



**1. Identification**

Product name : Sikaflex® Primer-449

Supplier : Sika Corporation  
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Lyndhurst, NJ 07071  
USA  
www.sikausa.com

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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.

**2. Hazards identification**

**GHS Classification**

Flammable liquids, Category 2	H225: Highly flammable liquid and vapor.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2 (Inhalation)	H351: Suspected of causing cancer if inhaled.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Specific target organ systemic toxicity - repeated exposure, Category 2 (Inhalation)	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.

**GHS label elements**

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.



H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer if inhaled.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements

: **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
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.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves/ eye protection/ face protection.  
P281 Use personal protective equipment as required.  
**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
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.

Warning

: Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors



may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.  
 There are no hazards not otherwise classified that have been identified during the classification process.  
 There are no ingredients with unknown acute toxicity used in a mixture at a concentration  $\geq 1\%$ .

**3. Composition/information on ingredients**

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (%)
butanone	78-93-3	$\geq 50 - < 100\%$
Toluene	108-88-3	$\geq 25 - < 50\%$
Aliphatic polyisocyanate	28182-81-2	$\geq 5 - < 10\%$
n-butyl acetate	123-86-4	$\geq 1 - < 2\%$
xylene	1330-20-7	$\geq 1 - < 2\%$
ethylbenzene	100-41-4	$< 1\%$

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**4. First aid measures**

- 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.  
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : irritant effects  
sensitizing effects  
  
Respiratory disorder  
Allergic reactions  
Excessive lachrymation  
Erythema  
Dermatitis  
Loss of balance



Vertigo  
See Section 11 for more detailed information on health effects and symptoms.

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer if inhaled.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure if inhaled.

Protection of first-aiders : Move out of dangerous area.  
Consult a physician.  
Show this material safety data sheet to the doctor in attendance.

Notes to physician : Treat symptomatically.

**5. Fire-fighting measures**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO2)  
Dry chemical
- Unsuitable extinguishing media : Water  
High volume water jet
- Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
- Specific extinguishing methods : 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.

**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).

**7. Handling and storage**

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.  
 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 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 : No data available

**8. Exposure controls/personal protection**

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
butanone	78-93-3	ACGIH	TWA	200 ppm
		ACGIH	STEL	300 ppm
		OSHA Z-1	TWA	200 ppm 590 mg/m3
		OSHA P0	TWA	200 ppm 590 mg/m3
		OSHA P0	STEL	300 ppm



				885 mg/m3
Toluene	108-88-3	ACGIH	TWA	20 ppm
		OSHA Z-2	TWA	200 ppm
		OSHA Z-2	CEIL	300 ppm
		OSHA Z-2	Peak	500 ppm
		OSHA P0	TWA	100 ppm 375 mg/m3
		OSHA P0	STEL	150 ppm 560 mg/m3
n-butyl acetate	123-86-4	OSHA Z-1	TWA	150 ppm 710 mg/m3
		OSHA P0	TWA	150 ppm 710 mg/m3
		OSHA P0	STEL	200 ppm 950 mg/m3
		ACGIH	TWA	50 ppm
		ACGIH	STEL	150 ppm
xylene	1330-20-7	OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	STEL	150 ppm 655 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3
		ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
ethylbenzene	100-41-4	ACGIH	TWA	20 ppm
		ACGIH	STEL	125 ppm
		OSHA Z-1	TWA	100 ppm



				435 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3
		OSHA P0	STEL	125 ppm 545 mg/m3

\*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

**\*\*Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

**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  
Remarks

- : 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.  
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.  
 Wash thoroughly after handling.

**9. Physical and chemical properties**

Appearance	:	liquid
Color	:	No data available
Odor	:	aromatic
Odor Threshold	:	No data available
Flash point	:	72 °F (22 °C)
Ignition temperature	:	779 °F (415 °C)
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	1 %(V)
Upper explosion limit (Vol%)	:	7 %(V)
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	No data available
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	66.750 mmHg (88.9924 hpa)
Density	:	0.87 g/cm3 at 68 °F (20 °C)
Water solubility	:	Note: insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s at 104 °F (40 °C)
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available





Volatile organic compounds : 670.7 g/l  
(VOC) content

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**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

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**11. Toxicological information**

**Acute toxicity**

Not classified based on available information.

**Ingredients:**

**butanone:**

Acute oral toxicity : LD50 Oral (Rat): 3,300 mg/kg

Acute inhalation toxicity : LC50 (Rat): 36 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

**Aliphatic polyisocyanate:**

Acute oral toxicity : LD50 Oral (Rat): > 2,500 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l  
Test atmosphere: dust/mist  
Method: Expert judgment

Acute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg

**n-butyl acetate:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 23.4 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.



**Serious eye damage/eye irritation**

Causes serious eye irritation.

**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.

**Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

**STOT-single exposure**

May cause drowsiness or dizziness.

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure if inhaled. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain,liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Aspiration toxicity**

Not classified based on available information.

**Carcinogenicity**

Suspected of causing cancer if inhaled.

**IARC** Group 2B: Possibly carcinogenic to humans

**NTP** ethylbenzene 100-41-4  
Not applicable

**12. Ecological information**

Other 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.

**Component:**

n-butyl acetate 123-86-4 Toxicity to algae:  
EC50  
Species: Desmodesmus subspicatus (green algae)  
Dose: 647.7 mg/l  
Exposure time: 72 h

**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.

**14. Transport information**

**DOT**

UN number	1993
Description of the goods	Flammable liquids, n.o.s. (butanone, Toluene)
Class	3
Packing group	II
Labels	3
Emergency Response Guidebook Number	128

**IATA**

UN number	1993
Description of the goods	Flammable liquid, n.o.s. (butanone, Toluene)
Class	3
Packing group	II
Labels	3
Packing instruction (cargo aircraft)	364
Packing instruction (passenger aircraft)	353
Packing instruction (passenger aircraft)	Y341

**IMDG**

UN number	1993
Description of the goods	FLAMMABLE LIQUID, N.O.S. (butanone, Toluene)
Class	3
Packing group	II
Labels	3
EmS Number 1	F-E
EmS Number 2	S-E
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**

No data available

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**



Not applicable

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**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.

**SARA304 Reportable Quantity**

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

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

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

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

Toluene	108-88-3	25.31 %
xylene	1330-20-7	1.09 %

**Clean Air Act**

**Ozone-Depletion Potential** This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Toluene	108-88-3	25.31 %
xylene	1330-20-7	1.09 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

**California Prop 65**  **WARNING:** Cancer – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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**16. Other information**



**HMIS Classification**

<b>Health</b>	*	2
<b>Flammability</b>		3
<b>Physical Hazard</b>		0
<b>Personal Protection</b>		X

**Caution:** HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

**Notes to Reader**

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