

# SAFETY DATA SHEET

## Sikaflex®-221LV



Version  
4.0

Revision Date:  
2025/06/30

SDS Number:  
100000012292

Date of last issue: 2023/03/26  
Date of first issue: 2018/03/06

### 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Sikaflex®-221LV

#### Supplier's company name, address and phone number

Company name of supplier : Sika Japan Ltd.  
Akasaka-K-Tower 7F  
1-2-7 Moto-Akasaka  
Minato-ku Tokyo  
107-0051 Japan

Telephone : +81 3 6434 7291

E-mail address : EHS@jp.sika.com

Telefax : -

Emergency telephone number : -

### 2. HAZARDS IDENTIFICATION

#### GHS classification of chemical product

Skin corrosion/irritation : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 2 (Central nervous system, Kidney, Liver, respiratory system)

Specific target organ toxicity - repeated exposure : Category 2 (respiratory system, Nervous system, Nervous system, Auditory organs)

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H351 Suspected of causing cancer.  
H360 May damage fertility or the unborn child.  
H371 May cause damage to organs (Central nervous system,

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Kidney, Liver, respiratory system).  
H373 May cause damage to organs (respiratory system, Nervous system, Nervous system, Auditory organs) through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

### Prevention:

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe mist or vapours.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
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.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS/ISHL number
Stoddard solvent	8052-41-3	7.5	-
Titanium dioxide (> 10 µm)	13463-67-7	>= 1 - < 10	1-558, 5-5225
xylene	1330-20-7	3.1	3-3, 3-60
ethylbenzene	100-41-4	1	3-28, 3-60
4,4'-methylenediphenyl diisocya-	101-68-8	>= 0.1 - < 1	4-118



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for firefighters

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### 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.
- Environmental precautions : Prevent product from entering drains.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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### 7. HANDLING AND STORAGE

#### Handling

- 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 vapours 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 vapours).  
Follow standard hygiene measures when handling chemical products
- Avoidance of contact : No data available
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.
- Storage**
- Conditions for safe storage : Store in original container.  
Keep in a well-ventilated place.  
Observe label precautions.  
Store in accordance with local regulations.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Threshold limit value and permissible exposure limits for each component in the work environment**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Concentration standard / Permissible concentration	Basis
Stoddard solvent	8052-41-3	TWA	100 ppm	ACGIH
Titanium dioxide (> 10 µm)	13463-67-7	OEL-M (Respirable particulate matter)	1.5 mg/m <sup>3</sup> (Titanium)	JP OEL JSOH
	Further information: Group 2B: possibly carcinogenic to humans			
		OEL-M (Total particulate matter)	2 mg/m <sup>3</sup> (Titanium)	JP OEL JSOH
xylene	1330-20-7	OEL-M	50 ppm 217 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Group 2: Substances presumed to cause reproductive toxicity in humans			
		ACL	50 ppm	JP OEL ISHL
		TWA	20 ppm	ACGIH
ethylbenzene	100-41-4	ACL	20 ppm	JP OEL ISHL
		OEL-M	20 ppm 87 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Group 2: Substances presumed to cause reproductive toxicity in humans, Skin absorption, Group 2B: possibly carcinogenic to humans			
		TWA	20 ppm	ACGIH
4,4'-methylenediphenyl diisocyanate	101-68-8	OEL-M	0.05 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Airway sensitizing agent; Group 1 substances which induce allergic reactions in humans			
		TWA	0.005 ppm	ACGIH

#### Biological occupational exposure limits

Components	CAS-No.	Target substance	Biological specimen	Sampling time	Permissible concentration	Basis
xylene	1330-20-7	total (o-, m-, p-)methylhippuric acid	Urine	End of shift at end of workweek	800 mg/l	JSOH
		Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
ethylbenzene	100-41-4	Mandelic acid	Urine	End of shift	150 mg/g creatinine	JSOH
		Mandelic	Urine	End of	200 mg/g	JSOH

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		acid + Phenylglyoxylic acid		shift at end of workweek	creatinine	
		Ethylbenzene	Urine	End of shift	15 µg/l	JSOH
		Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 mg/g creatinine	ACGIH BEI

### Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : paste
- Colour : No data available
- Odour : characteristic
- Odour Threshold : No data available
- Melting point/ range / Freezing point : No data available
- Boiling point/boiling range : No data available
- Flammability (solid, gas) : No data available
- Lower explosion limit and upper explosion limit / flammability limit  
Upper explosion limit / Up- : No data available

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per flammability limit	
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: 53.5 °C (Method: closed cup)
Decomposition temperature	: No data available
pH	: Not applicable
Evaporation rate	: No data available
Auto-ignition temperature	: 465 °C
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20.5 mm <sup>2</sup> /s (40 °C)
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n- octanol/water	: No data available
Vapour pressure	: 0.01 hPa
Density and / or relative density	
Density	: ca. 1.24 g/cm <sup>3</sup> (23 °C)
Relative vapour density	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

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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 reac- tions	: Vapours may form explosive mixture with air. No hazards to be specially mentioned.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: No data available
Hazardous decomposition	: No hazardous decomposition products are known.

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products

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### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Not classified due to lack of data.

#### Components:

##### **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

##### **4,4'-methylenediphenyl diisocyanate:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50: 1.5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgement

#### **Skin corrosion/irritation**

Causes skin irritation.

#### **Serious eye damage/eye irritation**

Not classified due to lack of data.

#### **Respiratory or skin sensitisation**

##### **Skin sensitisation**

Not classified due to lack of data.

##### **Respiratory sensitisation**

Not classified due to lack of data.

##### **Germ cell mutagenicity**

Not classified due to lack of data.

##### **Carcinogenicity**

Suspected of causing cancer.

##### **Reproductive toxicity**

May damage fertility or the unborn child.

##### **STOT - single exposure**

May cause damage to organs (Central nervous system, Kidney, Liver, respiratory system).

##### **STOT - repeated exposure**

May cause damage to organs (respiratory system, Nervous system, Nervous system, Auditory organs) through prolonged or repeated exposure.

##### **Aspiration toxicity**

Not classified due to lack of data.

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### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **xylene:**

Toxicity to fish (Chronic tox- : NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l

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icity)	Exposure time: 56 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia (water flea)): 1.17 mg/l Exposure time: 7 d
<b>ethylbenzene:</b> Toxicity to fish	: LC50 (Fish): <= 1 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	: 1
<b>Persistence and degradability</b> No data available	
<b>Bioaccumulative potential</b> No data available	
<b>Mobility in soil</b> No data available	
<b>Hazardous to the ozone layer</b> Not applicable	
<b>Other adverse effects</b> <b>Product:</b>	
Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

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### 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues	: Send to a licensed waste management company.  The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product.  Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

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### 14. TRANSPORT INFORMATION

#### International Regulations

#### UNRTDG

Not regulated as a dangerous good	
UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable

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Environmentally hazardous : no

### IATA-DGR

Not regulated as a dangerous good  
UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

### IMDG-Code

Not regulated as a dangerous good  
UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
EmS Code : Not applicable  
Marine pollutant : Not applicable

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

Not applicable for product as supplied.

### National Regulations

Refer to section 15 for specific national regulation.

### Special precautions for user

Not applicable

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## 15. REGULATORY INFORMATION

### Related Regulations

#### Fire Service Law

Designated Flammable Substances, Flammable solid, (3000 kilogram)

#### Industrial Safety and Health Law

#### Harmful Substances Prohibited from Manufacture

Not applicable

#### Harmful Substances Required Permission for Manufacture

Not applicable

#### Substances Prevented From Impairment of Health

Chemical name
Ethylbenzene

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

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### Substances Subject to be Notified Names

Law Article 57-2 (Ministerial Order Article 34-2 Appended Table 2)

Chemical name	Concentration (%)	Remarks
Mineral spirits	7.5	-
Titanium(IV) oxide	$\geq 1 - < 10$	-
Xylene	3.1	-
Ethylbenzene	1.0	-
Methylenebis (4,1-phenylene) diisocyanate	$\geq 0.1 - < 1$	-

### Substances Subject to be Indicated Names

Law Article 57 (Ministerial Order Article 30 Appended Table 2)

Chemical name	Remarks
Mineral spirits	-
Titanium(IV) oxide	-
xylene	-
ethylbenzene	-

### Skin and Eye Damage Substances (ISHL MO Art. 594-2)

Chemical name
Xylene

### Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations)

Not applicable

### Ordinance on Prevention of Hazards Due to Specified Chemical Substances - Group 2 Substance

Chemical name
ethylbenzene

### Ordinance on Prevention of Lead Poisoning

Not applicable

### Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

### Ordinance on Prevention of Organic Solvent Poisoning

Organic Solvents Class 3

### Poisonous and Deleterious Substances Control Law

Not applicable

### Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

### Class I Designated Chemical Substances

Chemical name	Administration number	Concentration (%)
Xylene	80	3.1
Ethylbenzene	53	1.0

International Chemical Weapons Convention (CWC) : Not applicable  
Schedules of Toxic Chemicals and Precursors

### High Pressure Gas Safety Act

Not applicable

## 16. OTHER INFORMATION

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

Date format : yyyy/mm/dd

Full text of other abbreviations

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ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
JP OEL ISHL	:	Japan. Administrative Control Levels
JP OEL JSOH	:	Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits
JSOH	:	Occupational exposure limits based on biological monitoring (JSOH).
ACGIH / TWA	:	8-hour, time-weighted average
JP OEL ISHL / ACL	:	Administrative Control level
JP OEL JSOH / OEL-M	:	Occupational Exposure Limit-Mean
ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road
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

The information contained in this Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.  
JP / EN