Section 1: Identification

Chemical Name/Synonyms........ Carbon black filled acrylic adhesive attached to a release paper

Chemical family.................. Carbon double sided adhesives

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...
Worldwide phone: 1-(703)-527-3887
Worldwide FAX: 1-(703)-741-6090
Toll-free phone: 1-(800)-424-9300 USA only

Product or Trade Name............ SPI Supplies® Double Sided Adhesive, Conductive Carbon Disc

CAS #'s.............................. not known

Chemical Formula.................. not known

HAZARD IDENTIFICATION:

OSHA Hazards
Not classified as hazardous according to OSHA.

GHS
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Hazardous Material Information System USA

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

NFPA Rating (estimated)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Section 2: Composition

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>WEIGHT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic adhesive</td>
<td>Not known</td>
<td>&lt; 95%</td>
</tr>
</tbody>
</table>
based on adhesive

Carbon black 1333-86-4 < 10%

based on adhesive

Trace impurities and additional material names not listed above may also appear in Section 15 near the end of the MSDS. These materials may be listed for local “Right-To-Know” compliance and for other reasons. However, we have never found any evidence for trace contaminants in these adhesive materials.

Section 3: Hazard Identification

Emergency overview:

A black adhesive layer. Not considered hazardous under normal usage. Can release irritating and/or toxic vapors at elevated processing temperatures or if involved in a fire. Caution should be exercised about not permitting the film to come in contact with a hot plate that is going to take the acrylic beyond the point where vapors are released from the film.

Potential Health Hazards:

Skin: Not considered hazardous but constant contact with this product could lead to some skin irritation.

Eyes: Not considered hazardous but if eye contact should occur, wash with fresh water for 15 minutes.

Inhalation: Not a route of exposure under normal usage. Elevated processing temperatures may release irritating vapors, and large amounts of cutting could generate irritating particulates, but mainly coming from the release papers, not from the adhesive.

Ingestion: Not a route of exposure. Not considered hazardous.

Conditions Aggravated by Exposure: No known conditions are aggravated by this material.

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE

Section 4: First Aid Measures

Take proper precautions to ensure your own health and safety before attempting to rescue and providing first aid. For specific information refer to the Emergency Overview in Section of this MSDS.

Skin: If molten material contacts the skin, immediately flush the skin with large amounts of water to cool the affected tissue and polymer. Do not attempt to peel polymer from skin. Get medical attention immediately.

Eyes: None needed under normal usage. If material comes into contact with the eye, flush eyes with water while holding eyelids apart to ensure complete irrigation.

Inhalation: None needed under normal usage. If exposed to vapors at elevated processing temperatures, remove to fresh air.

Ingestion: None needed.
Advice to physician: None.

Section 5: Fire Fighting Measures

Flammable Properties

Flash Point: Not applicable.
Flash Point Method: Not applicable.
Autoignition Temperature: Not determined.

Upper flame limit (volume % in air): Not applicable. Non-volatile solid.
Lower flame limit (volume % in air): Not applicable. Non-volatile solid.

Flame propagation rate (solids): Not determined.
OSHA Flammability class: Not determined.

Extinguishing Media: Carbon dioxide, dry chemical foam, water or other agents as appropriate for materials in surrounding fire.

Unusual Fire and Explosion Hazards: Gaseous products may be evolved if the film is heated to very high temperatures and they should be regarded as hazardous.

Special Fire Fighting Precautions/Instructions:

Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

Section 6: Accidental Release Measures

Person-related safety precautions: No special measures required.
Measures of environmental protection: No special measures required.
Measures of cleaning/collecting: Collect mechanically.
Dispose of contaminated material as waste according to Section 13.

Section 7: Handling and Storage

Normal Handling: Use normal personal hygiene and good housekeeping.

Storage Recommendations: Store in a cool, dry area, preferably refrigerated, away from direct heat or sunlight.

Section 8: Exposure Controls and Personal Protection

Engineering Controls: General room ventilation is adequate for normal cutting and shaping of the film.

Personal Protective Equipment

Skin Protection: Not normally required. Use heat resistant gloves if handling melted material.
Eye Protection: As a general practice in manufacturing areas, safety glasses that conform to ANSI Z87.1 should be worn.

Respiratory Protection:
Under normal usage, not normally required. A NIOSH/MSHA approved respirator should be worn in areas where the PEL/TLV is exceeded.

Additional Recommendations: None.

Exposure Guidelines

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>OTHER</th>
<th>LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ingredients listed in this section.</td>
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</tbody>
</table>

Other Exposure Limits for Potential Decomposition of Products

Section 9: Physical and Chemical Properties

Appearance: Black adhesive layer
Physical state: Solid, sticky adhesive layer.
Odor: None.
Specific Gravity (water = 1.0): Not known
Solubility in Water (weight%): Negligible.
pH: Not applicable.
Boiling Point: Not applicable.
Melting Point: Not known
Vapor Pressure: Negligible at room temperature.
Vapor Density (air = 1.0): Not determined.
Evaporation Rate: Not determined.
% Volatiles: Negligible.
Flash Point: Not applicable.

Section 10: Stability and Reactivity

Normally Stable? (Conditions to Avoid)

Normally stable. Avoid exposure to open flame or temperatures exceeding recommended processing temperatures. The maximum temperature to which the film can be exposed will vary with exposure (dwell) time. Any such heating should be done under exhaust fume hood conditions and the breathing of vapors should be avoided.

Incompatibilities:
Alkali metal complexes and organic amines. Highly chlorinated-fluorinated solvents, nitrogen tetroxide and chlorine gas tend to plasticize the film. Silicones tend to induce stress cracking.

Hazardous Decomposition Products:
Thermal decomposition products may include hydrogen chloride, hydrogen fluoride, carbon monoxide, carbon dioxide and combustion by-products (oxidized and non-oxidized hydrocarbons).

Hazardous Polymerization: Will not occur.
Section 11: Toxicological Information

Immediate (Acute) Effects: Not determined.

Delayed (Subchronic and Chronic) Effects: None known.

Other Data: None.

Section 12: Ecological Information

Exotoxicity: Exotoxicity is expected to be low based on the near zero water solubility of the polymer. Material is considered inert and not expected to be biodegradable or toxic.

Bioaccumulation: Not expected to occur.

Section 13: Disposal Considerations

**RCRA**

Is the unused product a RCRA hazardous waste if discarded? No.

Other Disposal Considerations:
Dispose of in compliance with Federal, state and local government regulations. Usually considered an inert packaging material that can be recycled or landfilled. Incineration is not a preferred disposal method because of the possible formation of hydrogen chloride and hydrogen fluoride.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

Section 14: Transport Information

US DOT ID Number: Not applicable, none assigned.

Section 15: Regulatory Information

Toxic Substances Control Act (TSCA)

TSCA Inventory Status: Listed on the TSCA Inventory.

Other TSCA Issues: None.

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>SARA/CERCLA RQ (lb)</th>
<th>SARA EHS TPQ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ingredients listed in this section.</td>
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</tr>
</tbody>
</table>

Spills resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (1-800-424-8802) and to your Local Emergency Planning Committee.
SECTION 311 HAZARD CLASS: None.

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME COMMENT
No ingredients listed in this section.

State Right-To-Know
In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME WEIGHT % COMMENT
No ingredients listed in this section.

Additional Regulatory Information

Use in Food Packaging - United States:
  Non-Food Packaging or Non-Pharmaceutical Packaging

WHMIS Classification (CANADA):
Not a controlled substance. (Considered to be a manufactured article.)

Foreign Inventory Status:
The base monomers are listed on the EINECS Inventory.

California Prop. 65:
Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the State has found to cause cancer, birth defects or other reproductive harm. If this product contains an ingredient listed by the State of California to cause cancer or reproductive toxicity, it will be listed below:

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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levels could have substantially different properties.