SAFETY DATA SHEET

Sikaflex® Crack Flex Sealant

Version	Revision Date:	SDS Number:
1.0	02/28/2018	100000015502

SECTION 1. IDENTIFICATION

Product name : Sikaflex® Crack Flex Sealant

Manufacturer or supplier's details

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

Health and Safety Services's 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

Flammable liquids : Category 4

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity (Inhalation) : Category 1A

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

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.

H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350i May cause cancer by inhalation.
H373 May cause damage to organs (hearing 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 In case of inadequate ventilation wear respiratory protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: 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.
Storage:
P403 Store in a well-ventilated place.
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.

Other hazards

None known.

Supplemental information

If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
calcium oxide	1305-78-8	>= 3 - < 5
xylenes	1330-20-7	>= 2 - < 5
Isophoronedialdimine	932742-30-8	>= 1 - < 2
ethylbenzene	100-41-4	>= 0.1 - < 1
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	>= 0.1 - < 1
4,4'-methylenediphenyl diisocyanate	101-68-8	>= 0.1 - < 1
Aliphatic polyisocyanate	28182-81-2	>= 0.1 - < 1
Quartz (SiO2) <5µm	14808-60-7	>= 0.1 - < 1
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	>= 0.1 - < 1

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 : 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 : sensitizing effects
carcinogenic effects
Asthmatic appearance
Allergic reactions
See Section 11 for more detailed information on health effects and symptoms.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause cancer by inhalation.
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	:	Carbon dioxide (CO2)
Unsuitable extinguishing media	:	Water
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

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. 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	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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	:	Avoid formation of aerosol. 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.

Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Prevent unauthorized access.
Store in original container.
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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
calcium oxide	1305-78-8	TWA	2 mg/m3	CA AB OEL
		TWA	2 mg/m3	CA BC OEL
		TWAEV	2 mg/m3	CA QC OEL
		TWA	2 mg/m3	ACGIH
xylenes	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
		TWAEV	100 ppm 434 mg/m3	CA QC OEL
		STEV	125 ppm 543 mg/m3	CA QC OEL
		TWA	20 ppm	ACGIH
		STEL	125 ppm	ACGIH
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	TWA	0.005 ppm 0.05 mg/m3	CA AB OEL
		TWA	0.005 ppm	CA BC OEL
		C	0.01 ppm	CA BC OEL
		TWAEV	0.005 ppm 0.045 mg/m3	CA QC OEL
		TWA	0.005 ppm	CA ON OEL

		C	0.02 ppm	CA ON OEL
		TWA	0.005 ppm	CA ON OEL
		C	0.02 ppm	CA ON OEL
		TWA	0.005 ppm	ACGIH
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.005 ppm	CA BC OEL
		C	0.01 ppm	CA BC OEL
		TWA	0.005 ppm	CA ON OEL
		C	0.02 ppm	CA ON OEL
		TWA	0.005 ppm 0.05 mg/m3	CA AB OEL
		TWAEV	0.005 ppm 0.051 mg/m3	CA QC OEL
		TWA	0.005 ppm	ACGIH
Aliphatic polyisocyanate	28182-81-2	TWA	0.005 ppm	CA ON OEL
		C	0.02 ppm	CA ON OEL
Quartz (SiO2) <5µm	14808-60-7	TWA (Respirable fraction)	0.1 mg/m3	CA ON OEL
		TWA (Respirable particulates)	0.025 mg/m3	CA AB OEL
		TWAEV (respirable dust)	0.1 mg/m3	CA QC OEL
		TWA (Respirable)	0.025 mg/m3 (Silica)	CA BC OEL
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
xylenes	1330-20-7	Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

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 engineer-

ing 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	viscous
Color	:	light gray
Odor	:	aromatic
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range / Freezing	:	No data available

point		
Boiling point/boiling range	:	No data available
Flash point	:	85 °C (185 °F) Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	0.01 hpa (0.01 mmHg)
Relative vapor density	:	No data available
Density	:	1.25 g/cm3 (23 °C (73 °F) ())
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s (40 °C)
Explosive properties	:	No data available
Molecular weight	:	No data available

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	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	No data available

No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 6.29 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

xylenes:

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

Isophoronedialdimine:

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

ethylbenzene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,500 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 5,510 mg/kg

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute oral toxicity	:	LD50 Oral (Rat): 4,814 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.031 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 Dermal (Rat): > 7,000 mg/kg

4,4'-methylenediphenyl diisocyanate:

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

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

4,4'-Methylenediphenyl diisocyanate, oligomers:
Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

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

Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Method: OECD Test Guideline 438

Result: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans	
	Quartz (SiO2) <5µm	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide	13463-67-7
	Carbon black	1333-86-4
	ethylbenzene	100-41-4
NTP	Known to be human carcinogen	
	Quartz (SiO2) <5µm	14808-60-7

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

xylenes:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 3.3 mg/l Exposure time: 96 h

Isophoronedialdimine:

Toxicity to fish	:	LC50 (Fish): 87.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): > 100 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Desmodesmus subspicatus (green algae)): 180.4 mg/l Exposure time: 72 h

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

Domestic regulation

TDG (road/train)
Not dangerous goods

International Regulations

IATA-DGR
Not dangerous goods
IMDG-Code
Not dangerous goods

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

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

Canadian PBT Chemicals	:	This product contains the following components on the DSL that are classified as Persistent, Bioaccumulative and/or Toxic (PBT) under CEPA: bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Revision Date	:	02/28/2018
Prepared by	:	R & D of Sika Canada Inc.

Notice to Reader:

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Full text of other abbreviations

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 dosis (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

CA / Z8