH, or emailLubrizol at REACH_MSDS_Inquiries@Lubrizol.com.
Japan (ENCS): All components are in compliance with the Chemical Substance Control Act of Japan.
Australia (AICS): All components are in compliance with the chemical notification requirements in Australia.
New Zealand (NZIoC): All components are in compliance with the chemical notification requirements in New Zealand.

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Canada (DSL/NDSL): All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

Switzerland (SWISS): All components are in compliance with Environmentallly Hazardous Substance Ordinance in Switzerland.

Korea (ECL): All components are in compliance in Korea.

Philippines (PICCS): All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

China (IECSC): All components of this product are listed on the Inventory of Existing Chemical Substances in China.

Taiwan (TCSCA) : All components are listed on the Taiwan inventory.

Other U.S. Federal Regulations:

SARA Ext. Haz. Subst.: This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazarodus Substances List.

SARA Section 313: This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA 313.

SARA 311 Classification:

Acute Hazard	Yes
Chronic Hazard	No
Fire Hazard	No
Reactivity Hazard	No

CERCLA Haz. Subst.: None known

State Regulations:

California Proposition 65: This product contains the following chemical(s) known to the State of California to cause cancer and/or birth defects based on maximum impurity levels of components: <0.05 ppm Ethylene Oxide (CAS 75-21-8); < 0.05ppm Formaldehyde (CAS 50-00-0); <0.1 ppm Acetaldehyde (CAS 75-07-0; , < 0.1ppm Arsenic, < 0.1ppm Lead, <0.5ppm 1,4 Dioxane (CAS 123-91-1).

Product Registration:

U.S. Fuel Registration: Not applicable

Finnish Registration: Not registered

Swedish Registration: Not registered

Norwegian Registration: 201542

Danish Registration: Not registered

Swiss Registration: Not registered

Italian Registration: Not registered

Other / International:

Misc. Regulatory Information: Not determined

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

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Section 16. Other Information

HMIS Rating:

Health:	2
Flammability:	1
Reactivity:	0
Personal Protection:	N/E

N/E – None established

NFPA Rating:

Health:	2
Flammability:	1
Reactivity:	0

Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme

Precautionary Labels:

Warning:

- Causes eye irritation.
- Airborne dust may form explosive mixtures with air.
- Dusts may be harmful if inhaled.
- May cause respiratory tract irritation.
- Prolonged or repeated exposure may cause dermatitis.

History:

Issue Date:	October 1, 2012
Revision Date:	March 10, 2015

MANUFACTURER'S STATEMENT:

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