1. Identification

Product name : Sarnacol® 2121 Membrane Adhesive

Supplier : Sika Corporation

Address : 201 Polito Avenue
           Lyndhurst, NJ 07071
           USA
           www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

Emergency telephone : CHEMTREC: 800-424-9300
                      INTERNATIONAL: 703-527-3887
                      ehs@sika-corp.com

Recommended use of the chemical and restrictions on use : For further information, refer to the product technical data sheet.

2. Hazards identification

**GHS Classification**

- Flammable liquids, Category 3
- Skin sensitization, Category 1
- Reproductive toxicity, Category 1B
- Specific target organ systemic toxicity - single exposure, Category 1
- Specific target organ systemic toxicity - repeated exposure, Category 2 (Inhalation)

**Hazard Statements**

- H226: Flammable liquid and vapor.
- H317: May cause an allergic skin reaction.
- H360: May damage fertility or the unborn child.
- H370: Causes damage to organs.
- H373: May cause damage to organs through prolonged or repeated exposure if inhaled.

**GHS Label element**

- Hazard pictograms
- Signal Word : Danger
- Hazard Statements

**Precautionary Statements**

- Prevention:
  - P201 Obtain special instructions before use.
  - P202 Do not handle until all safety precautions have been read
and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. -
- No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.

Response:
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Warning: Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&gt;= 5 - &lt; 10 %</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
<td>&gt;= 2 - &lt; 5 %</td>
</tr>
<tr>
<td>Dibutylphthalate</td>
<td>84-74-2</td>
<td>&gt;= 0 - &lt; 1 %</td>
</tr>
<tr>
<td>1,2-benzisothiazol-3(2H)-one</td>
<td>2634-33-5</td>
<td>&gt;= 0 - &lt; 1 %</td>
</tr>
</tbody>
</table>
4. First aid measures

If inhaled
- Move to fresh air.
- Consult a physician after significant exposure.

In case of skin contact
- Take off contaminated clothing and shoes immediately.
- Wash off with soap and plenty of water.
- If symptoms persist, call a physician.

In case of eye contact
- Remove contact lenses.
- Keep eye wide open while rinsing.
- If eye irritation persists, consult a specialist.

If swallowed
- Clean mouth with water and drink afterwards plenty of water.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- Obtain medical attention.

Most important symptoms and effects, both acute and delayed
- Allergic reactions
  - See Section 11 for more detailed information on health effects and symptoms.
  - sensitizing effects
  - toxic effects for reproduction

Protection of first-aiders
- Move out of dangerous area.
- Consult a physician.
- Show this material safety data sheet to the doctor in attendance.

Notes to physician
- Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media
- Alcohol-resistant foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media
- Water

Specific extinguishing methods
- Use water spray to cool unopened containers.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters
- In the event of fire, wear self-contained breathing apparatus.
6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Remove all sources of ignition. Deny access to unprotected persons. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions: Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. Handling and storage

Advice on safe handling: Do not breathe vapors or spray mist. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharge. Open drum carefully as content may be under pressure. Pregnant women or women of child-bearing age should not be exposed to this product. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Follow standard hygiene measures when handling chemical products.

Conditions for safe storage: Store in original container. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Store in accordance with local regulations.

Materials to avoid: no data available

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Basis **</th>
<th>Value</th>
<th>Exposure limit(s)* /</th>
</tr>
</thead>
</table>

4 / 13
<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Agency</th>
<th>Expositional Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-2</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-2</td>
<td>CEIL</td>
<td>300 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-2</td>
<td>Peak</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA P0</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>375 mg/m³</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>250 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-1</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>260 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA P0</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>260 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA P0</td>
<td>STEL</td>
<td>250 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>325 mg/m³</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>OSHA P0</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.1 fibre/cm³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Respirable fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-3</td>
<td>TWA</td>
<td>20 Million particles per cubic foot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dust</td>
</tr>
</tbody>
</table>
*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

**Basis**
ACGIH. Threshold Limit Values (TLV)
OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)
OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant
OSHA P2. Permissible Exposure Limits (PEL), Table Z-2
OSHA Z3. Table Z-3, Mineral Dust

**Engineering measures**
Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

**Personal protective equipment**

**Respiratory protection**: Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

**Hand protection**

**Remarks**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eye protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

**Skin and body protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.
### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>solvent</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>ca. 104 °F (40 °C)</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit (Vol%)</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit (Vol%)</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>no data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>Note: not applicable</td>
</tr>
<tr>
<td>Melting point/range / Freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>ca.1.08 g/cm3</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Note: soluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>ca. &gt; 20.5 mm²/s</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Burning rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td>240 g/l</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: The product is chemically stable.
Possibility of hazardous reactions: Stable under recommended storage conditions.
Vapors may form explosive mixture with air.
Conditions to avoid: Heat, flames and sparks.
Incompatible materials: no data available

11. Toxicological information

Acute toxicity

Product
Acute oral toxicity: no data available
Acute inhalation toxicity: no data available
Acute dermal toxicity: no data available

Ingredients:
methanol:
Acute oral toxicity: Acute toxicity estimate: 100 mg/kg
Method: Converted acute toxicity point estimate
Acute inhalation toxicity: Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Converted acute toxicity point estimate
Acute dermal toxicity: Acute toxicity estimate: 300 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation
Product
no data available

Serious eye damage/eye irritation
Product
no data available

Respiratory or skin sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity

- **Product**
  - Mutagenicity: no data available

Carcinogenicity

- **Product**
  - Carcinogenicity: no data available
  
  - IARC: not applicable
  - NTP: not applicable

Reproductive Toxicity/Fertility

- **Product**
  - Reproductive toxicity: May damage fertility or the unborn child.

Reproductive Toxicity/Development/Teratogenicity

- **Product**
  - Teratogenicity: no data available

STOT-single exposure

- **Product**
  - Assessment: Causes damage to organs.

STOT-repeated exposure

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

- **Product**
  - Assessment: May cause damage to organs through prolonged or repeated exposure if inhaled.

Aspiration toxicity

- **Product**
  - no data available

12. Ecological information

- Other information: Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Component:**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS Number</th>
<th>Toxicity to daphnia and other aquatic invertebrates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-benzisothiazol-3(2H)-one</td>
<td>2634-33-5</td>
<td>EC50:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Daphnia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dose: 3 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exposure time: 48 h</td>
</tr>
</tbody>
</table>

13. **Disposal considerations**

**Disposal methods**

- **Waste from residues**: Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- **Contaminated packaging**: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. **Transport information**

**DOT**

- **UN number**: 1993
- **Description of the goods**: Flammable liquids, n.o.s. (Toluene)
- **Class**: 3
- **Packing group**: III
- **Labels**: 3
- **Emergency Response**: 128
- **Guidebook Number**: 128

**IATA**

- **UN number**: 1993
- **Description of the goods**: Flammable liquid, n.o.s. (Toluene)
- **Class**: 3
- **Packing group**: III
- **Labels**: 3
- **Packing instruction (cargo aircraft)**: 366
- **Packing instruction (passenger aircraft)**: 309
- **Packing instruction (passenger aircraft)**: Y309

**IMDG**

- **UN number**: 1993
Safety Data Sheet

Sarnacol® 2121 Membrane Adhesive

Description of the goods
FLAMMABLE LIQUID, N.O.S.
(Toluene)

Class 3
Packing group III
Labels 3
EmS Number 1 F-E
EmS Number 2 S-E

Marine pollutant no

DOT: As per 49CFR 173.150 (f) Combustible Liquid Exception, Material is Not Regulated.
IATA: For Limited Quantity provisions reference IATA DGR Section 2.7 and other applicable sections.
IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user
no data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

15. Regulatory information

TSCA list
All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards
Fire Hazard
Chronic Health Hazard
Acute Health Hazard

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

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:
- Toluene 108-88-3 8.00 %
- Methanol 67-56-1 2.00 %

Clean Air Act
16. Other information

**HMIS Classification**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>* 3</td>
<td>2</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

**Caution:** HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

**Notes to Reader**

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