1 Identification

- Product identifier
- Trade name: DynaFlex SC
- Other means of identification: Silyl Terminated Polyurethane Sealant
- Recommended use and restriction on use
  - Recommended use: Sealant
  - Restrictions on use: No relevant information available.

2 Hazard(s) identification

- Classification of the substance or mixture
  - Eye Irrit. 2A  H319  Causes serious eye irritation.
  - Skin Sens. 1  H317  May cause an allergic skin reaction.

- Label elements
  - GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms:
    GHS07

- Signal word: Warning
- Hazard statements:
  - H319 Causes serious eye irritation.
  - H317 May cause an allergic skin reaction.
- Precautionary statements:
  - P261  Avoid breathing dust/fume/gas/mist/vapors/spray
  - P264  Wash thoroughly after handling.
  - P272  Contaminated work clothing must not be allowed out of the workplace.
  - P280  Wear protective gloves and eye protection.
  - P302+P352  If on skin: Wash with plenty of soap and water.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P333+P313  If skin irritation or rash occurs: Get medical advice/attention.
  - P337+P313  If eye irritation persists: Get medical advice/attention.
  - P363  Wash contaminated clothing before reuse.
  - P501  Dispose of contents/container in accordance with local/regional/national/international regulations.

(Cont'd. on page 2)
Other hazards  
There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>Components</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>471-34-1</td>
<td>Calcium carbonate</td>
<td>30-40%</td>
</tr>
<tr>
<td>2768-02-7</td>
<td>Trimethoxymethylsilylamine</td>
<td>&lt;2.5%</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
<td>&lt;2.5%</td>
</tr>
<tr>
<td>1305-78-8</td>
<td>Calcium oxide</td>
<td>&lt;2.5%</td>
</tr>
<tr>
<td>35141-30-1</td>
<td>N-(2-aminoethyl)-N'-(3-trimethoxysilyl)propyl]ethylenediamine</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>41556-26-7</td>
<td>Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>25973-55-1</td>
<td>2-(2H-benzotriazol-2-yl)-4,6-diterpentylphenol</td>
<td>Combustible Dust</td>
</tr>
<tr>
<td>82919-37-7</td>
<td>Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Additional information:
Non-classification as a carcinogen is based on non-inhalable form of product. IARC listings for titanium dioxide note that the substance must be respirable.
For the wording of the listed Hazard Statements, refer to section 16.
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact:
  Wash with soap and water.
  If skin irritation or rash occurs: Get medical advice/attention.
- After eye contact:
  Remove contact lenses if worn.
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Do not induce vomiting; immediately call for medical help.
- Most important symptoms and effects, both acute and delayed:
  Gastric or intestinal disorders when ingested.
  Causes serious eye irritation.
  Allergic reactions
Trade name: DynaFlex SC

- Indication of any immediate medical attention and special treatment needed:
  Contains N-(2-aminoethyl)-N’-[3-(trimethoxysilyl)propyl]ethylenediamine, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction. Treat skin and mucous membrane with antihistamine and corticoid preparations.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    Foam
    Carbon dioxide
    Fire-extinguishing powder
    Water fog / haze
  - For safety reasons unsuitable extinguishing agents: None.

- Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.

- Advice for firefighters
  - Protective equipment:
    Wear self-contained respiratory protective device.
    Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Ensure adequate ventilation.
  Use personal protective equipment as required.
  Environmental precautions Avoid release to the environment.

- Methods and material for containment and cleaning up
  Towel or mop up material and collect in a suitable container.
  For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.

- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling
  - Precautions for safe handling:
    Open and handle receptacle with care.
    Keep out of reach of children.
    Avoid contact with the eyes and skin.

- Conditions for safe storage, including any incompatibilities
  Requirements to be met by storerooms and receptacles:
  Store in cool, dry conditions in well sealed receptacles.
  Information about storage in one common storage facility: Store away from foodstuffs.
Trade name: DynaFlex SC

Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value 1</th>
<th>Limit Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>471-34-1 Calcium carbonate</td>
<td>15* 5** mg/m³</td>
<td>10* 5** mg/m³</td>
</tr>
<tr>
<td>PEL (USA)</td>
<td>Long-term value: 15* mg/m³</td>
<td>Long-term value: 10* mg/m³</td>
</tr>
<tr>
<td>REL (USA)</td>
<td>Long-term value: 15* mg/m³</td>
<td>Long-term value: 10* mg/m³</td>
</tr>
<tr>
<td>TLV (USA)</td>
<td>TLV withdrawn</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>2768-02-7 trimethoxyvinylsilane</td>
<td>EV (Canada) Short-term value: 60 mg/m³, 10 ppm</td>
<td></td>
</tr>
<tr>
<td>13463-67-7 Titanium dioxide</td>
<td>PEL (USA) Long-term value: 15* mg/m³</td>
<td>PEL (USA) Long-term value: 15* mg/m³</td>
</tr>
<tr>
<td>REL (USA)</td>
<td>See Pocket Guide App. A</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>TLV (USA)</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>EL (Canada)</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>EV (Canada)</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>LMPE (Mexico)</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
</tbody>
</table>

Exposure controls

General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Avoid contact with the eyes and skin.
Avoid breathing mist, vapors, or spray.

Engineering controls: No relevant information available.

Breathing equipment:
Not required under normal conditions of use.
Use suitable respiratory protective device in case of insufficient ventilation.
A NIOSH approved dust respirator should be used for operations generating dust.

Protection of hands:

(Cont’d. on page 5)
Protective gloves

Wear protective gloves to handle contents of damaged or leaking units. Gloves are advised for repeated or prolonged contact.

Eye protection:

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment No special requirements.

Risk management measures No special requirements.

9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance:

- Form: Paste
- Color: According to product specification
- Odor: Characteristic
- Odor threshold: Not determined.

- pH-value: Not determined.
- Melting point/Melting range: Not determined.
- Boiling point/Boiling range: Not determined.

- Flash point: >93.3 °C (>199.9 °F)

- Flammability (solid, gaseous): Not applicable.
- Auto-ignition temperature: Not determined.
- Decomposition temperature: Not determined.
- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits
  - Lower: Not determined.
  - Upper: Not determined.
- Oxidizing properties: Non-oxidizing.

- Vapor pressure: Not determined.

- Density:
  - Relative density: 1.35
  - Vapor density: Not determined.
  - Evaporation rate: Not determined.

- Solubility in / Miscibility with Water: Not determined.
10 Stability and reactivity

- Reactivity: No relevant information available.
- Chemical stability: Stable under normal temperatures and pressures.
- Thermal decomposition / conditions to be avoided:
  No decomposition if used and stored according to specifications.
- Possibility of hazardous reactions
  Reacts with strong alkali.
  Reacts with strong oxidizing agents.
  Reacts with strong acids.
- Conditions to avoid
  Excessive heat.
- Incompatible materials
  Oxidizers, strong bases, strong acids
- Hazardous decomposition products
  Under fire conditions only:
  Carbon monoxide and carbon dioxide
  Nitrogen oxides (NOx)
  Silicon oxides.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>LD/LC50 values that are relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimate)</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
- On the skin: Based on available data, the classification criteria are not met.
- On the eye: Based on available data, the classification criteria are not met.
- Sensitization:
  Contains N-(2-aminoethyl)-N’-[3-(trimethoxysilyl)propyl]ethylenediamine, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.
- IARC (International Agency for Research on Cancer):
  Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

<table>
<thead>
<tr>
<th>13463-67-7</th>
<th>Titanium dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2B</td>
</tr>
</tbody>
</table>

- NTP (National Toxicology Program):
  None of the ingredients are listed.
OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

Probable route(s) of exposure:
- Ingestion.
- Eye contact.
- Skin contact.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity:
Contains known or suspect carcinogens when inhaled. Product is in non-inhalable form and is nonclassifiable as a carcinogen.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: Based on available data, the classification criteria are not met.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Ecological information

Toxicity
- Aquatic toxicity
  Harmful to aquatic life with long lasting effects.

41556-26-7 bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
LC50 0.97 mg/l (leptomis macrochirus)

Persistence and degradability: No relevant information available.

Bioaccumulative potential: No relevant information available.

Mobility in soil: No relevant information available.

Other adverse effects: No relevant information available.

Disposal considerations

Waste treatment methods
- Recommendation:
  Smaller quantities can be disposed of with household waste.
  Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
  The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Uncleaned packagings
- Recommendation: Disposal must be made according to official regulations.

Transport information

- UN-Number
- DOT, ADR/RID/ADN, IMDG, IATA Not regulated.
Trade name: DynaFlex SC

- UN proper shipping name
  - DOT, ADR/RID/ADN, IMDG, IATA
    - Not regulated.
- Transport hazard class(es)
  - DOT, ADR/RID/ADN, IMDG, IATA
    - Class
      - Not regulated.
- Packing group
  - DOT, ADR/RID/ADN, IMDG, IATA
    - Not regulated.
- Environmental hazards
  - Marine pollutant:
    - No
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - United States (USA)
    - SARA
      - Section 302 (extremely hazardous substances):
        - None of the ingredients are listed.
      - Section 313 (Specific toxic chemical listings):
        - None of the ingredients are listed.
      - TSCA (Toxic Substances Control Act)
        - All ingredients are listed or exempt.
      - Proposition 65 (California)
        - Chemicals known to cause cancer:
          - Reference to titanium dioxide is based on unbound respirable particles and is not applicable to the product as supplied.
          - 13463-67-7 | Titanium dioxide
        - Chemicals known to cause developmental toxicity for females:
          - None of the ingredients are listed.
        - Chemicals known to cause developmental toxicity for males:
          - None of the ingredients are listed.
        - Chemicals known to cause developmental toxicity:
          - None of the ingredients are listed.
      - EPA (Environmental Protection Agency):
        - None of the ingredients are listed.
      - IARC (International Agency for Research on Cancer):
        - (Cont'd. on page 9)
Trade name: DynaFlex SC

Reference to titanium dioxide is based on unbound respirable particles and is not applicable to the product as supplied.

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>HCS Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
<td>2B</td>
</tr>
</tbody>
</table>

Canadian Domestic Substances List (DSL):

All ingredients are listed or exempt.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Safety Data Sheets, Individual Manufacturers

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Website: www.chemtel.com