SAFETY DATA SHEET FORM

Section 1 - PRODUCT and COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: Gusmer Cellulose Carbon Filter Sheet with Natural DE
Product Code(s): MC30, MC70
Chemical Name: Mixture
Synonyms: Cellulose Filter Sheet with Carbon

1.2 Relevant identified uses of the substance or mixture and uses advised against

Intended Product Use: Filtration
Uses Advised Against: To avoid exposure to airborne dust, do not damage or abrade filter material. Do not use damaged sheets.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor: Gusmer Enterprises, Inc.
Postal Address: 81 M Street, Fresno, CA 93721 USA
1401 Ware Street, Waupaca, WI 54981 USA
Telephone Number: (01)(559) 485-2692 [USA] (product info)
(01)(715) 258-5525 [USA] (product info)
Hours of Operation: Monday - Friday 8:00am-5:00pm CST
Monday - Friday 8:00am-5:00pm PST

1.4 Emergency telephone number

Medical Emergency: 911
Chemical Emergency: (800) 424-9300

Section 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product, as shipped, is not regulated as an OSHA hazardous material when used in its normal state and for its intended purpose.
Product contains <0.1% Crystalline Silica.

2.2 Label Elements

Hazard Pictogram(s): None
Signal Word: NA
Hazard Statements: NA
Precautionary Statements: NA

2.3 Emergency Overview

Appearance/Odor: Black, carbon-impregnated filter sheets, generally odorless.
Other Hazards: Warning: Product may form combustible dust concentrations in air during processing. Specifically, in instances where product dust is suspended in air in sufficient concentrations and in proximity to an ignition source. Product as supplied and shipped does not constitute a dust hazard. Users of this product should examine the potential to generate dusts during handling and processing and related combustibility hazards and controls.
Activated carbon (especially when wet) can deplete oxygen from air in enclosed spaces, and dangerously low levels of oxygen may result. Prior to entering a confined space that contains or previously contained activated carbon, the space should be evaluated for oxygen and carbon monoxide concentrations, and any other hazards, by a qualified person.
The primary health hazard posed by this product is thought to be due to exposure to cellulose and activated carbon dusts (reference "Section 8" below). Cellulose and activated carbon dust may aggravate pre-existing respiratory conditions or allergies.

Section 3 - COMPOSITION / INFORMATION on INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Common Name &amp; Synonyms</th>
<th>Percentage</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose Pulp</td>
<td>Kraft Pulp</td>
<td>30-55%</td>
<td>65996-61-4</td>
</tr>
<tr>
<td>Activated Carbon</td>
<td>Charcoal Black</td>
<td>20-40%</td>
<td>7440-44-0</td>
</tr>
<tr>
<td>Diatomaceous Earth, Natural</td>
<td>Kieselguhr, DE</td>
<td>10-40%</td>
<td>61790-53-2</td>
</tr>
<tr>
<td>FDA Approved resin binders and additives</td>
<td>&lt; 5%</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Section 4 - FIRST AID MEASURES

4.1 Description of the first aid measures

Eye Contact: Dust may mechanically irritate the eyes, resulting in redness or watering. Treat dust in eye as foreign object. Flush with water to remove dust particles. Get medical help if irritation persists.
Skin Contact: Not anticipated to be irritating for product in purchased form, wash with mild soap and water.
Inhalation: Excessive dust concentrations may cause unpleasant obstruction in the nasal passages. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.
Ingestion: Not applicable for product in purchased form.

4.2 Most important symptoms and effects, both acute and delayed

Eye Contact: Dust can cause eye irritation
Skin Contact: Possible irritation.
Inhalation: May cause unpleasant obstruction in the nasal passages.
Ingestion: Not applicable for product in purchased form.
Chronic Effects: Not applicable

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No special advice, treat symptomatically.
Section 5 - FIREFIGHTING MEASURES

5.1 Extinguishing Media
Suitable Extinguishing Media: Water or other extinguishing agents appropriate for fighting surrounding fires.

Unsuitable Extinguishing Media: DO NOT USE a solid water stream as it may scatter and spread fire. In the event of a fire, spreading large amounts of activated carbon is not recommended due to the risk of creating uncontrolled dust emissions.

5.2 Special hazards arising from the substance or mixture
Products of combustion include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.

5.3 Advice for firefighters
As in any fire, wear NIOSH-approved self-contained breathing apparatus and appropriate protective clothing.

Product as supplied and shipped is highly unlikely to release sufficient cellulose dust to constitute a combustible dust explosion hazard. Depending on airborne concentration, moisture content, particle diameter, surface area and exposure to an ignition source, airborne cellulose dust may ignite and burn with explosive force in a contained area. Cellulose dust may similarly deflagrate (combustion without detonation like a supersonic explosion) if ignited in an open or loosely contained area. Cellulose dust explosibility (\(K_v\) dry = >200 and <300 bar m/s). Activated carbon explosibility (\(K_v\) dry = 105 bar m/s). Caution should be taken in the processing, shipping, handling and use of these materials, particularly if they are in a dry state and dust is produced. Reference NFPA standards 654, 69 and the NFPA Fire Protection Handbook for guidance.

\(K_v\), the maximum rate of pressure rise is used to calculate the *\(K_v\)* value; an internationally recognized index used to classify dust explosibility.

Section 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of cellulose dust on exposed surfaces. Use NIOSH-approved filtering face piece respirator ("dust mask") and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

Other precautions: Minimize compressed air blowdown or other practices that generate high dust levels.

6.2 Environmental precautions
None, discharge in accordance with federal, state and local laws.

6.3 Methods and materials for containment and cleanup
If large amounts of dust are generated, collect with vacuum or suppress with water spray and sweep up.

See Section 8 for appropriate personal protective equipment.

Section 7 - Handling and Storage

7.1 Precautions for safe handling
Avoid generating excessive dust. If dust levels are suspected to be over PEL, wear a NIOSH approved N95 or greater respirator. Protect from excessive moisture. Maintain good housekeeping practices. See Section 8 for more information.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool, dry place away from open flame and other sources of ignition. Do not store together with strong oxidizing agents.

See Section 8 for OSHA permissible exposure limit(s)

Section 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Control parameters</th>
<th>OSHA PEL</th>
<th>ACGIH</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose (C_{6}H_{10}O_{5})&lt;sub&gt;6&lt;/sub&gt;</td>
<td>PEL-TWA 15 mg/m&lt;sup&gt;3&lt;/sup&gt; Total Dust (PNOR)</td>
<td>Not Established</td>
<td>REL-TWA 10 mg/m&lt;sup&gt;3&lt;/sup&gt; Total Dust</td>
</tr>
<tr>
<td>Activated Carbon</td>
<td>PEL-TWA 5 mg/m&lt;sup&gt;3&lt;/sup&gt; Respirable Dust (PNOR)</td>
<td>Not Established</td>
<td>REL-TWA 5 mg/m&lt;sup&gt;3&lt;/sup&gt; Respirable Dust</td>
</tr>
<tr>
<td>Diatomaceous Earth, Natural</td>
<td>PEL-TWA 15 mg/m&lt;sup&gt;3&lt;/sup&gt; Total Dust</td>
<td>Not Established</td>
<td>REL-TWA 5 mg/m&lt;sup&gt;3&lt;/sup&gt; Total Dust</td>
</tr>
<tr>
<td></td>
<td>REL-TWA 15 mg/m&lt;sup&gt;3&lt;/sup&gt; Total Dust</td>
<td>Not Established</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td>Not Established</td>
<td>Not Established</td>
<td>5 mg/m&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Notes: 1. OSHA particulate not otherwise regulated (PNOR)

8.1 Control parameters

8.2 Exposure controls

Engineering Controls:
If necessary use ventilation system to keep airborne dust concentration below permissible exposure limits. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of cellulose dust within the system.

Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

Respiratory Protection:
If dust levels are suspected to be over PEL, wear a NIOSH approved N95 or greater respirator.

Eye Protection: ANSI Z87+ approved dust goggles or safety glasses, if necessary, to avoid eye irritation.

Skin Protection: Cover skin with clothing and/or gloves if skin dryness or irritation occurs.

General Hygiene:
Maintain good housekeeping practices, wash hands after handling, avoid direct eye contact. Clean up areas where cellulose dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne dust concentrations.
Section 9 - PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Black colored filter sheet</td>
</tr>
<tr>
<td>Odor:</td>
<td>Generally Odorless</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>None</td>
</tr>
<tr>
<td>Melting / Freezing Point (Specify):</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Initial Boiling Point &amp; Boiling Range:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>upper: No Data Available lower: No Data Available</td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: No Data Available UEL: No Data Available</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Relative Density:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Solubility(ies):</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water):</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>Decomposition No Data Available</td>
</tr>
<tr>
<td>Oxidizing Properties:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

Section 10 - STABILITY and REACTIVITY

10.1 Reactivity
No Data Available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
None

10.4 Conditions to avoid
Avoid open flame, sparks and other sources of ignition.

10.5 Incompatible materials
Strong oxidizing agents, strong acids. Avoid open flame, sparks and other sources of ignition.

10.6 Hazardous decomposition products
Combustion products include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.

Section 11 - TOXICOLOGY INFORMATION

11.1 Information on toxicological effects

Toxicity Test: The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

<table>
<thead>
<tr>
<th>Toxicity Test</th>
<th>Exposure Route</th>
<th>Dose</th>
<th>Observed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulose</td>
<td></td>
<td>Inhalation</td>
<td>5,800 mg/m³</td>
</tr>
<tr>
<td>L(C50) (rat)</td>
<td></td>
<td>Dermal</td>
<td>&gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>L(D50) (rabbit)</td>
<td></td>
<td>Oral</td>
<td>&gt; 8.5mg/l</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: No Data Available

Serious Eye Damage/Eye Irritation: No Data Available

Respiratory or Skin Sensitization: No Data Available

STOT - Single Exposure: No Data Available

STOT - Repeated Exposure: No Data Available

Aspiration Hazard: No Data Available

11.2 Further Information

Mutagenicity: No Data Available

Productive Toxicity: No Data Available

Carcinogenicity: Not classified as a carcinogen by OSHA, NTP, or IARC in their reviews.

IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Diatomaceous earth, Natural)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Section 12 - ECOLOGICAL INFORMATION

12.1 Toxicity
No Data Available

12.2 Persistence and degradability
Cellulose fiber slowly biodegrades in water (half life range 1 month - 1 year in freshwater and coastal seawater.)

12.3 Bioaccumulative potential
Not expected to bioaccumulate.

12.4 Mobility in soil
Cellulose fiber persists in arid soil (landfills).

12.5 Other adverse effects
No Data Available

Section 13 - DISPOSAL CONSIDERATIONS
Substance: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - TRANSPORTATION INFORMATION

UN Number: Not Applicable
Class: Not Applicable
Proper Shipping Name: Not Applicable
Packing Group: Not Applicable
Marine Pollutant: Not Applicable
Other Applicable Information: Not Applicable

Section 15 - REGULATORY INFORMATION

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

TSCA: Diatomaceous Earth, Natural appears on the EPA TSCA inventory list.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312: No SARA Hazards

California Prop. 65 Components: WARNING! This product may contain crystalline silica, a chemical known to the State of California to cause cancer.

Section 16 - OTHER INFORMATION

Product Number(s): MC Carbon Filter Sheet Series Item Number(s): MC30, MC70

Prepared By: Gusmer Enterprises, Inc. Name of Preparer: Eric Anderson
Title: Corporate Safety and Regulatory Manager
Date: 7/21/2017

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GHS Hazard Warning Label

No Hazard Warning Label Required:
This product, as shipped, is not regulated as an OSHA hazardous material when used in its normal state and for its intended purpose.