



**SECTION 1. IDENTIFICATION**

Product name : SikaFix® HH+

Company name : Sika Corporation  
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Lyndhurst, NJ 07071  
USA  
www.sikausa.com

Telephone : (201) 933-8800

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E-mail address : ehs@sika-corp.com

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.

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**SECTION 2. HAZARDS IDENTIFICATION**

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Inhalation) : Category 2

Skin irritation : Category 2

Eye irritation : Category 2A

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity (Inhalation) : Category 2

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

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

**GHS label elements**



Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	<p>H315 Causes skin irritation.                      H317 May cause an allergic skin reaction.                      H319 Causes serious eye irritation.                      H330 Fatal if inhaled.                      H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.                      H335 May cause respiratory irritation.                      H351 Suspected of causing cancer if inhaled.                      H373 May cause damage to organs through prolonged or repeated exposure if inhaled.</p>
Precautionary Statements	:	<p><b>Prevention:</b>                      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 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.                      P284 Wear respiratory protection.</p> <p><b>Response:</b>                      P302 + P352 IF ON SKIN: Wash with plenty of soap and water.                      P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.                      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.                      P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.                      P362 + P364 Take off contaminated clothing and wash it before reuse.</p> <p><b>Storage:</b>                      P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p>



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.

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

**Mixtures**

**Components**

Chemical name	CAS-No.	Classification	Concentration (% w/w)
4,4'-methylenediphenyl diisocyanate	101-68-8	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	$\geq$ 20 - < 30
Diphenylmethanediisocyanate, isomers and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	$\geq$ 10 - < 20
m-tolyldiene diisocyanate	26471-62-5	Acute Tox. 1; H330 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335	$\geq$ 1 - < 5

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.  
Symptoms of poisoning may appear several hours later.

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  
Asthmatic appearance  
Cough  
Respiratory disorder  
Allergic reactions  
Excessive lachrymation  
Erythema  
Headache  
Dermatitis  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Fatal if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer if inhaled.  
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 : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 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.  
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.  
Provide sufficient air exchange and/or exhaust in work rooms.  
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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
4,4'-methylenediphenyl diiso-	101-68-8	TWA	0.005 ppm	ACGIH



cyanate				
		C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.02 ppm 0.2 mg/m3	OSHA P0
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.02 ppm 0.2 mg/m3	OSHA P0
m-tolyldiene diisocyanate	26471-62-5	C	0.02 ppm 0.14 mg/m3	OSHA Z-1
		TWA (Inhalable fraction and vapor)	0.001 ppm	ACGIH
		STEL (Inhalable fraction and vapor)	0.005 ppm	ACGIH
		TWA	0.005 ppm 0.04 mg/m3	OSHA P0
		STEL	0.02 ppm 0.15 mg/m3	OSHA P0

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.

**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 spe-



Hygiene measures : cific work-place.  
 : Avoid contact with skin, eyes and clothing.  
 Wash hands before breaks and immediately after handling the product.  
 Remove contaminated clothing and protective equipment before entering eating areas.  
 Wash thoroughly after handling.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid  
 Color : amber  
 Odor : slight, musty  
 Odor Threshold : No data available  
 pH : Not applicable  
 Melting point/range / Freezing point : No data available  
 : Not applicable  
 Flash point : > 199.9 °F / 93.3 °C  
 (Method: closed cup)  
 Evaporation rate : No data available  
 Flammability (solid, gas) : No data available  
 Upper explosion limit / Upper flammability limit : No data available  
 Lower explosion limit / Lower flammability limit : No data available  
 Vapor pressure : 0.01 hpa  
 Relative vapor density : No data available  
 Density : 1.12 - 1.14 g/cm3 (77 °F / 25 °C)  
 Solubility(ies)  
     Water solubility : insoluble  
     Solubility in other solvents : No data available  
 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 mm <sup>2</sup> /s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	1 g/l SikaFix® HH+
		2 g/l SikaFix® HH+ + SikaFix® HH Accelerator Combined.

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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.
Conditions to avoid	:	No data available
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

Fatal if inhaled.

### Product:

Acute inhalation toxicity :  
Remarks: see user defined free text

### Components:

#### **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 judgment

**Diphenylmethanediisocyanate, isomeres and homologues:**

- Acute oral toxicity : LD50 Oral (Rat): > 10,000 mg/kg
- Acute inhalation toxicity : LC50: 1.5 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: Expert judgment  
 Assessment: The component/mixture is moderately toxic after short term inhalation.
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

**m-tolylidene diisocyanate:**

- Acute inhalation toxicity : LC50 (Rat): 0.107 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapor

**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**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**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 m-tolylidene diisocyanate (toluene diisocyanates)	26471-62-5
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<b>OSHA</b>	Not applicable
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<b>NTP</b>	Reasonably anticipated to be a human carcinogen m-tolylidene diisocyanate (Toluene Diisocyanates)	26471-62-5
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**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

May cause respiratory irritation.

**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:****Diphenylmethanediisocyanate, isomeres and homologues:**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l  
Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l

**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**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

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

Not regulated as a dangerous good

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**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)
m-tolylidene diisocyanate	26471-62-5	100

**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** : Acute toxicity (any route of exposure)  
Respiratory or skin sensitization  
Carcinogenicity  
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:

4,4'-methylenediphenyl diisocyanate	101-68-8	>= 20 - < 30 %
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	>= 10 - < 20 %
m-tolylidene diisocyanate	26471-62-5	>= 1 - < 5 %



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

4,4'-methylenediphenyl diisocyanate	101-68-8	>= 20 - < 30 %
Diphenylmethanediisocyanate, isomers and homologues	9016-87-9	>= 10 - < 20 %
m-tolyldiene diisocyanate	26471-62-5	>= 1 - < 5 %

#### Clean Air Act

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

4,4'-methylenediphenyl diisocyanate	101-68-8	>= 20 - < 30 %
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#### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including m-tolyldiene diisocyanate, which is known to the State of California to cause cancer. 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
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 P0 / C	:	Ceiling limit
OSHA Z-1 / C	:	Ceiling

#### 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.

# Safety Data Sheet

## SikaFix® HH+



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