

# SAFETY DATA SHEET

## 1. Identification of the substance or mixture and of the supplier

### Product identifier

**Product name:** CARBOPOL® 5984 EP POLYMER

### Additional identification

**Chemical name:** Polyacrylic acid  
**CAS-No.:** 9003-01-4

### Recommended use and restriction on use

**Recommended use:** Base Carbopol-Pharma  
**Restrictions on use:** None identified.

### Details of the supplier of the safety data sheet

#### Supplier

**Company Name:** LUBRIZOL LIMITED  
**Address:** THE KNOWLE, NETHER LANE  
HAZELWOOD, DERBYSHIRE, DE56 4AN  
GB  
**Telephone:** (44) 01332-842211

### Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1) 703 527 3887

## 2. Hazards identification

### Classification of the substance or mixture

**Prepared according to Global Harmonized System (GHS) standards.**

Acute hazards to the aquatic environment      Category 3

Chronic hazards to the aquatic environment      Category 3

### Label Elements

**Signal Words:** Not applicable

**Hazard Statement(s):** H412: Harmful to aquatic life with long lasting effects.

### Precautionary Statements

**Prevention:** P273: Avoid release to the environment.

**Disposal:** P501: 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 which do not result in GHS classification:** None identified.

### 3. Composition/Information on Ingredients

#### Mixtures

Chemical name	CAS number	Percent by Weight
Cyclohexane	110-82-7	0.1 - 0.5%
Acrylic acid	79-10-7	0.1 - 0.5%

### 4. First aid measures

#### Description of first aid measures

**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.

**Eye contact:** 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. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

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

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

**Most important symptoms and effects, both acute and delayed:** See section 11.

#### Indication of any immediate medical attention and special treatment needed

**Treatment:** Treat symptomatically.

### 5. Fire-fighting measures

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

#### Extinguishing media

**Suitable extinguishing media:** Use water spray, dry chemical or foam for extinction. CO2 may be ineffective on large fires.

**Unsuitable extinguishing media:** Not determined.

**Specific hazard arising from the chemical:** See section 10 for additional information.

#### Advice for firefighters

**Special fire fighting procedures:**

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 for fire-fighters:**

Recommend wearing self-contained breathing apparatus.

**6. Accidental Release Measures****Personal precautions, protective equipment and emergency procedures:**

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

**Environmental Precautions:**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent entry into sewers and waterways. Take precautions to avoid release to the environment.

**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 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.

**Reference to other sections:**

See sections 8 and 13 for additional information.

**7. Handling and Storage:****Precautions for safe handling:**

Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. 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.

**Maximum Handling Temperature:**

Not determined.

**Conditions for safe storage, including any incompatibilities:**

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 Temperature:**

< 80 °C

## 8. Exposure Controls/Personal Protection

### Control Parameters:

#### Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Cyclohexane	TWA	100 ppm	US. ACGIH Threshold Limit Values (02 2012)
Acrylic acid	TWA	2 ppm	US. ACGIH Threshold Limit Values (02 2012)

#### Other exposure limits

Chemical name	Type	Exposure Limit Values	Source
Polyacrylic acid	TWA	0,05 mg/m3	

**Appropriate 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, such as 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 where eye exposure is reasonably probable.

#### Skin protection

**Hand Protection:** Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur wear chemically protective gloves. Suitable gloves can be recommended by the glove supplier.

**Other:** Long sleeve shirt is recommended.

**Respiratory Protection:** Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. 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.

**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.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

#### Appearance

<b>Physical state:</b>	solid
<b>Form:</b>	Powder
<b>Color:</b>	White
<b>Odor:</b>	Slight acetic
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	2,5 - 3 (1 % Water)

<b>Melting Point:</b>	No data available.
<b>Boiling Point:</b>	No data available.
<b>Flash Point:</b>	Not applicable.
<b>Evaporation Rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability Limit - Upper (%):</b>	No data available.
<b>Flammability Limit - Lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density (air=1):</b>	No data available.
<b>Relative density:</b>	1,4 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Material will swell in water.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Autoignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.
<b>Pour Point Temperature</b>	No data available.
<b>Other information</b>	
<b>Dust Explosion Limit, Lower:</b>	0,13 oz/ft3
<b>Max. Rate of Pressure Rise:</b>	5 500 psi/s (0,5 oz/ft3)
<b>Max. Pressure of Explosion:</b>	70 PSI (0,5 oz/ft3)

## 10. Stability and Reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Will not occur.
<b>Conditions to avoid:</b>	Static discharge. Moisture. Heat.
<b>Incompatible Materials:</b>	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.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

## 11. Toxicological Information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.

### Information on toxicological effects

#### Acute toxicity

##### Oral

Product: LD 50 (Rat): > 5 000 mg/kg (Read across) Not classified

##### Dermal

Product: ATEmix > 5 000 mg/kg

##### Inhalation

Product: Avoid inhalation of dust. Animal studies indicate the inhalation of respirable polyacrylate dust may cause inflammatory changes in the lung. Persons with sensitive airways (e.g., asthmatics) may react to vapors. Breathing of dust may cause coughing, mucous production, and shortness of breath.

Not classified for acute toxicity based on available data.

#### Skin Corrosion/Irritation:

Product: Classification: Not irritating (Read across); 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 temperature and occlusion by clothing. This effect may be the result of the product's hygroscopic properties, abrasion, or pH.  
Not classified as a primary skin irritant.

#### Serious Eye Damage/Eye Irritation:

Product: Remarks: Particles in the eyes may cause irritation and smarting.  
Classification: Not irritating (Read across); Rabbit.  
Remarks: Not classified as a primary eye irritant.

#### 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:

Product: Acrylic acid Respiratory tract irritation.

#### 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:

**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:**

No data available

**Germ Cell Mutagenicity:**

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

Acrylic acid Results of vitro mutagenicity tests have been positive.

Acrylic acid Results of in vivo mutagenicity tests have been negative.

**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>.

Acrylic acid Prolonged or repeated exposure may cause kidney damage.  
Unknown: Target Organ(s): Kidney

**12. Ecological Information**

**Ecotoxicity**

**Fish**

Cyclohexane LC 50 (Fathead Minnow, 4 d): 4,5 mg/l

Acrylic acid LC 50 (Rainbow Trout, 4 d): 27 mg/l

**Aquatic Invertebrates**

Cyclohexane EC 50 (Water flea (Daphnia magna), 2 d): 0,9 mg/l

Acrylic acid EC 50 (Water flea (Daphnia magna), 2 d): 95 mg/l

**Toxicity to Aquatic Plants**

Cyclohexane EC 50 (Green algae (Selenastrum capricornutum), 3 d): 9,317 mg/l

Acrylic acid EC 50 (Green algae (Selenastrum capricornutum), 3 d): 0,13 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**

Acrylic acid

EC 50 (Sludge, 0,1 d): 900 mg/l

**Persistence and Degradability****Biodegradation**

Cyclohexane

OECD TG 301 F, 77 %, 28 d  
Miscellaneous, 9 %, 28 d, Not readily degradable.

Acrylic acid

OECD TG 301 D, 80 %, 28 d, Readily biodegradable

**Bioaccumulative Potential****Bioconcentration Factor (BCF)**

No data available

**Partition Coefficient n-octanol / water (log Kow)**

Cyclohexane

Log Kow: 3,44 (Measured)

Acrylic acid

Log Kow: 0,46 (calculated)

**Mobility:**

No data available

**Other Adverse Effects:**

No data available.

**13. Disposal Considerations****Disposal methods:**

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.

**14. Transport Information****IATA**

Not regulated.

**International standards****IMDG**

Not regulated.

**Transport in bulk according to Annex II of MARPOL 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. For transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

## 15. Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

#### Inventory Status

##### Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

##### Canada (DSL/NDSL)

All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

##### China (IECSC)

All components of this product 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 e-mail REACH@SDSInquiries.com.

##### 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 (R.A. 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 substances contained in this product are listed on the TSCA inventory or are exempt.

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

## 16. Other Information

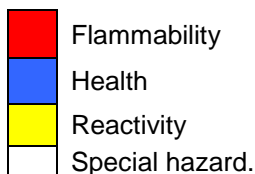
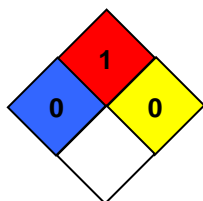
**Key literature references and sources for data:** Internal company data and other publically available resources.

#### HMIS Hazard ID

Health	0
Flammability	1
Physical Hazards	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

## NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

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