



**SECTION 1. IDENTIFICATION**

Product name : Sikaflex® Primer-449

Company name : Sika Corporation  
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USA  
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Emergency telephone : CHEMTREC: 800-424-9300  
INTERNATIONAL: +1-703-527-3887

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 the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Flammable liquids : Category 2

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ toxicity - repeated exposure (Inhalation) : Category 2

**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. H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
Precautionary Statements	:	<b>Prevention:</b> 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 mist or vapors. 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/ protective clothing/ eye protection/ face protection. <b>Response:</b> 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. 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 + P364 Take off contaminated clothing and wash it before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. <b>Storage:</b> 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  $\geq 1\%$ .

**Other hazards**

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

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

**Mixtures**

**Components**

Chemical name	CAS-No.	Classification	Concentration (% w/w)
butanone	78-93-3	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	$\geq 50 - < 70$
toluene	108-88-3	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361 STOT SE 3; H336 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 20 - < 30$
Aliphatic polyisocyanate	28182-81-2	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT SE 3; H335	$\geq 5 - < 10$
n-butyl acetate	123-86-4	Flam. Liq. 3; H226 STOT SE 3; H336	$\geq 1 - < 5$
xylene	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 1 - < 5$
ethylbenzene	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304 Eye Irrit. 2A; H319	$\geq 0.1 - < 1$

Actual concentration is withheld as a trade secret

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**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. 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 Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure if inhaled.
Notes to physician	:	Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) 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.



- 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.

**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).

**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.  
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 : Explosives  
Oxidizing agents  
Poisonous gases  
Poisonous liquids

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butanone	78-93-3	TWA	200 ppm	ACGIH
		STEL	300 ppm	ACGIH
		TWA	200 ppm 590 mg/m <sup>3</sup>	OSHA Z-1
		TWA	200 ppm 590 mg/m <sup>3</sup>	OSHA P0
		STEL	300 ppm 885 mg/m <sup>3</sup>	OSHA P0
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm (10 minutes)	OSHA Z-2
		TWA	100 ppm 375 mg/m <sup>3</sup>	OSHA P0
n-butyl acetate	123-86-4	STEL	150 ppm 560 mg/m <sup>3</sup>	OSHA P0
		TWA	150 ppm 710 mg/m <sup>3</sup>	OSHA Z-1
		TWA	150 ppm 710 mg/m <sup>3</sup>	OSHA P0
		STEL	200 ppm 950 mg/m <sup>3</sup>	OSHA P0
		TWA	50 ppm	ACGIH
xylene	1330-20-7	STEL	150 ppm	ACGIH
		TWA	100 ppm 435 mg/m <sup>3</sup>	OSHA Z-1
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH



		STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm 435 mg/m3	OSHA P0
ethylbenzene	100-41-4	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
		TWA	20 ppm	ACGIH

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 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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	liquid
Color	:	No data available
Odor	:	aromatic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	72 °F / 22 °C (Method: closed cup)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	7 %(V)
Lower explosion limit / Lower flammability limit	:	1 %(V)
Vapor pressure	:	88.9924 hpa
Relative vapor density	:	No data available
Density	:	0.87 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	:	415 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm <sup>2</sup> /s (104 °F / 40 °C)





Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	670.7 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. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
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:****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	:	LC50: 1.5 mg/l Exposure time: 4 h 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

**xylene:**

Acute oral toxicity : LD50 Oral (Rat): 3,523 mg/kg

**ethylbenzene:**

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 5,510 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.

**Carcinogenicity**

Not classified based on available information.

**IARC** Group 2B: Possibly carcinogenic to humans  
ethylbenzene 100-41-4

**OSHA** Not applicable

**NTP** Not applicable

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

**Aspiration toxicity**

Not classified based on available information.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****n-butyl acetate:**

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 647.7 mg/l

**xylene:**Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l  
Method: OECD Test Guideline 201Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l  
Exposure time: 56 dToxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia): 1.17 mg/l  
Exposure time: 7 d**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.

**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No. : UN 1993  
 Proper shipping name : Flammable liquid, n.o.s.  
 (butanone, toluene)  
 Class : 3  
 Packing group : II  
 Labels : Flammable Liquids  
 Packing instruction (cargo aircraft) : 364  
 Packing instruction (passenger aircraft) : 353

**IMDG-Code**

UN number : UN 1993  
 Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
 (butanone, toluene)  
 Class : 3  
 Packing group : II  
 Labels : 3  
 EmS Code : F-E, S-E  
 Marine pollutant : no

**Domestic regulation****49 CFR**

UN/ID/NA number : UN 1993  
 Proper shipping name : Flammable liquids, n.o.s.  
 (butanone, toluene)  
 Class : 3  
 Packing group : II  
 Labels : FLAMMABLE LIQUID  
 ERG Code : 128  
 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.

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)
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toluene	108-88-3	1000
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**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)  
Respiratory or skin sensitization  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

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

toluene	108-88-3	>= 20 - < 30 %
xylene	1330-20-7	>= 1 - < 5 %
ethylbenzene	100-41-4	>= 0.1 - < 1 %

**Clean Air Act**

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

toluene	108-88-3	>= 20 - < 30 %
xylene	1330-20-7	>= 1 - < 5 %

**California Prop. 65**

**⚠ WARNING:** This product can expose you to chemicals including ethylbenzene, which is known to the State of California to cause cancer, and toluene, 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  
OSHA Z-2 : USA. Occupational Exposure Limits (OSHA) - Table Z-2  
ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
OSHA P0 / TWA : 8-hour time weighted average  
OSHA P0 / STEL : Short-term exposure limit  
OSHA Z-1 / TWA : 8-hour time weighted average  
OSHA Z-2 / TWA : 8-hour time weighted average  
OSHA Z-2 / CEIL : Acceptable ceiling concentration  
OSHA Z-2 / Peak : Acceptable maximum peak above the acceptable ceiling con-



centration for an 8-hr shift

**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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