SECTION 1. IDENTIFICATION

Product name : Sika® Aktivator-205 LUM Plus

Company name : Sika Corporation

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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
Flammable liquids : Category 2
Eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements
Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statements :
Prevention:
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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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.

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

Other hazards
Intentional misuse by deliberate concentration and inhalation of vapor may be harmful or fatal.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%) w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Flam. Liq. 2; H225</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye Irr. 2A; H319</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STOT SE 3; H336</td>
<td></td>
</tr>
<tr>
<td>titanium tetrabutanolate</td>
<td>5593-70-4</td>
<td>Flam. Liq. 3; H226</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>
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 : Immediately flush eye(s) with plenty of water. 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.

Most important symptoms and effects, both acute and delayed : irritant effects
Respiratory disorder
Excessive lachrymation
Loss of balance
Vertigo
Causes serious eye irritation.
May cause drowsiness or dizziness.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media : Water

Further information : 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.

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### SECTION 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).

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### SECTION 7. HANDLING AND STORAGE

#### Advice on protection against fire and explosion
- Use explosion-proof equipment.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Take precautionary measures against electrostatic discharges.

#### 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.
- 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.
- 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.
- Store in cool place.
- 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:
- Explosives
- Oxidizing agents
- Poisonous gases
- Poisonous liquids

Further information on storage stability:
No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<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>Isopropanol</td>
<td>67-63-0</td>
<td>TWA</td>
<td>400 ppm 980 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm 980 mg/m³</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>500 ppm 1,225 mg/m³</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

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.

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:
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 nec-
### 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.

### SECTION 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>colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>alcohol-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>ca. 7</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>Flash point</td>
<td>ca. 54 °F / 12 °C (Method: closed cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>12 %(V)</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>2 %(V)</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>42.9963 hpa</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 0.79 g/cm³ (68 °F / 20 °C)</td>
</tr>
</tbody>
</table>
Solubility(ies)
  Water solubility : soluble
  Solubility in other solvents : No data available

Partition coefficient: n-octanol/water
  : No data available

Autoignition temperature : 425 °C
Decomposition temperature : No data available

Viscosity
  Viscosity, dynamic : No data available
  Viscosity, kinematic : < 7 mm²/s (104 °F / 40 °C)

Explosive properties : No data available
Oxidizing properties : No data available
Volatile organic compounds (VOC) content : 795 g/l

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.
  Vapors may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
Incompatible materials : No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Components:
Isopropanol:
  Acute oral toxicity : LD50 Oral (Rat): < 5,000 mg/kg
  Acute inhalation toxicity : LC50 (Rat): > 20 mg/l
    Exposure time: 4 h
    Test atmosphere: vapor
Acute dermal toxicity: LD50 Dermal (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Causes serious 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 Not applicable

OSHA Not applicable

NTP Not applicable

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
May cause drowsiness or dizziness.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

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
UN/ID No.: UN 1219
Proper shipping name: Isopropanol
Class: 3
Packing group: II
Labels: Flammable Liquids
Packing instruction (cargo aircraft): 364
Packing instruction (passenger aircraft): 353

IMDG-Code
UN number: UN 1219
Proper shipping name: ISOPROPAKOL
Class: 3
Packing group: II
Labels: 3
EmS Code: F-E, S-D
Marine pollutant: no

Domestic regulation

49 CFR
UN/ID/NA number: UN 1219
Proper shipping name: Isopropanol
Class: 3
Packing group: II
Labels : FLAMMABLE LIQUID
ERG Code : 129
Marine pollutant : no

DOT: For Limited Quantity exceptions reference 49 CFR 173.150 (b)
IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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 : Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

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

<table>
<thead>
<tr>
<th>Chemical</th>
<th>U.S. EPA CAS Number</th>
<th>Reporting Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>&gt;= 90 - &lt;= 100 %</td>
</tr>
</tbody>
</table>

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 : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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
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
The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

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