



Material Safety Data Sheet

DOC NO.: TC-TE-RES-144 1/5

Version: A/2 Last update: 2014-03-03

Tinci (R) TC-CARBOMER 340

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

| | |
|-----------------------------|--|
| 1.1 Product Name: | TC-CARBOMER 340 |
| 1.2 INCI Name: | CARBOMER |
| 1.3 CAS NO.: | 9003-01-4 |
| 1.4 Chemical family: | Polyacrylic acid |
| 1.5 Company Details: | |
| Manufacture/Supplier: | Guangzhou Tinci Materials Technology Co., Ltd |
| Address: | Kangda Road No.8, Yunpu Industrial Zone, Huangpu Region, GuangZhou |
| Telephone Number: | (86 20) 82251159 |
| Fax Number: | (86 20)82058669 |
| Emergency Telephone Number: | (86 20) 82251159 |
| Contact Person: | Technical support engineer |
| 1.6 Date issued: | March 2014 |

2. HAZARDS IDENTIFICATION

| | |
|--------------------------|---|
| 2.1 Appearance | White powder. |
| 2.2 Odor | Slight acetic. |
| 2.3 Classification: | Hazardous to the aquatic environment (acute hazard) category 3. |
| 2.4 Target Organs: | Not determined. |
| 2.5 Signal Word: | Not determined. |
| 2.6 Hazard statement: | Harmful to aquatic life. |
| 2.7 Other Hazards: | None identified. |
| 2.8 Precaution(s): | Avoid release to the environment. |
| 2.9 Response: | |
| In case of fire: | Use CO ₂ , dry chemical, foam, water spray or water fog for extinction. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity which may result in reignition. Avoid hose stream or any method which will create dust clouds. |
| If on skin: | Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. |
| If in eyes: | Rinse cautiously with water for several minutes. Get medical attention. |
| If inhaled: | If experiencing respiratory symptoms: Call a POISON CENTER or doctor. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. |
| If swallowed | Call a POISON CENTER or doctor if you feel unwell. Treat symptomatically. |
| 2.10 Storage Procedures: | Store in a cool, dry, well-ventilated location. Store in a closed container. |
| 2.11 Disposal: | All disposal practices must be in accordance with local, national and international regulations. |

See Section 11 for complete health hazard information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Ingredients: | | | |
|------------------------|---------|----------|------------|
| Chemical Name | CAS No. | Weight % | Carcinogen |
| Residual acrylic acid | 79-10-7 | ≤025 | N/E |
| Residual Benzene | 71-43-2 | 0.50 | N/E |

4. FIRST AID MEASURES

| | |
|-------------------|--|
| 4.1 Eye Contact: | 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. Water (moisture) swells this product into a gelatinous film which may be difficult to remove from the eye using only water. |
| 4.2 Skin Contact: | Wash with soap and water. Get medical attention if irritation develops. Launder contaminated clothing before reuse. |
| 4.3 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. |
| 4.4 Ingestion: | Treat symptomatically. Get medical attention. |



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4.5 Advice for the protection of first-aid providers When providing first aid always protect your self against exposure to chemicals or blood born diseases by wearing gloves, masks and eye protection. If providing CPR use mouthpieces, resuscitation bags, pocket masks or other ventilation devices. After providing first aid wash your exposed skin with soap and water.

4.6 Note to physicians: Note to physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Flash Point: Not Applicable.

5.2 Fire and explosive properties
 Min. Explosive Concentration 0.13 oz/ft3 (130 g/m3)
 Min. Ignition Energy > 0.03 joules
 Max. Rate of Pressure Rise 5500 psi/sec @ 0.5 oz/ft3 (379.21 bar/s @ 501 g/m3)
 Max. Pressure of Explosion 70 psi @ 0.5 oz/ft3 (4.83 bar @ 501 g/m3)
 Volume Resistivity 0.32 x 10+15 ohm-cm.
 Explosion Severity 2.02 (Severe)
 Ignition Temperature of Dust Cloud 520 °C (968 °F).
 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. 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.

5.3 Extinguishing Media: CO2, dry chemical, foam, water spray, water fog. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity which may result in reignition. Avoid hose stream or any method which will create dust clouds.

5.4 Unsuitable Extinguishing Media: Not determined.

5.5 Fire fighting Procedures: Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots.

5.6 Unusual fire / explosion hazards: Solid does not readily release flammable vapors. Material can form an explosive organic dust air mixture. See section 10 for additional information.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precaution, protective equipment and emergency Procedures: Personal protective equipment must be worn. Caution - this material is slippery when wet.

6.2 Environmental precaution and protective procedures: Take precautions to avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3 Methods for clean-up and removal: Pick up free solid for recycle and/or disposal. Avoid raising a dust. Wash spill area with detergent.

7. HANDLING AND STORAGE

7.1 Handling: Keep material away from heat, sparks, pilot lights, static electricity and open flame. Avoid creating dust. Maintain good housekeeping practices. Avoid drinking, tasting, swallowing or ingesting this product. Avoid inhalation of dust, aerosol, mist, spray, fume, or vapor. Use with appropriate and adequate ventilation. Ground and bond containers when transferring material. Avoid prolonged skin contact. Launder contaminated clothing before reuse. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

7.2 Storage: Take precautions to avoid release to the environment. Store in a cool, dry, well-ventilated area. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| 8.1 Exposure Limits: | | CAS No. | Long Term (8 Hours T.W.A.) | Short Term (15 mins.) |
|----------------------|-----------------|---------|----------------------------|-----------------------|
| EU | Not applicable. | | | |
| Australia | Acrylic acid | 79-10-7 | 2 ppm | N/E |



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| New Zealand Acrylic acid | 79-10-7 | 2 ppm | N/E |
| 8.2 Other Exposure Limits: | The industry-recommended permissible exposure limit for respirable polyacrylate dusts is 0.05 mg/m ³ . | | |
| 8.3 Engineering Controls: | If use generates a dust, local exhaust ventilation is recommended. Prevent inhalation by providing effective general and, when necessary, local exhaust ventilation to draw dust away from workers. Avoid high concentrations of dust in air and accumulation of dust on equipment. | | |
| 8.4 Personal Protective Equipment | | | |
| Respiratory Protection: | Use respirator with a High Efficiency Particulate Air (HEPA) filter if the recommended exposure limit is exceeded 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. | | |
| Eye Protection: | Safety glasses or goggles. | | |
| Hand Protection: | Use good industrial hygiene practices to avoid skin contact. If contact with the material may occur wear chemically protective gloves. | | |
| Clothing Recommendation: | Long sleeve shirt is recommended. | | |
| Hygiene Measures: | Wash thoroughly after handling this product. | | |
| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | |
| 9.1 Physical State: | White powder | | |
| 9.2 Odor: | Slight acetic | | |
| 9.3 PH (@ 0.5% in H ₂ O): | 3.0 – 4.5 | | |
| 9.4 Evaporation rate: | Non-volatile | | |
| 9.5 Water Solubility: | Material will swell in water. | | |
| 9.6 Loss by drying: : | ≤ 2.0 % | | |
| 9.7 Vapor pressure: | Not Applicable | | |
| 9.8 Melting point | Not available | | |
| 9.9 Vapor density: | Non-volatile | | |
| 9.10 Bulk Density: | 0.195 - 0.235 g/mL | | |
| 9.11 Flash Point: | Not Applicable | | |
| 9.12 Autoignition Point | 520 °C (968 °F) | | |
| 9.13 Explosion Data: | Dust can form explosive mixtures in the air. | | |
| 10. STABILITY AND REACTIVITY | | | |
| 10.1 Chemical Stability: | Material is normally stable at moderately elevated temperatures and pressures. | | |
| 10.2 Incompatibility with other materials: | Heat may be generated if polymer comes in contact with strong basic materials like ammonia, sodium hydroxide or strong basic amines. | | |
| 10.3 Polymerization: | Will not occur. | | |
| 10.4 Decomposition Temperature: | Not determined. | | |
| 10.5 Thermal Decomposition: | Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. | | |
| 10.6 Conditions to Avoid: | Not determined. | | |
| 11. TOXICOLOGICAL INFORMATION | | | |
| 11.1 ACUTE EXPOSURE | | | |
| Eye Irritation | Not expected to cause eye irritation. Based on data from similar materials. Particulates may cause mechanical irritation. Solid particles (powder or dust) on the eye may cause pain and irritation. | | |
| Skin Irritation | Not expected to be a primary skin irritant. Based on data from similar materials. 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. | | |
| Respiratory Irritation | Breathing of dust may cause coughing, mucous production, and shortness of breath. | | |
| Dermal Toxicity | The LD50 in rabbits is > 5000 mg/Kg. Based on data from components or similar materials. | | |
| Inhalation Toxicity | Avoid inhalation of dust. Animal studies indicate the inhalation of respirable polyacrylate dust may cause inflammatory changes in the lung. | | |
| Oral Toxicity | The LD50 in rats is > 10,000 mg/Kg. Based on data from components or similar materials. | | |



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| Dermal Sensitization | Not expected to cause skin sensitization. Based on data from components or similar materials. |
| Inhalation Sensitization | No data available to indicate product or components may be respiratory sensitizers. |
| Aspiration Hazard | Not determined. |
| 11.2 CHRONIC EXPOSURE | |
| Chronic Toxicity | 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 ³ . 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 ³ . |
| Carcinogenicity | Not listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. |
| Mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Reproductive Toxicity | No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity. |
| Teratogenicity | No data available to indicate product or any components contained at greater than 0.1% may cause birth defects. |

11.3 ADDITIONAL INFORMATION

Pre-existing skin conditions may be aggravated by prolonged or repeated exposure. Persons with sensitive airways (e.g., asthmatics) may react to vapors. 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.

12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL TOXICITY:

| | |
|-----------------------------------|---|
| Freshwater Fish Toxicity | The acute LC50 is 100 - 1000 mg/L based on component data. |
| Freshwater Invertebrates Toxicity | The acute EC50 is 100 - 1000 mg/L based on component data. Chronic effects expected at 100 - 1000 mg/L based on component data. |
| Algal Inhibition | The acute EC50 is 10 - 100 mg/L based on component data. |
| Bacteria Toxicity | The acute EC50 is 100 - 1000 ppm based on component data. |

12.2 ENVIRONMENTAL FATE

| | |
|-----------------|---|
| Biodegradation | At least 25% of the components in this product show limited biodegradation based on OECD 301-type test data. At least 25% of the components in this product show limited biodegradation based on OECD 302-type test data. |
| Bioaccumulation | Less than 1.0% of the components potentially bioconcentrate. |

13. DISPOSAL CONSIDERATIONS

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|-----------------------|---|
| 13.1 Disposal Method: | All disposal practices must be in accordance with local, regional, national and international regulations. Do not dispose in landfill. Dispose of packaging or containers in accordance with local, regional, national and international regulations. |
|-----------------------|---|

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. |
| DOT NAERG | 171 |

15. REGULATORY INFORMATION

Global Chemical Inventories

| | |
|-----------------|--|
| USA | All components of this material are on the US TSCA Inventory or are exempt. |
| Other TSCA Reg. | None known. |
| EU | All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC. |
| Japan | All components are in compliance with the Chemical Substances Control Law of Japan. |
| Australia | All components are in compliance with chemical notification requirements in Australia. |
| New Zealand | All components are in compliance with chemical notification requirements in New Zealand. |



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| Canada | All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List. |
| Switzerland | All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland. |
| Korea | All components are in compliance in Korea. |
| Philippines | All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969). |
| China | All components of this product are listed on the Inventory of Existing Chemical Substances in China. |
| Miscellaneous Regulatory Information: | Not determined. |

16. OTHER INFORMATION

| | | | | |
|---------------------|---|-----------|-----------------|----------------|
| 16.1 Contact Point: | Technical Services Engineer (86-20) 82251159 | | | |
| 16.2 Prepared by: | Guangzhou Tinci Materials Technology Co., Ltd | | | |
| 16.3 US NFPA Codes: | Health 1 | Fire 1 | Reactivity 0 | Special N/E |
| 16.4 HMIS Codes: | Health 0 | Fire 1 | Reactivity 0 | |

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