



1. Identification

Product name : Sikalastic®-644

Supplier : Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

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

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.


2. Hazards identification

GHS Classification

Flammable liquids, Category 4
Respiratory sensitization, Category 1
Skin sensitization, Category 1
Carcinogenicity, Category 2

H227: Combustible liquid.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer.

GHS Label element

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.
H351 Suspected of causing cancer.

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/sparks/open flames/hot surfaces.
No smoking.



P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves.
 P281 Use personal protective equipment as required.
 P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P341 IF INHALED: If breathing is difficult, 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.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment for extinction.

Storage:

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.

See Section 11 for more detailed information on health effects and symptoms.

There are no hazards not otherwise classified that have been identified during the classification process.

There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Hardener MTJ (Polyoxypropylenetri(morpholinoaldimine))	1379822-00-0	$\geq 5 - < 10\%$
Propylene carbonate	108-32-7	$\geq 5 - < 10\%$
titanium dioxide	13463-67-7	$\geq 2 - < 5\%$
Isophorondiisocyanate homopolymer	53880-05-0	$\geq 2 - < 5\%$
Hardener MI (Isophoronedim(morpholinoaldimine))	1217271-02-7	$\geq 2 - < 5\%$
4-morpholinecarbaldehyde	4394-85-8	$< 1\%$
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	$< 1\%$
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	$< 1\%$
ethylbenzene	100-41-4	$< 1\%$
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5	$< 1\%$
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	82919-37-7	$< 1\%$

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.

**4. First aid measures**

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 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. Suspected of causing cancer.
Protection of first-aiders	: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.
Notes to physician	: Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	: Carbon dioxide (CO ₂)
Unsuitable extinguishing media	: Water
Specific extinguishing methods	: 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.



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.

7. Handling and storage

- 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 : 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.
- Materials to avoid : No data available

Precautions should be taken to prevent odors and/or vapors from entering the building/structure, including but not limited to turning off and sealing air intake vents or other means of ingress for odors and/or vapors into the building/structure during product application and cure.

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
titanium dioxide	13463-67-7	OSHA Z-1	TWA	15 mg/m ³ total dust
		OSHA P0	TWA	10 mg/m ³ Total dust
		ACGIH	TWA	10 mg/m ³



3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	ACGIH	TWA	0.005 ppm
		OSHA P0	TWA	0.005 ppm
		OSHA P0	STEL	0.02 ppm
ethylbenzene	100-41-4	ACGIH	TWA	20 ppm
		ACGIH	STEL	125 ppm
		OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3
		OSHA P0	STEL	125 ppm 545 mg/m3

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

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 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.

9. Physical and chemical properties

Appearance	: liquid
Color	: light brown
Odor	: mild
Odor Threshold	: No data available
Flash point	: > 142 °F (61 °C)
Ignition temperature	: Not applicable
Decomposition temperature	: No data available
Lower explosion limit (Vol%)	: No data available
Upper explosion limit (Vol%)	: No data available
Flammability (solid, gas)	: No data available
Oxidizing properties	: No data available
Autoignition temperature	: No data available
pH	: No data available
Melting point/range / Freezing point	: No data available
Boiling point/boiling range	: No data available



Vapor pressure	:	No data available
Density	:	1.37 g/cm ³
Water solubility	:	Note: insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 7 mm ² /s
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	173 g/l

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

11. Toxicological information

Acute toxicity

Not classified based on available information.

Ingredients:

Hardener MTJ (Polyoxypropylenetri(morpholinoaldimine)):

Acute oral toxicity : LD50 Oral (Rat): > 2,001 mg/kg

Isophorondiisocyanate homopolymer:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Hardener MI (Isophoronedimorpholinoaldimine):

Acute oral toxicity : LD50 Oral (Rat): > 2,001 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

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 Oral (Rat): 1,636 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.26 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

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.

IARC Group 2B: Possibly carcinogenic to humans

	titanium dioxide	13463-67-7
	ethylbenzene	100-41-4
NTP	Not applicable	

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

12. Ecological information

Other 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.

Component:



Hardener MTJ (Polyoxypropylenetri(morp holinoaldimine))	1379822-00-0	<p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 45.1 mg/l Exposure time: 48 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates:</u> NOEC Species: Daphnia magna (Water flea) Dose: 12.5 mg/l Exposure time: 48 h</p> <p><u>Toxicity to algae:</u> EC50 Species: Pseudokirchneriella subcapitata (green algae) Dose: 1.56 mg/l Exposure time: 72 h</p>
Isophorondiisocyanate homopolymer	53880-05-0	<p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: > 100 mg/l Exposure time: 48 h</p>
Hardener MI (Isophoronedimorpholino aldimine))	1217271-02-7	<p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 40.2 mg/l Exposure time: 48 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates:</u> NOEC Species: Daphnia magna (Water flea) Dose: 17.1 mg/l Exposure time: 48 h</p> <p><u>Toxicity to algae:</u> EC50 Species: Pseudokirchneriella subcapitata (green algae) Dose: 89 mg/l Exposure time: 72 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates Chronic toxicity:</u> EC50 Species: Daphnia Concentration: 40.20 mg/l Exposure time: 48 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates Chronic toxicity:</u> NOEC Species: Daphnia Concentration: 17.10 mg/l Exposure time: 48 h</p>
4,5-dichloro-2-octyl-2H- isothiazol-3-one	64359-81-5	<p><u>Toxicity to fish:</u> LC50 Species: Fish Dose: 0.0027 mg/l Exposure time: 96 h</p>

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.

14. Transport information**DOT**

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

Special precautions for user No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

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.

This product contains a substance regulated under a TSCA Significant New Use Rule (SNUR) at 40 CFR 721.10774. The SNUR states that the substance: (1) may only be imported, (2) may only be used as a: Latent hardener in polyurethane membranes, and (3) may not be imported above the total volume in the TSCA Section 5(e) Consent Order. These SNUR requirements do not apply after the substance has been completely reacted (cured). The substance is subject to TSCA Section 12(b) export notification (PMN Case Number P-13-239; generic chemical identity: Amine adduct).

EPCRA - Emergency Planning and Community Right-to-Know**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard
Acute Health Hazard
Fire Hazard

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate 4098-71-9 0.41 %



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

ethylbenzene	100-41-4	0.17 %
--------------	----------	--------

Clean Air Act**Ozone-Depletion Potential**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

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

16. Other information**HMIS Classification**

Health	*	3
Flammability		2
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

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.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT

Safety Data Sheet

Sikalastic®-644



Revision Date 11/24/2015

Print Date 11/24/2015

BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 11/24/2015

Material number: 506505