SAFETY DATA SHEET

Sikadur®-624 LE Part A

Version	Revision Date:	SDS Number:
1.3	12/14/2016	100000004228

SECTION 1. IDENTIFICATION

Product name : Sikadur®-624 LE Part A

Manufacturer or supplier's details

Company name : Sika Canada Inc.
601, avenue Delmar
Pointe-Claire, QC H9R 4A9
Canada
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

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Sub-category 1A

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

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)
bisphenol-A-(epichlorhydrin) epoxy resin	25068-38-6	>= 30 - < 40
[[(2-ethylhexyl)oxy]methyl]oxirane (2-ethylhexyl glycidyl ether)	2461-15-6	>= 5 - < 10

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 : 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 Allergic reactions Excessive lachrymation Erythema Dermatitis See Section 11 for more detailed information on health effects and symptoms. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
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. 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	:	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	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

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

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 contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	brown
Odor	:	epoxy-like
Odor Threshold	:	No data available
pH	:	not determined
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	ca. 177 °C (351 °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	:	1.603 g/ml (23 °C (73 °F) ())
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-	:	No data available

octanol/water

Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	not determined
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	:	No data available
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.

Ingredients:

bisphenol-A-(epichlorhydrin) epoxy resin:

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 20,000 mg/kg

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: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide	13463-67-7
NTP	Not applicable	

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

bisphenol-A-(epichlorhydrin) epoxy resin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.8 mg/l Exposure time: 48 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. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May be harmful to the environment if released in large quantities. Water polluting material.

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 regulated as a dangerous good

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous Dangerous Goods
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	no

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 lists
No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Revision Date : 12/14/2016

Prepared by : R & D of Sika Canada Inc.

Notice to Reader:

The information contained in this Material Safety Data Sheet applies only to the actual Sika Canada 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 Material Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed.

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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

SAFETY DATA SHEET

Sikadur®-624 LE Part B

Version	Revision Date:	SDS Number:
1.1	12/19/2016	100000004229

SECTION 1. IDENTIFICATION

Product name : Sikadur®-624 LE Part B

Manufacturer or supplier's details

Company name : Sika Canada Inc.
601, avenue Delmar
Pointe-Claire, QC H9R 4A9
Canada
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

Acute toxicity (Inhalation) : Category 3

Skin corrosion : Category 1

Serious eye damage : Category 1

Skin sensitization : Sub-category 1A

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.

H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
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.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
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.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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)
Polyoxypropylenediamine	9046-10-0	>= 35 - < 45
2-piperazin-1-ylethylamine	140-31-8	>= 10 - < 20
2,2'-iminodiethylamine	111-40-0	>= 5 - < 10
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	>= 5 - < 10
triethylenetetramine	112-24-3	>= 5 - < 10
Phenol, 4-nonyl-, branched	84852-15-3	>= 5 - < 10
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	>= 2 - < 5
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	68609-97-2	>= 2 - < 5
4,4'-isopropylidenediphenol	80-05-7	>= 2 - < 5
3,6,9-triazaundecamethylenediamine	112-57-2	>= 1 - < 2

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.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.

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.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Health injuries may be delayed.
corrosive effects
sensitizing effects

Respiratory disorder
Allergic reactions
Headache
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
May cause an allergic skin reaction.
Causes serious eye damage.
Toxic if inhaled.
Suspected of damaging fertility or the unborn child.
Causes severe burns.

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 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

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2,2'-iminodiethylamine	111-40-0	TWA	1 ppm 4.2 mg/m3	CA AB OEL
		TWA	1 ppm	CA BC OEL
		TWAEV	1 ppm 4.2 mg/m3	CA QC OEL
		TWA	1 ppm	ACGIH
triethylenetetramine	112-24-3	TWA	0.5 ppm 3 mg/m3	CA ON OEL

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

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 contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	amber
Odor	:	ammoniacal
Odor Threshold	:	No data available
pH	:	12
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	130 °C (266 °F) Method: Tag 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	:	0.1 hpa (0.1 mmHg)
Relative vapor density	:	No data available
Density	:	0.957 g/ml (23 °C (73 °F) ())

Solubility(ies)		
Water solubility	:	soluble
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	:	not determined
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	:	No data available
Incompatible materials	:	No data available

No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Toxic if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 3,594 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 0.85 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 3,181 mg/kg Method: Calculation method

Ingredients:

2-piperazin-1-ylethylamine:

Acute oral toxicity : LD50 Oral (Rabbit): ca. 2,097 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): ca. 866 mg/kg

2,2'-iminodiethylamine:

Acute oral toxicity : LD50 Oral (Rat): 1,553 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.071 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): 1,045 mg/kg

triethylenetetramine:

Acute oral toxicity : LD50 Oral (Rat): 1,716 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 1,465 mg/kg

Phenol, 4-nonyl-, branched:

Acute dermal toxicity : LD50 Dermal (Rabbit): 3,160 mg/kg

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane:

Acute oral toxicity : LD50 Oral (Rat): 7,010 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): 4,248 mg/kg

3,6,9-triazaundecamethylenediamine:

Acute oral toxicity : LD50 Oral (Rat): 1,716.2 mg/kg

Acute dermal toxicity : LD50 Dermal (Rat): 1,260 mg/kg

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Not applicable

NTP	Not applicable

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

2-piperazin-1-ylethylamine:

Toxicity to fish	:	LC50 (Fish): > 100 mg/l Exposure time: 96 h

Fatty acids, tall-oil, reaction products with tetraethylenepentamine:

M-Factor (Acute aquatic toxicity)	:	10
M-Factor (Chronic aquatic toxicity)	:	1

triethylenetetramine:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 10 - 100 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 10 - 100 mg/l Exposure time: 72 h

Phenol, 4-nonyl-, branched:

M-Factor (Acute aquatic toxicity)	:	10
M-Factor (Chronic aquatic toxicity)	:	10

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 55 mg/l Exposure time: 96 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. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May be harmful to the environment if released in large quantities. Water polluting material.

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)

UN number	:	UN 2735
Proper shipping name	:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, 2,2'-iminodiethylamine)
Class	:	8
Packing group	:	II
Labels	:	8

International Regulations

IATA-DGR

UN/ID No.	:	UN 2735
Proper shipping name	:	Polyamines, liquid, corrosive, n.o.s. (2-piperazin-1-ylethylamine, 2,2'-iminodiethylamine)

Class	:	8
Packing group	:	II
Labels	:	Corrosives
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 2735
Proper shipping name	:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, 2,2'-iminodiethylamine)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no

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 lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Revision Date	:	12/19/2016
Prepared by	:	R & D of Sika Canada Inc.

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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