

**SECTION 1. IDENTIFICATION**

Product name : Sikaflex® Primer-449  
Other means of identification : No data available  
  
Company name : 601, avenue Delmar  
Canada  
Pointe-Claire, QC H9R 4A9  
Sika Canada Inc.  
www.sika.ca  
  
Telephone : (514) 697-2610 / 1 (800) 933-7452  
Telefax : (514) 694-2792  
E-mail address : ehs@ca.sika.com  
Emergency telephone : CANUTEC (collect) (613) 996-6666 (24 hours)  
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 Hazardous Products Regulations**

Flammable liquids : Category 2  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Skin sensitization : Category 1  
Carcinogenicity (Inhalation) : Category 2  
Reproductive toxicity : Category 2  
Specific target organ toxicity : Category 3 (Central nervous system)  
- single exposure  
Specific target organ toxicity : Category 2  
- repeated exposure (Inhalation)

**GHS label elements**

Hazard pictograms :





Signal Word	: Danger
Hazard Statements	: <ul style="list-style-type: none"> <li>H225 Highly flammable liquid and vapor.</li> <li>H315 Causes skin irritation.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H319 Causes serious eye irritation.</li> <li>H336 May cause drowsiness or dizziness.</li> <li>H351 Suspected of causing cancer if inhaled.</li> <li>H361 Suspected of damaging fertility or the unborn child.</li> <li>H373 May cause damage to organs through prolonged or repeated exposure if inhaled.</li> </ul>
Precautionary Statements	: <p><b>Prevention:</b></p> <ul style="list-style-type: none"> <li>P201 Obtain special instructions before use.</li> <li>P202 Do not handle until all safety precautions have been read and understood.</li> <li>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P233 Keep container tightly closed.</li> <li>P240 Ground and bond container and receiving equipment.</li> <li>P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.</li> <li>P242 Use non-sparking tools.</li> <li>P243 Take action to prevent static discharges.</li> <li>P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.</li> <li>P264 Wash skin thoroughly after handling.</li> <li>P271 Use only outdoors or in a well-ventilated area.</li> <li>P272 Contaminated work clothing should not be allowed out of the workplace.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> </ul> <p><b>Response:</b></p> <ul style="list-style-type: none"> <li>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.</li> <li>P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.</li> <li>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P308 + P313 IF exposed or concerned: Get medical advice/ attention.</li> <li>P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.</li> <li>P337 + P313 If eye irritation persists: Get medical advice/ attention.</li> <li>P362 + P364 Take off contaminated clothing and wash it before reuse.</li> <li>P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.</li> </ul> <p><b>Storage:</b></p> <ul style="list-style-type: none"> <li>P403 + P233 Store in a well-ventilated place. Keep container</li> </ul>



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**

None known.

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

Substance / Mixture : Mixture

**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	$\geq 30 - < 60$
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	$\geq 10 - < 30$
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 Carc. 2; H351 Eye Irrit. 2A; H319	$\geq 0.1 - < 1$

Actual concentration or concentration range 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	: 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 causing cancer if inhaled. 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	: In the event of fire, wear self-contained breathing apparatus.



for fire-fighters

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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.  
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 590 mg/m3	CA AB OEL
		STEL	300 ppm 885 mg/m3	CA AB OEL
		TWA	50 ppm	CA BC OEL
		STEL	100 ppm	CA BC OEL
		TWAEV	50 ppm 150 mg/m3	CA QC OEL
		STEV	100 ppm 300 mg/m3	CA QC OEL
		TWA	200 ppm	ACGIH
		STEL	300 ppm	ACGIH
toluene	108-88-3	TWA	50 ppm 188 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		TWAEV	50 ppm 188 mg/m3	CA QC OEL
		TWA	20 ppm	ACGIH
Aliphatic polyisocyanate	28182-81-2	TWA	0.005 ppm	CA BC OEL
		C	0.01 ppm	CA BC OEL
n-butyl acetate	123-86-4	TWA	150 ppm 713 mg/m3	CA AB OEL
		STEL	200 ppm 950 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		TWAEV	150 ppm 713 mg/m3	CA QC OEL
		STEV	200 ppm 950 mg/m3	CA QC OEL
		TWA	50 ppm	ACGIH
		STEL	150 ppm	ACGIH
xylene	1330-20-7	TWA	100 ppm 434 mg/m3	CA AB OEL
		STEL	150 ppm 651 mg/m3	CA AB OEL
		TWAEV	100 ppm 434 mg/m3	CA QC OEL
		STEV	150 ppm 651 mg/m3	CA QC OEL
		TWA	100 ppm	CA BC OEL



		STEL	150 ppm	CA BC OEL
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
ethylbenzene	100-41-4	TWA	100 ppm 434 mg/m3	CA AB OEL
		STEL	125 ppm 543 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		STEV	125 ppm 543 mg/m3	CA QC OEL
		TWAEV	100 ppm 434 mg/m3	CA QC OEL

**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.

#### 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	: 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/cm3 (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 mm2/s ( 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.
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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	:	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

#### || xylene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,523 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 1,700 mg/kg

#### || ethylbenzene:

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

Suspected of causing cancer if inhaled.

<b>IARC</b>	Group 2B: Possibly carcinogenic to humans ethylbenzene	100-41-4
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<b>OSHA</b>	Not applicable
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<b>NTP</b>	Not applicable
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**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
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**|| ethylbenzene:****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**

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

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

Not applicable for product as supplied.

**Domestic regulation**

**TDG**

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (butanone, Toluene)
Class	:	3
Packing group	:	II
Labels	:	3
ERG Code	:	128
Marine pollutant	:	no

**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.

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**SECTION 15. REGULATORY INFORMATION****Canadian lists**

No substances are subject to a Significant New Activity Notification.

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**SECTION 16. OTHER INFORMATION****Full text of other abbreviations**

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for air-borne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA BC OEL / C	:	ceiling limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
ADR	:	Accord européen relatif au transport international des marchandises Dangereuses par Route
CAS	:	Chemical Abstracts Service
DNEL	:	Derived no-effect level
EC50	:	Half maximal effective concentration
GHS	:	Globally Harmonized System
IATA	:	International Air Transport Association
IMDG	:	International Maritime Code for Dangerous Goods



LD50	: Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	: Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	: International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	: Occupational Exposure Limit
PBT	: Persistent, bioaccumulative and toxic
PNEC	: Predicted no effect concentration
REACH	: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency
SVHC	: Substances of Very High Concern
vPvB	: Very persistent and very bioaccumulative

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