#### MATERIAL SAFETY DATA SHEET RADABS 122326CMPD

Version Number 1.1 Revision Date 12/18/2009

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#### 1. PRODUCT AND COMPANY IDENTIFICATION

#### POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone<br>Emergency telephone | : | Product Stewardship (770) 271-5902<br>CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure<br>or accident). |
|----------------------------------|---|---|
| Product name                     | : | RADABS 122326CMPD   |
| Product code                     | : | CC10122326  |
| Chemical Name                    | : | Mixture   |
| CAS-No.                          | : | Mixture   |
| Product Use                      | : | Industrial Applications   |

#### 2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components       | CAS-No.    | Weight percent |
|------------------|------------|----------------|
| Titanium dioxide | 13463-67-7 | 0.1 - 1        |

#### **3. HAZARDS IDENTIFICATION**

#### **EMERGENCY OVERVIEW**

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.

#### POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Ingestion, Skin contact   |
|---------------------|---|
| Acute exposure      |   |
| Inhalation          | : Resin particles, like other inert materials, can be mechanically irritating.      |
| Ingestion           | : May be harmful if swallowed.  |
| Eyes                | : Resin particles, like other inert materials, are mechanically irritating to eyes. |
| Skin                | : Experience shows no unusual dermatitis hazard from routine handling.              |
| Chronic exposure    | : Refer to Section 11 for Toxicological Information.                                |

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| Medical Conditions<br>Aggravated by Exposure:  | : None known.  |
|--|--|
|  | 4. FIRST AID MEASURES  |
| Inhalation   | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases o doubt seek medical advice.   |
| Ingestion  | : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.   |
| Eyes   | : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.   |
| Skin   | : Wash off with soap and plenty of water. If skin irritation persists seek medical attention.  |
|  | 5. FIRE-FIGHTING MEASURES  |
| Flash point  | : not applicable   |
| Flammable Limits<br>Upper explosion limit<br>Lower explosion limit<br>Autoignition temperature<br>Suitable extinguishing media | <ul> <li>not applicable</li> <li>not applicable</li> <li>not applicable</li> <li>Carbon dioxide blanket, Water spray, Dry powder, Foam.</li> </ul>   |
| Special Fire Fighting<br>Procedures<br>Unusual Fire/Explosion<br>Hazards   | <ul> <li>Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.</li> <li>Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.</li> </ul> |
|  | 6. ACCIDENTAL RELEASE MEASURES   |
| Personal precautions   | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.   |
| Environmental precautions  | : Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.   |
| Methods for cleaning up  | : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 13 of this MSDS for proper disposal methods.  |
|  | 7. HANDLING AND STORAGE  |
| Handling   | : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation.  |

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Storage

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: Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Respiratory protection            | : No personal respiratory protective equipment normally re-   | equired. |
|-----------------------------------|---|----------|
| Eye/Face Protection               | : Safety glasses with side-shields  |          |
| Hand protection                   | : Protective gloves   |          |
| Skin and body protection          | : Long sleeved clothing   |          |
| Additional Protective<br>Measures | : Safety shoes  |          |
| General Hygiene<br>Considerations | : Handle in accordance with good industrial hygiene and s practice. Wash hands before breaks and at the end of wo | •        |
| Engineering measures              | : Heat only in areas with appropriate exhaust ventilation. appropriate exhaust ventilation at machinery.          | Provide  |

Exposure limit(s)

| Components       | Value    | Exposure time             | Exposure type | List:    |
|------------------|----------|---------------------------|---------------|----------|
| Titanium dioxide | 10 mg/m3 | Time Weighted Average     |               | ACGIH    |
|                  |          | (TWA):                    |               |          |
|                  | 15 mg/m3 | PEL:                      | Total dust.   | OSHA Z1  |
|                  | 10 mg/m3 | Time Weighted Average     | Total dust.   | OSHA Z1A |
|                  |          | (TWA):                    |               |          |
|                  | 10 mg/m3 | Time Weighted Average     | as Ti         | MX OEL   |
|                  |          | (TWA):                    |               |          |
|                  | 20 mg/m3 | Short Term Exposure Limit | as Ti         | MX OEL   |
|                  |          | (STEL):                   |               |          |

| Form<br>Appearance           | : solid<br>: pellets                                | Evaporation rate<br>Specific Gravity | : Not applicable<br>: Not determined |
|------------------------------|---|--------------------------------------|--------------------------------------|
| Colour                       | : ORANGE  | Bulk density                         | : Not established                    |
| Odour<br>Melting point/range | <ul><li>very faint</li><li>Not determined</li></ul> | Vapour pressure<br>Vapour density    | : not applicable<br>: not applicable |
| Boiling Point:               | : not applicable                                    | pН                                   | : not applicable                     |
| Water solubility             | : insoluble   |                                      |                                      |
|                              | 10. STABILITY AN                                    | D REACTIVITY                         |                                      |
| Stability                    | : Stable  |                                      |                                      |

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| Hazardous Polymerization         | : | Will not occur.  |
|----------------------------------|---|--|
| Conditions to avoid              | : | Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.                             |
| Incompatible Materials           | : | Incompatible with strong acids and oxidizing agents.   |
| Hazardous decomposition products | : | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |

#### **11. TOXICOLOGICAL INFORMATION**

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

| CAS-No.    | Chemical Name    | Effect           | Target Organ        |
|------------|------------------|------------------|---------------------|
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

| CAS-No.    | Chemical Name    | OSHA | IARC | NTP |
|------------|------------------|------|------|-----|
| 13463-67-7 | Titanium dioxide | no   | 2B   | no  |

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

|                               | 2. ECOLOGICAL INFORMATION   |            |
|-------------------------------|---|------------|
| Persistence and degradability | Not readily biodegradable.  |            |
| Environmental Toxicity        | Chemicals are not readily available as they are bound w polymer matrix. | vithin the |
| Bioaccumulation Potential     | Chemicals are not readily available as they are bound w polymer matrix. | vithin the |
| Additional advice             | no data available   |            |

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| Like most thermoplastic plastics the product can be recycled. Where<br>possible recycling is preferred to disposal or incineration. The<br>generator of waste material has the responsibility for proper waste<br>classification, transportation and disposal in accordance with<br>applicable federal, state/provincial and local regulations.<br>Recycling is preferred when possible. The generator of waste<br>material has the responsibility for proper waste classification,<br>transportation and disposal in accordance with applicable federal,<br>state/provincial and local regulations.<br><b>I. TRANSPORT INFORMATION</b><br>Not regulated for transportation.<br>Refer to specific regulation.<br>Refer to specific regulation.<br>Refer to specific regulation.<br>Classified as hazardous based on components. |
|---|
| state/provincial and local regulations.  I. TRANSPORT INFORMATION Not regulated for transportation. Refer to specific regulation. Refer to specific regulation. REGULATORY INFORMATION Classified as hazardous based on components.   |
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|   |
|   |
| All components of this meduat are listed on or event from the   |
| All components of this product are listed on or exempt from the TSCA Inventory.   |
| tances (40 CFR 302)   |
|   |
| Not applicable  |
| ly Hazardous Substance  |
| ied under this section, this product is Not Applicable under this regula  |
| nemicals:   |
| ]<br>]  |

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| Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation |   |  |
|---|---|--|
| Canadian Regulations:   |   |  |
| National Pollutant Release Inventory (NPRI)   |   |  |
| not applicable  |   |  |
| WHMIS Classification  | : | D2A  |
| DSL   | : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. |
| National Inventories:   |   |  |
| Australia AICS  | : | Listed   |
| China IECS  | : | Listed   |
| Europe EINECS   | : | Not determined   |
| Japan ENCS  | : | Not determined   |
| Korea KECI  | : | Not determined   |
| Philippines PICCS   | : | Not determined   |
| 16. OTHER INFORMATION   |   |  |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.