Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier:  CS-3209 Part B Class B (all application times)
   - Product Name: Electrically Conductive Sealant / Catalyst Part B
   - Product reference: CS-3209-B

1.2. Product Use:
   - Electrically Conductive Sealant

1.3. Manufacturer’s Name:
   CAGE Code: 14439
   Flamemaster Corp.
   Chem Seal Division
   13576 Desmond Street
   Pacoima, CA 91333 – USA

1.3.1 Suppliers Name (if not manufacturer)

Technical Contact:
   Flamemaster Corp.
   Tel: 818-890-1401
   Fax: 818-890-6001
   www.flamemaster.com

1.4. Emergency Telephone:
   Chemtrec – Chemtrec International
   Tel: 800-424-9300 (North America)
   703-527-3887 (Outside North America)

<table>
<thead>
<tr>
<th>Specification: STM 40-109</th>
<th>Catalyst Part B</th>
<th>CLASS B</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSN:</td>
<td>NONE ISSUED FOR THIS PRODUCT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 2. HAZARD(S) IDENTIFICATION
ASPIRATION HAZARD 1, H304
ACUTE TOXICITY (ORAL) 4, H302
ACUTE TOXICITY (INHALATION) 4, H332
SKIN SENSITIZATION 1, H317
CARCINOGENICITY 2, H351
TOXIC TO REPRODUCTION (FERTILITY) 2, H361f
SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373
AQUATIC CHRONIC 4, 413
For A Complete List of H-Statements and Classifications See Section 16

OSHA / HCS STATUS: THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

Human and Environmental Hazards:

HAZARD STATEMENTS:

May Be Fatal If Swallowed and Enters Airways.
Harmful by Inhalation and/or Swallowing
Irritating to Eyes and Skin
May Cause An Allergic Skin Reaction
Suspected of Causing Cancer
Suspected of Damaging Fertility
May Cause Damage to Organs Through Prolonged or Repeated Exposure
May Cause Long Lasting Harmful Effects to Aquatic Life

HAZARD PICTOGRAMS:

SIGNAL WORD: DANGER

Full text of P statements associated to this compound:

• P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
• Read label before use
• P202: Do not handle until all safety precautions have been read and understood
• P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
• P240: Ground/bond container and receiving equipment
• P261+P262+P263+P264: Avoid breathing dust/fumes/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
• P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
• P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/eye protection/face protection
• P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
• P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice attention.
• P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
• P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
• P302+P352: If on skin: Wash with plenty of soap and water
• P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
• P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
• P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.
HAZARDS NOT OTHERWISE CLASSIFIED: OXIDISING POTENTIAL: Contact with combustible material may result in fire. Keep away from combustible materials. This material increases the risk of fire and may aid in combustion.

Other Hazards that do not result in classification:
Prolonged or repeated exposure may dry skin and/or cause irritation

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family: Mixture of organic compounds
For the hazards of the composition, (SDS see Section 2).

CHEMICAL NAME: MANGANESE DIOXIDE
OSHA HAZARDS: TARGET ORGAN EFFECT, TOXIC BY INHALATION
TARGET ORGANS: NERVES, LUNGS
GHS CLASSIFICATION:
ACUTE TOXICITY, ORAL (CATEGORY 4) - H302
ACUTE TOXICITY, INHALATION (CATEGORY 4) - H332
CHEMICAL NAME: TERPHENYL, HYDROGENATED
AQUATIC CHRONIC (CATEGORY 4) - H413
CHEMICAL NAME: BIS(PIPERIDINOTHIOCARBONYL) TETRASULFIDE
SKIN SENSITIVITY (CATEGORY 1) - H317
CHEMICAL NAME: POLYPHENYL, QUATER AND HIGHER
CHEMICAL NAME: MANGANESE DIOXIDE
CHEMICAL NAME: CARBON BLACK
CHEMICAL NAME: ZEOLITES
CHEMICAL NAME: TALC
CHEMICAL NAME: CARBON BLACK
CHEMICAL NAME: TERPHENYL
CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE
CHEMICAL NAME: TERPHENYL
CHEMICAL NAME: TALC
CHEMICAL NAME: MAGNESIUM CARBONATE

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Section -4. FIRST-AID MEASURES

General: When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

Recommended: Universal resistant foam, CO2, water, powder.

Agents to avoid: None known

Attention

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous decomposition products include: Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Sulfur Oxides, Metal Oxide / Oxides, Manganese Compounds, Smoke

Section -6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/water mix; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state/local regulations.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling.

Avoid exposure during pregnancy/while nursing.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/bonding/earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

7.2 Storage:

Observe label precautions. Store between 32/F and 95/F (0/C and 35/C) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:
Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).
If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

8.2 Exposure limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>TWA: 0.1mg/m³ (as Mn) 8 hours (Inhalable Fraction)</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.02mg/m³ (as Mn) 8 hours (Respirable Fraction)</td>
</tr>
<tr>
<td>Terphenyl, Hydrogenated</td>
<td>TWA: 4.9 mg/m³ 8 hours</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.5 ppm 8 hours</td>
</tr>
<tr>
<td>Zeolites</td>
<td>TWA: 1mg/m³ 8 hours (Respirable Fraction)</td>
</tr>
<tr>
<td>Talc</td>
<td>TWA: 2mg/m³ 8 hours (Respirable Fraction)</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>TWA: 3mg/m³ 8 hours (Inhalable Fraction)</td>
</tr>
<tr>
<td>Terphenyl</td>
<td>C: 5mg/m³</td>
</tr>
<tr>
<td></td>
<td>C: 0.53 ppm</td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>TWA: 5mg/m³ (Respirable Fraction)</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours (Total Dust)</td>
</tr>
</tbody>
</table>

8.3 Personal protection
All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

Respiratory protection:
Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

Hand protection:
For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection:
Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

Skin protection:
Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 °F (20 °C) Liquid
- Flash point: 200 °F (93 °C) Method: TCC
- Specific gravity at: 68 °F (20 °C) 2.0
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 °C: NEGLIGIBLE
- Material Supports Combustion: Yes

- Ph: 9.0
- % VOLATILE BY VOLUME - 2.0
- Vapor pressure at: 68 °F (20 °C) N/A
- Color: BLACK
- Appearance: PASTE
- Odor: NEGLIGIBLE OILY ODOR
- Boiling Point: 360°C (680°F)

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as:

- Carbon monoxide
- Oxides of nitrogen
- Sulfur oxides
- Carbon Dioxide
- Metal Oxide / Oxides
- Smoke
- Manganese Compounds

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health

ACUTE TOXICITY:

<table>
<thead>
<tr>
<th>PRODUCT:</th>
<th>RESULT</th>
<th>SPECIES</th>
<th>DOSE</th>
<th>EXPOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>3478 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Terphenyl, Hydrogenated</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>17500 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Zeolites</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>&gt;5 g/kg</td>
<td></td>
</tr>
<tr>
<td>Carbon Black</td>
<td>LD50 Oral</td>
<td>Rabbit</td>
<td>&gt;3 g/kg</td>
<td></td>
</tr>
<tr>
<td>Terphenyl</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;15400 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Magnesium Carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>8000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>1,3-Diphenylguanidine</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>323 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

CARCINOGENICITY:

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>IARC</th>
<th>OSHA</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeolites</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Carbon Black, Respirable</td>
<td>2B</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Acute Toxicity Estimates:**

Oral: 1099.7 mg/kg
Inhalation (gases): 10532.1 ppm
Inhalation (vapors): 25.75 mg/l
Inhalation (Dust and Mist): 3.511mg/l

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Specific Target Organ Toxicity (STOT) - Single Exposure
1,3-Diphenylguanidine - (Category 3)
Zeolites - (Category 3)
Talc - (Category 3)

This Product is Harmful if Swallowed or Inhaled.
This Product also Causes Serious Eye Irritation.
This Product Causes Skin Irritation, Defatting of the Skin, and May Cause an Allergic Reaction.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Manganese Dioxide - (Category 2)

Potential chronic health effects include the following:
May cause damage to organs through prolonged or repeated exposure. May lead to defatting of the skin and / or irritation. May lead to allergic reactions. Suspected of causing cancer. Suspected of damaging fertility

Target Organs: lungs, skin, central nervous system, blood, kidneys, nervous system, liver, spleen, lymphatic system, cardiovascular system, upper respiratory tract, bone marrow, eye, lens, cornea

12. ECOLOGICAL INFORMATION
There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

Bioaccumulative Potential:

<table>
<thead>
<tr>
<th>Product</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3 Diphenylguanidine</td>
<td>1.69</td>
<td>19.95</td>
<td>Low</td>
</tr>
<tr>
<td>Bis(piperidinothiocarbonyl) tetrasulfide</td>
<td>2.8</td>
<td>16.98</td>
<td>Low</td>
</tr>
</tbody>
</table>

Mobility in Soil:
Not Available

13. DISPOSAL CONSIDERATIONS
Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.
React with base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

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14. TRANSPORT INFORMATION

DOT: Not regulated
UN Number: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated
NMFC: 4620 SUB.5 – CL.60
Schedule B # 3506.91.0000

15. REGULATORY INFORMATION

Other EU Regulations:
1,3-Diphenylguanidine - Reproductive (Category 2) H361f (Fertility)

SARA 311/312
Classification: Immediate (acute) health hazard
        Delayed (chronic) health hazard

Composition of Ingredients:

Manganese Dioxide : Immediate (acute) health hazard
        Delayed (chronic) health hazard

Zeolites : Immediate (acute) health hazard

Polyphenyls, quater and higher : Immediate (acute) health hazard

Talc : Immediate (acute) health hazard

Carbon Black : Fire Hazard
        Delayed (chronic) health hazard

Terphenyl : Immediate (acute) health hazard

1,3-Diphenylguanidine : Fire Hazard
        Immediate (acute) health hazard
        Delayed (chronic) health hazard

Bis(piperidinothiocarbonyl) tetrasulfide : Fire Hazard
        Immediate (acute) health hazard
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**US Regulations Federal**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Threshold limit (Reporting Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>1313-13-9</td>
<td>&lt;65%</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

SARA notifications must remain attached to this SDS. Any copies and/or distribution of this SDS must include all SARA notifications.

All remaining Constituents are non-hazardous per FED-STD-313. All Constituents are listed in TSCA inventory; complete mixture is excluded. Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

**US Regulations State**

| California Proposition 65 (Developmental – Female) | MANGANESE DIOXIDE | 1313-13-9 | <65% | >= 1.0% |
| Massachusetts | MANGANESE DIOXIDE | 1313-13-9 | <65% | >= 1.0% |
| New Jersey | MANGANESE DIOXIDE | 1313-13-9 | <65% | >= 1.0% |
| Pennsylvania | MANGANESE DIOXIDE | 1313-13-9 | <65% | >= 1.0% |
| Rhode Island | MANGANESE DIOXIDE | 1313-13-9 | <65% | >= 1.0% |

**California Prop 65 Warning:**

This Product contains one or more ingredients known by the state of California to cause cancer.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR. Listed National Pollutant Release Inventory (NPRI): Manganese Dioxide CAS#1313-13-9

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>3</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>1</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>1</td>
</tr>
</tbody>
</table>

Other Toxic Effects:
Manganese Dioxide CAS#1313-13-9

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Section 16 Other Information

Full Text of H Statements Associated with this Compound:

ASPIRATION HAZARD 1, H304
ACUTE TOXICITY (ORAL) 4, H302
ACUTE TOXICITY (INHALATION) 4, H332
SKIN SENSITIZATION 1, H317
CARCINOGENICITY 2, H351
TOXIC TO REPRODUCTION (FERTILITY) 2, H361f
SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373
AQUATIC CHRONIC 4, H413

H304 - MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
H302 - HARMFUL IF SWALLOWED.
H332 - HARMFUL IF INHALED.
H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
H351 - SUSPECTED OF CAUSING CANCER.
H361f - SUSPECTED OF DAMAGING FERTILITY.
H373 - MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
H413 - MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.

Preparer-Flamemaster/Compliance  
Revision Notes: A 
Conversion to ANSI format  
Rev A  April 2015 
Supercedes(Conversion)

Containers: Plastic Jars, Metal Cans, Cartridge Kits

Maximum Container Size: 50 Gallons/190 Liters

Notice to reader:
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In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.
This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.
Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

END OF SAFETY DATA SHEET