



# Material Safety Data Sheet

Sikaflex 221

## 1. Product and company identification

**Product name** : Sikaflex 221  
**Supplier** : Sika Corporation, Industry  
30800 Stephenson Highway  
Madison Heights, MI 48071  
www.sikaindustry.com  
**Telephone no.** : (888) 832 - 7452  
**Fax no.** : (248) 577 - 0810  
**In case of emergency** : CHEMTREC: 800-424-9300  
INTERNATIONAL: 703-527-3887  
**Manufacturer** : Sika Corporation, Operations  
201 Polito Avenue  
Lyndhurst, NJ 07071  
www.sikacorp.com  
**Telephone no.** : (201) 933 - 8800  
**Validation date** : **1. June 2009.**  
**Print date** : 1. June 2009.  
**Product type** : Solid.

## 2. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
XYLENE (MIXED ISOMERS)	1330-20-7	< 4
POLYISOCYANATE PREPOLYMER	TRADE SECRET	

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.

## 3. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Potential acute health effects

**Inhalation** : Toxic by inhalation. Irritating to respiratory system. May cause sensitization by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** : Toxic if swallowed.

**Skin** : Irritating to skin. May cause sensitization by skin contact.

**Eyes** : Irritating to eyes.

See toxicological information (section 11)

## 4. First aid measures

**Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Get medical attention.

**Skin contact** : Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse.

## 4 . First aid measures

- Inhalation** : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5 . Fire-fighting measures

- Flammability of the product** : No specific fire or explosion hazard.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## 7 . Handling and storage

### Handling

: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Storage

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8 . Exposure controls/personal protection

### Product name

Ethene, chloro-, homopolymer

xylene

4,4'-methylenediphenyl diisocyanate

### Exposure limits

**ACGIH TLV (United States, 1/2008).**

TWA: 1 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction

**ACGIH TLV (United States, 1/2008).**

STEL: 651 mg/m<sup>3</sup> 15 minute(s).

STEL: 150 ppm 15 minute(s).

TWA: 434 mg/m<sup>3</sup> 8 hour(s).

TWA: 100 ppm 8 hour(s).

**OSHA PEL (United States, 11/2006).**

TWA: 435 mg/m<sup>3</sup> 8 hour(s).

TWA: 100 ppm 8 hour(s).

**OSHA PEL 1989 (United States, 3/1989).**

STEL: 655 mg/m<sup>3</sup> 15 minute(s).

STEL: 150 ppm 15 minute(s).

TWA: 435 mg/m<sup>3</sup> 8 hour(s).

TWA: 100 ppm 8 hour(s).

**ACGIH TLV (United States, 1/2008).**

TWA: 0.005 ppm 8 hour(s).

**NIOSH REL (United States, 6/2008).**

CEIL: 0.2 mg/m<sup>3</sup> 10 minute(s).

CEIL: 0.02 ppm 10 minute(s).

TWA: 0.05 mg/m<sup>3</sup> 10 hour(s).

TWA: 0.005 ppm 10 hour(s).

**OSHA PEL (United States, 11/2006).**

CEIL: 0.2 mg/m<sup>3</sup>

CEIL: 0.02 ppm

**OSHA PEL 1989 (United States, 3/1989).**

CEIL: 0.2 mg/m<sup>3</sup>

CEIL: 0.02 ppm

## 8 . Exposure controls/personal protection

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : 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.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## 9 . Physical and chemical properties

- Physical state** : Paste.
- Color** : Various
- Odor** : Aromatic.
- Density** : ~1.27 g/cm<sup>3</sup>
- VOC** : 48.3 (g/l).

## 10 . Stability and reactivity

- Stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

## 11 . Toxicological information

### Potential chronic health effects

- Chronic effects** : Contains material that may cause target organ damage, based on animal data. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

### Acute toxicity

- Conclusion/Summary** : Not available.

### Carcinogenicity

### Classification

## 11 . Toxicological information

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Ethene, chloro-, homopolymer	A4	3	-	-	-	-
xylene	A4	3	-	-	-	-
4,4'-methylenediphenyl diisocyanate	-	3	-	-	-	-

## 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## 14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Additional information
<b>DOT Classification</b>	Not regulated.		-	-	-
<b>TDG Classification</b>	Not regulated.		-	-	-
<b>ADR/RID Class</b>	Not regulated.		-	-	-
<b>IMDG Class</b>	Not regulated.		-	-	-
<b>IATA-DGR Class</b>	Not regulated.		-	-	-

PG\* : Packing group

## 15 . Regulatory information

**U.S. Federal regulations** : TSCA 8(a) PAIR: 4,4'-methylenediphenyl diisocyanate  
**United States inventory (TSCA 8b)**: All components are listed or exempted.  
 TSCA 8(d) H and S data reporting: 4,4'-methylenediphenyl diisocyanate: 1990  
**SARA 302/304/311/312 extremely hazardous substances**: No products were found.  
**SARA 302/304 emergency planning and notification**: No products were found.  
**SARA 302/304/311/312 hazardous chemicals**: xylene; Ethene, chloro-, homopolymer; calcium carbonate; titanium dioxide  
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**:  
 xylene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard;  
 Ethene, chloro-, homopolymer: Delayed (chronic) health hazard; calcium carbonate:  
 Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard  
**Clean Water Act (CWA) 307**: vinyl chloride; ethylbenzene

## 15 . Regulatory information

**Clean Water Act (CWA) 311:** xylene; ethylbenzene

**Clean Air Act (CAA) 112 accidental release prevention:** vinyl chloride

**Clean Air Act (CAA) 112 regulated flammable substances:** vinyl chloride

**Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

### SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
<b>Form R - Reporting requirements</b>	: xylene	1330-20-7	1 - 5
	ethylbenzene	100-41-4	<1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

<b>State regulations</b>	<b>Massachusetts Substances:</b>	The following components are listed: XYLENE; TITANIUM DIOXIDE
	<b>New Jersey Hazardous Substances:</b>	The following components are listed: XYLENES; ETHYL BENZENE; TITANIUM DIOXIDE
	<b>New York Acutely Hazardous Substances:</b>	The following components are listed: Xylene (mixed); Ethylbenzene
	<b>Pennsylvania RTK Hazardous Substances:</b>	The following components are listed: BENZENE, DIMETHYL-; BENZENE, ETHYL-; TITANIUM OXIDE (TIO2)

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	No.	Yes.	No.	No.
ethylbenzene	Yes.	No.	No.	No.
Quartz (SiO <sub>2</sub> )	Yes.	No.	No.	No.
vinyl chloride	Yes.	No.	Yes.	No.

**United States inventory (TSCA 8b)** : All components are listed or exempted.

## 16 . Other information

**Hazardous Material Information System (U.S.A.)** :

Health	*	2
Flammability		1
Physical hazards		0
Personal Protection Equipment		C

**Caution:** HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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## 16 . Other information

**Date of previous issue** : 29.05.2009.

**Version** : 1.01

✔ Indicates information that has changed from previously issued version.

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