



**SECTION 1. IDENTIFICATION**

Product name : Sikaflex®-591

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

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Skin sensitization : Category 1

**GHS label elements**

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.

Precautionary Statements : P101 If medical advice is needed, have product container or label at hand.  
 P102 Keep out of reach of children.  
 P103 Read label before use.

**Prevention:**

P261 Avoid breathing mist or vapors.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves.

**Response:**



P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.

**Disposal:**

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

**Additional Labeling**

There are no ingredients with unknown acute toxicity used in a mixture at a concentration  $\geq 1\%$ .

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixtures****Components**

| Chemical name  | CAS-No.     | Classification  | Concentration (% w/w) |
|--|-------------|---|-----------------------|
| Distillates (petroleum), hydrotreated light paraffinic   | 64742-55-8  | Asp. Tox. 1; H304   | $\geq 1 - < 5$        |
| 1,2,3,4-Butanetetracarboxylic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol and 3-hydroxy-2,2-dimethylpropanal, 1,2,2,6, | 101357-36-2 | Acute Tox. 4; H302<br>Eye Irrit. 2A; H319<br>Skin Sens. 1; H317 | $\geq 0.1 - < 1$      |

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
 Consult a physician.  
 Show this material safety data sheet to the doctor in attendance.
- 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 induce vomiting without medical advice.



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 : sensitizing effects  
 Allergic reactions  
 May cause an allergic skin reaction.

Notes to physician : Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : 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.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
 Deny access to unprotected persons.

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
 Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
 Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : 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 ap-



plication area.  
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Store in accordance with local regulations.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Ingredients with workplace control parameters**

| Components   | CAS-No.    | Value type (Form of exposure)      | Control parameters / Permissible concentration | Basis    |
|--|------------|------------------------------------|--|----------|
| Distillates (petroleum), hydrotreated light paraffinic | 64742-55-8 | TWA (Mist)                         | 5 mg/m3  | OSHA Z-1 |
|  |            | TWA (Inhalable particulate matter) | 5 mg/m3  | ACGIH    |
|  |            | TWA (Mist)                         | 5 mg/m3  | OSHA P0  |

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**Occupational exposure limits of decomposition products**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis    |
|------------|---------|-------------------------------|--|----------|
| methanol   | 67-56-1 | TWA                           | 200 ppm<br>260 mg/m3                           | OSHA Z-1 |
|            |         | STEL                          | 250 ppm<br>325 mg/m3                           | OSHA P0  |
|            |         | TWA                           | 200 ppm<br>260 mg/m3                           | OSHA P0  |

**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.

**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          | : | 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.<br>Wash hands before breaks and immediately after handling the product.<br>Remove contaminated clothing and protective equipment before entering eating areas.<br>Wash thoroughly after handling. |

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|  |   |  |
|--|---|--|
| Appearance                                       | : | paste  |
| Color  | : | various  |
| Odor   | : | slight   |
| Odor Threshold                                   | : | No data available  |
| pH   | : | Not applicable substance/mixture is non-soluble (in water) |
| Melting point/range / Freezing point             | : | No data available  |
| Boiling point/boiling range                      | : | No data available  |
| Flash point                                      | : | ca. 214 °F / 101 °C<br>(Method: closed cup)                |
| Evaporation rate                                 | : | No data available  |
| Flammability (solid, gas)                        | : | No data available  |
| Upper explosion limit / Upper flammability limit | : | No data available  |
| Lower explosion limit / Lower flammability limit | : | No data available  |
| Vapor pressure                                   | : | 0.01 hpa   |
| Relative vapor density                           | : | No data available  |



|  |   |  |
|--|---|--|
| Density                                  | : | ca. 1.51 g/cm <sup>3</sup> (68 °F / 20 °C) |
| Solubility(ies)                          |   |  |
| Water solubility                         | : | insoluble                                  |
| Solubility in other solvents             | : | No data available                          |
| Partition coefficient: n-octanol/water   | : | No data available                          |
| Autoignition temperature                 | : | No data available                          |
| Decomposition temperature                | : | No data available                          |
| Viscosity                                |   |  |
| Viscosity, dynamic                       | : | Not applicable                             |
| Viscosity, kinematic                     | : | Not applicable                             |
| Explosive properties                     | : | No data available                          |
| Oxidizing properties                     | : | No data available                          |
| Volatile organic compounds (VOC) content | : | 17 g/l                                     |

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**SECTION 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.                |
| Conditions to avoid                | : | No data available   |
| Incompatible materials             | : | No data available   |
| Hazardous decomposition products   | : | No decomposition if stored and applied as directed.         |

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Components:****1,2,3,4-Butanetetracarboxylic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol and 3-hydroxy-2,2-dimethylpropanal, 1,2,2,6,:**

Acute oral toxicity : LD50 Oral (Rat): 1,900 mg/kg



**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization**

**Skin sensitization**

May cause an allergic skin reaction.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

|             |   |            |
|-------------|---|------------|
| <b>IARC</b> | Group 2B: Possibly carcinogenic to humans<br>Titanium dioxide (> 10 µm) | 13463-67-7 |
|-------------|---|------------|

**OSHA** Not applicable

**NTP** Not applicable

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

Remarks : Titanium dioxide (13463-67-7)  
 In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been char-



acterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Additional ecological 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.

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**SECTION 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.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Domestic regulation**

**49 CFR**

Not regulated as a dangerous good





## SECTION 15. REGULATORY INFORMATION

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

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

### CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Respiratory or skin sensitization

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer, and methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)  
 OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  
 ACGIH / TWA : 8-hour, time-weighted average  
 OSHA P0 / TWA : 8-hour time weighted average  
 OSHA P0 / STEL : Short-term exposure limit  
 OSHA Z-1 / TWA : 8-hour time weighted average

### Notes to Reader



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