

1. Identification

Product Name: MiniFIBERS Rayon Fibers
Synonyms: Rayon Flocking Tow, Rayon Tire Cord, Rayon Staple Fibers
Manufacturer: MiniFibers Inc.; 2923 Boones Creek Road; Johnson City, TN 37615 USA
Telephone: Information: (423) 282-4242 Emergency: (423) 282-4242
Date Prepared: November 2008

| HMIS | | |
|-----------------|---|---|
| HEALTH | 0 | 0 |
| FLAMMABILITY | 1 | 0 |
| PHYSICAL HAZARD | 0 | 0 |

2. Hazard Identification

This product is not hazardous under the criteria of U.S. Occupational Safety and Health Standard 29 CFR 1910 Subpart Z and United Nations GHS Parts 2, 3, and 4.

3. Composition / Information on Ingredients

| Substance | CAS No. | EC No. | Concentration By Weight |
|-------------------|------------|-----------|-------------------------|
| Cellulose (Rayon) | 68442-85-3 | 270-493-7 | >99% |

4. Emergency & First Aid Measures

Routes of Exposure:

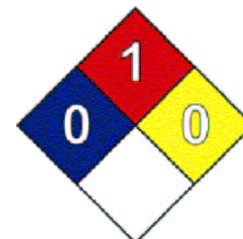
- Inhalation:** Inhalation of fibers or fiber dust may cause respiratory irritation. Move to fresh air if effects occur. Consult a physician if persistent coughing or other symptoms develop.
- Skin:** **If thermal burn, cool with water and seek immediate medical attention; do not attempt to peel fibers from skin.** Non-thermal contact with fibers may cause mechanical irritation of the skin. Wash off with soap and water, and consult a physician if symptoms develop.
- Skin Absorption:** A single prolonged skin exposure is not likely to result in the material being absorbed through the skin in harmful amounts.
- Eyes:** Fibers or fiber dust may cause irritation or scratch the surface of the eyes. Flush with water to remove particles; remove contact lenses if present part eyelids with fingers to ensure complete flushing. Consult a physician if persistent irritation or other symptoms develop.
- Ingestion:** No adverse effects are believed to occur from swallowing a small amount. Consult a physician if symptoms develop or if a large amount is swallowed.

Contaminated clothing does not need to be removed.

Personal protective equipment is not required for first-aid responders.

5. Fire Fighting Measures / Fire & Explosion Hazard Data

- Flash Point:** No data available
- Flammable Limits:** Not determined
- Extinguishing Media:** Water, CO₂, dry chemicals, foam, fog.
- Hazardous Combustion Products:** May include, but are not limited to, CO and CO₂.
- Unusual Fire & Explosion Hazards:** As with many solids, any dust that is generated may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.
- Special Fire Fighting Procedures:** Avoid excessive inhalation of smoke or potential thermal decomposition products. Keep product cool by spraying with water. If outdoors, fight fire from an upwind position.
- Special Protective Equipment:** Due to potential decomposition of the polymer, firefighters should be equipped with positive pressure self-contained breathing apparatus (SCBA) and standard protective fire fighting clothing (helmet, eye protection, overalls, boots, and gloves) when fighting all indoor fires and any significant outdoor fires.



6. Accidental Release Measures / Steps to be Taken if Material is Released or Spilled

- Personal Precautions:** None needed.
- Environmental Precautions:** None needed.
- Methods for Cleanup:** Vacuum or sweep up and place in a standard disposal container. Avoid the use of air jets.

7. Precautions for Safe Handling & Storage

- Precautions for Safe Handling:** No special handling has been shown to be necessary.
- Conditions for Safe Storage:** Avoid overstacking to prevent collapse or breakage of the package. Do not store near flame or incompatible substances.
- Other Precautions:** None

8. Exposure Control Measures / Personal Protection

- Exposure Guidelines:** Fiber dust should be considered a nuisance dust, i.e. particulates (not otherwise classified):
ACGIH Threshold Limit Value: 10 mg/m³ total dust; 3-mg/m³ respirable dust
OSHA Permissible Exposure Limit: 15 mg/m³ total dust; 5-mg/m³ respirable dust
- Engineering Controls:** Local exhaust recommended to reduce exposure to fiber dust.
- Specific Personal Protective Equipment:**
Respiratory: For operations where inhalation exposure can occur, a NIOSH approved dust mask/respirator is recommended.

| | |
|---------------------------------|---|
| Eye: | For operations where eye contact can occur, eye protection such as goggles or safety glasses is recommended. |
| Hand: | Protective gloves not required. |
| Skin/Other: | Not required. |
| Work/Hygienic Practices: | Maintain good housekeeping to control dust accumulations. Avoid the use of air jets to blow off equipment; use vacuums instead. |

9. Physical & Chemical Properties / Characteristics

| | | | | | |
|--------------------------|---|--------------------------|-----------------------|-------------------------------|-------------------|
| Chemical Formula: | (C ₆ H ₁₂ O ₆) _n | Flash Point: | No data available | Solubility: | Not soluble |
| Appearance: | White solid | Evaporation Rate: | Does not apply | Partition Coefficient: | No data available |
| Odor: | No odor | Flammability: | Non-flammable | Auto-Ignition Temp: | 420°C |
| pH: | No data available | Vapor Pressure: | Does not apply | Decomposition Temp: | >175°C |
| Melting Point: | Does not melt | Vapor Density: | Does not apply | Viscosity: | Does not apply |
| Boiling Point: | Does not apply | Specific Gravity: | 1.5 g/cm ³ | | |

10. Stability & Reactivity Data

| | |
|--|--|
| Reactivity: | Data not available. |
| Stability: | Stable under normal conditions. |
| Hazardous Polymerization: | Will not occur. |
| Conditions to Avoid: | Temperatures above 300°C. |
| Incompatible Materials: | Tends to decompose in strong acids and bases. |
| Hazardous Decomposition Products: | Thermal decomposition products may include CO, ethylene glycol and other C, H, and O compounds varying in chemical structure and molecular weight. |

11. Toxicological Information / Health Hazard Data

| | |
|---|--|
| Health Hazards (Acute and Chronic): | No data available. |
| Carcinogenicity: | |
| NTP: | Not listed. |
| IARC: | 3 - Not classifiable as to its carcinogenicity to humans. |
| OSHA: | Not regulated. |
| Signs and Symptoms of Exposure: | No data available. |
| Medical Conditions Aggravated by Exposure: | Some individuals, e.g. with asthma or bronchitis, are likely to be intolerant of high concentrations of airborne fibers or fiber dust when processing. |

12. Ecological Information

| | |
|---------------------------------------|--------------------|
| Toxicity: | No data available. |
| Persistence and Degradability: | No data available. |
| Bioaccumulative Potential: | No data available. |
| Mobility in Soil: | No data available. |

13. Disposal Considerations

| | |
|-------------------------------|--|
| Waste Disposal Method: | Dispose of in accordance with all applicable governmental regulations for non-hazardous solid waste. Disposal via septic or sewage systems is not recommended. Recycling of corrugated packaging is encouraged where possible. Other packaging may be disposed of with product. Standard disposal containers are acceptable. |
|-------------------------------|--|

14. Transport Information

| | | | |
|-------------------------------|---------------------|--------------------|----------------|
| Proper Shipping Name: | Rayon Staple Fibers | U.S. DOT: | Not regulated. |
| U.S. NMFC Item Number: | 68310 | ICAO/IATA: | Not regulated. |
| HTC Number: | 5504.10 | IMDG: | Not regulated. |
| U.N. Number: | None | Canada TDG: | Not regulated. |

15. Regulatory Information

| | | | |
|-----------------------|--|------------------------|---|
| International: | | Federal (U.S.): | |
| Canada: DSL/NDSL: | Included on the Canadian Domestic Substance List. | EPA: | Not regulated. |
| Canada: WHMIS: | Not a controlled product. | OSHA: | Not hazardous under the criteria of Occupational Safety and Health Standard 29 CFR 1910 Subpart Z. |
| Europe: | Not classified as dangerous according to Directive 1999/45/EC. | State: | |
| UN: | Does not appear on the Dangerous Goods List. | CA: | Proposition 65: Does not contain chemicals known to the State of California to cause cancer or reproductive toxicity. |

16. Other Information

This MSDS has been prepared in compliance with United States OSHA Hazard Communication Standard 29 CFR 1910.1200 and the United Nations Globally Harmonized System for the Classification and Labeling of Chemicals.

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.