



Boden gut, alles gut!  
Expect more from your floor.

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/14/2013

Reviewed on 06/14/2013

## 1 Identification of substance

- **Product details**
- **Trade name:** SILIKAL ADDITIVE I
- **Application of the substance / the preparation:** Additive
- **Manufacturer/Supplier:**  
Silikal America  
609-B Fertilla Street  
Carrolton, GA 30117  
Tel.: 770.830.1404  
Fax.: 777.830.9213  
info@silikalamerica.com
- **Information department:** Silikal America
- **Emergency information:** INFOTRAC 1-800-535-5053

## 2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

### · Dangerous components:

|         |                                                                                                |         |
|---------|------------------------------------------------------------------------------------------------|---------|
|         | Diphenylmethane-diisocyanate, isomeres and homologues<br>Xn,  Xi; R 20-36/37/38-40-42/43-48/20 | 50-100% |
| 80-62-6 | methyl methacrylate<br>Xi,  F; R 11-37/38-43                                                   | 25-50%  |

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

## 3 Hazards identification

### · Hazard description:



Xn Harmful  
F Highly flammable

### · Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.

R 20 Harmful by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitisation by inhalation and skin contact.

Contains isocyanates. See information supplied by the manufacturer.

### · Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

### · NFPA ratings (scale 0 - 4)



Health = 2  
Fire = 3  
Reactivity = 0

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## · HMIS-ratings (scale 0 - 4)

|            |    |                |
|------------|----|----------------|
| HEALTH     | *2 | Health = *2    |
| FIRE       | 3  | Fire = 3       |
| REACTIVITY | 0  | Reactivity = 0 |

## 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Clean with water and soap. If possible, also wash with polyethylene glycol 400.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call a doctor immediately.

## 5 Fire fighting measures

- **Suitable extinguishing agents:**  
Foam  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards caused by the material, its products of combustion or resulting gases:**  
Exothermic polymerization.  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Hydrogen cyanide (HCN)  
(Traces)
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Cool endangered receptacles with water spray.

## 6 Accidental release measures

- **Person-related safety precautions:**  
Ensure adequate ventilation  
Wear protective clothing.  
Keep away from ignition sources  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents

## 7 Handling and storage

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.

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- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Store in cool, dry conditions in well sealed receptacles.  
Do not allow to enter sewers/ surface or ground water.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store receptacle in a well ventilated area.  
Protect from heat and direct sunlight.
- **Maximum storage temperature:** 25°C

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

### 80-62-6 methyl methacrylate

|     |                                                                                                      |
|-----|------------------------------------------------------------------------------------------------------|
| PEL | 410 mg/m <sup>3</sup> , 100 ppm                                                                      |
| REL | 410 mg/m <sup>3</sup> , 100 ppm                                                                      |
| TLV | Short-term value: 410 mg/m <sup>3</sup> , 100 ppm<br>Long-term value: 205 mg/m <sup>3</sup> , 50 ppm |
| SEN |                                                                                                      |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Workplace must be properly ventilated and monitored to maintain air quality below the TLV.  
Organic vapour respirators are required only when levels meet or exceed these values. A self contained breathing apparatus is required in confined spaces.  
Filter AX or Organic Vapour Cartridge.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
Butyl rubber, BR  
Nitrile rubber, NBR
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

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## 9 Physical and chemical properties

### · General Information

|               |                |
|---------------|----------------|
| <b>Form:</b>  | Fluid          |
| <b>Color:</b> | Dark brown     |
| <b>Odor:</b>  | Characteristic |

### · Change in condition

|                                     |               |
|-------------------------------------|---------------|
| <b>Melting point/Melting range:</b> | Undetermined. |
| <b>Boiling point/Boiling range:</b> | 100°C (212°F) |

|                       |             |
|-----------------------|-------------|
| <b>· Flash point:</b> | 10°C (50°F) |
|-----------------------|-------------|

|                                |               |
|--------------------------------|---------------|
| <b>· Ignition temperature:</b> | 400°C (752°F) |
|--------------------------------|---------------|

|                         |                              |
|-------------------------|------------------------------|
| <b>· Auto igniting:</b> | Product is not selfigniting. |
|-------------------------|------------------------------|

|                               |                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------|
| <b>· Danger of explosion:</b> | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
|-------------------------------|--------------------------------------------------------------------------------------------|

### · Explosion limits:

|               |            |
|---------------|------------|
| <b>Lower:</b> | 2.1 Vol %  |
| <b>Upper:</b> | 12.5 Vol % |

|                                         |                     |
|-----------------------------------------|---------------------|
| <b>· Vapor pressure at 20°C (68°F):</b> | 38.7 hPa (29 mm Hg) |
|-----------------------------------------|---------------------|

|                                  |                        |
|----------------------------------|------------------------|
| <b>· Density at 20°C (68°F):</b> | 1.07 g/cm <sup>3</sup> |
|----------------------------------|------------------------|

### · Solubility in / Miscibility with

|               |                                   |
|---------------|-----------------------------------|
| <b>Water:</b> | Not miscible or difficult to mix. |
|---------------|-----------------------------------|

### · Viscosity:

|                                |         |
|--------------------------------|---------|
| <b>Dynamic at 20°C (68°F):</b> | 70 mPas |
|--------------------------------|---------|

### · Solvent content:

|                          |       |
|--------------------------|-------|
| <b>Organic solvents:</b> | 0.0 % |
|--------------------------|-------|

## 10 Stability and reactivity

### · Thermal decomposition / conditions to be avoided:

Keep away from heat and direct sunlight.  
No decomposition if used according to specifications.

· **Materials to be avoided:** Reacts with peroxides and other radical forming substances.

### · Dangerous reactions:

Exothermic polymerization.  
Reacts with alcohols, amines, aqueous acids and alkalis.

### · Dangerous products of decomposition:

Isocyanate  
Hydrocarbons  
Carbon monoxide and carbon dioxide

· **Additional information:** Do not allow to enter sewers/ surface or ground water.

## 11 Toxicological information

### · Acute toxicity:

### · LD/LC50 values that are relevant for classification:

**Diphenylmethane-diisocyanate, isomeres and homologues**

|      |      |                    |
|------|------|--------------------|
| Oral | LD50 | > 5000 mg/kg (rat) |
|------|------|--------------------|

### · Primary irritant effect:

· **on the skin:** Irritant to skin and mucous membranes.

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- **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

## 12 Ecological information

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

### Diphenylmethane-diisocyanate, isomeres and homologues

|            |                                 |
|------------|---------------------------------|
| EC50 (24h) | > 1000 mg/l (Daphnia magna)     |
| EC50 (3h)  | > 100 mg/l (Pseudomonas putida) |
| LC0 (96h)  | > 1000 mg/l (fish)              |

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

- **Product:**

- **Recommendation:**

Must be specially treated adhering to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:**

Packaging can be reused or recycled after cleaning.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

- **Recommended cleansing agent:** Acetone, ethylacetate

## 14 Transport information

- **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1866
- **Packing group:** II
- **Proper shipping name (technical name):** RESIN SOLUTION

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· Label 3

· Land transport ADR/RID (cross-border):



· ADR/RID class: 3 Flammable liquids  
 · Danger code (Kemler): 33  
 · UN-Number: 1866  
 · Packaging group: II  
 · Description of goods: 1866 RESIN SOLUTION

· Maritime transport IMDG:



· IMDG Class: 3  
 · UN Number: 1866  
 · Label: 3  
 · Packaging group: II  
 · EMS Number: F-E,S-E  
 · Marine pollutant: No  
 · Proper shipping name: RESIN SOLUTION

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 3  
 · UN/ID Number: 1866  
 · Label: 3  
 · Packaging group: II  
 · Proper shipping name: RESIN SOLUTION

## 15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

|         |                                                       |
|---------|-------------------------------------------------------|
|         | Diphenylmethane-diisocyanate, isomeres and homologues |
| 80-62-6 | methyl methacrylate                                   |

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

|         |                                                       |     |
|---------|-------------------------------------------------------|-----|
|         | Diphenylmethane-diisocyanate, isomeres and homologues | CBD |
| 80-62-6 | methyl methacrylate                                   | NL  |

· **IARC (International Agency for Research on Cancer)**

|         |                                                       |   |
|---------|-------------------------------------------------------|---|
|         | Diphenylmethane-diisocyanate, isomeres and homologues | 3 |
| 80-62-6 | methyl methacrylate                                   | 3 |

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

|         |                     |    |
|---------|---------------------|----|
| 80-62-6 | methyl methacrylate | A4 |
|---------|---------------------|----|

· **MAK (German Maximum Workplace Concentration)**

|  |                                                       |   |
|--|-------------------------------------------------------|---|
|  | Diphenylmethane-diisocyanate, isomeres and homologues | 4 |
|--|-------------------------------------------------------|---|

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **AGW (German Workplace Threshold Value)**

|         |                     |  |
|---------|---------------------|--|
| 80-62-6 | methyl methacrylate |  |
|---------|---------------------|--|

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Xn Harmful  
F Highly flammable

· **Hazard-determining components of labelling:**

Diphenylmethane-diisocyanate, isomeres and homologues  
methyl methacrylate

· **Risk phrases:**

11 Highly flammable.  
20 Harmful by inhalation.  
36/37/38 Irritating to eyes, respiratory system and skin.  
42/43 May cause sensitisation by inhalation and skin contact.

· **Safety phrases:**

3/7 Keep container tightly closed in a cool place.  
9 Keep container in a well-ventilated place.  
23 Do not breathe fumes/aerosol.  
24 Avoid contact with skin.  
37/39 Wear suitable gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

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- **National regulations:**

- **Technical instructions (air):**

| Class | Share in % |
|-------|------------|
| I 50- | 100        |
| II    | 25-50      |

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

## 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.

- **Department issuing MSDS:** Silikal America

- \* **Data compared to the previous version altered.**

-USA-