SECTION 1. IDENTIFICATION

Product name: Sika Firesil®-N
Company name: Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone: (201) 933-8800
Telefax: (201) 804-1076
E-mail address: ehs@sika-corp.com

Emergency telephone: CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

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 29 CFR 1910.1200
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Additional Labeling
There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium</td>
<td>83877-91-2</td>
<td>Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336, H335</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES
General advice: No hazards which require special first aid measures.

If inhaled: Move to fresh air.
In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. 
In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing.
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.

Most important symptoms and effects, both acute and delayed: No known significant effects or hazards. No information available.

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

Environmental precautions: Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up: Wipe up with absorbent material (e.g. cloth, fleece). 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: For personal protection see section 8. No special handling advice required. 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.
Materials to avoid: No special restrictions on storage with other products.
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

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

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: Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>color</th>
<th>Odor</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>paste</td>
<td>gray</td>
<td>fruity</td>
<td>No data available</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point/range / Freezing point</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.001 hpa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.5 g/cm³ (68 °F / 20 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>ca. 500,000 mPa.s (68 °F / 20 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>&gt; 20.5 mm²/s (104 °F / 40 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td>30 g/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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**: Moisture, Heat, open flames, and other sources of ignition.
Incompatible materials: Reacts with: water, basic substances and acids. Reaction causes the formation of: methanol.

Hazardous decomposition products: By hydrolysis: methanol. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Not classified based on available information.

**Skin corrosion/irritation**
Not classified based on available information.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Product:**
Result: No eye irritation

**Respiratory or skin sensitization**

**Skin sensitization**
Not classified based on available information.

**Respiratory sensitization**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**IARC**

- Group 1: Carcinogenic to humans antimony compounds 8007-18-9
  - (nickel compounds)
- Group 2B: Possibly carcinogenic to humans titanium dioxide 13463-67-7
- Group 2B: Possibly carcinogenic to humans Cobalt aluminate blue spinel 1345-16-0
  - (Cobalt and cobalt compounds)
- Group 2B: Possibly carcinogenic to humans Carbon black 1333-86-4
- Group 2B: Possibly carcinogenic to humans Rutile (TiO2) 1317-80-2

**OSHA**
Not applicable

**NTP**

**Reproductive toxicity**
Not classified based on available information.

**STOT-single exposure**
Not classified based on available information.
STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
Remarks: Carbon black (1333-86-4)
Animal Toxicity:
Rat, oral, duration 2 year
Effect: no tumors

Mouse, oral, duration 2 years
Effect: no tumors

Mouse, dermal, duration 18 months
Effect: no skin tumors

Rat, inhalation, duration 2 years
Target organ: lungs
Effect: inflammation, fibrosis, tumors

Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions. Mortality studies (human data): A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plant studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorohan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (Del, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010). Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and Mcunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington. Overall, as a result of these detailed investigations, no causa-
tive link between carbon black exposure and cancer risk in humans has been demonstrated.

**IARC CANCER CLASSIFICATION:** In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B). This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).

**ICGIH CANCER CLASSIFICATION:** Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

**ASSESSMENT:** Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a result of a secondary non-genotoxic mechanism that has questionable relevance for classification in humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk to carcinogenicity.

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 characterized 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.
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.

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.

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 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.

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 : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

- Antimony nickel 8007-18-9 >= 1 - < 5 %
- titanium oxide yellow

Clean Air Act
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):  
- C.I. pigment brown 24 68186-90-3 >= 1 - < 5 %
- Cobalt aluminate blue 1345-16-0 >= 1 - < 5 %
- spinel
- Antimony nickel titanium oxide yellow 8007-18-9 >= 1 - < 5 %

California Prop 65  
⚠️ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
OSHA P0 : USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Notes to Reader
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Revision Date 02/07/2020

100000021950

US / Z8