

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Foam-Lok LPA 2800
Product code : LPA 2800 - All Grades

Other means of identification : LPA 2800 - FoamLok Resin - All Grades

Urethane System Resin Component, B - Component, B - Side, Polyol Resin

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Two-Component, closed-cell, polyurethane foam system specifically designed to provide a high

performance, light weight roofing system for use over insulation water proofing a wide variety of

roof deck construction and configurations.

Use of the substance/mixture : A component for the production of spray insulation foam

1.3. Details of the supplier of the safety data sheet

Huntsman Building Solutions 3315 E. Division Street, Arlington, TX 76011

Tel: 817-640-4900 , 888-224-153 sdsinfo@huntsmanbuilds.com

1.4. Emergency telephone number

Emergency number : CARECHEM (866) 928-0789

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral), Category 4 H302 Skin corrosion/irritation, Category 2 H315 Serious eye damage/eye irritation, Category 1 H318

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)





GHS05

GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

Precautionary statements (GHS-US) : P264 - Wash hands, face thoroughly after handling

P270 - Do not eat, drink or smoke when using this product P280 - Wear eye protection, protective gloves, protective clothing

P280 - Wear eye protection, protective gloves, protective clothing P301+P312 - If swallowed: Call a POISON CENTER if you feel unwell

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 P310 - Immediately call a doctor, a POISON CENTER

P330 - Rinse mouth

P332+P313 - If skin irritation occurs: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse

P501 - Dispose of contents/container to comply with applicable local, national and international

regulation

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1)	(CAS No) 52019-35-9	<30	Skin Irrit. 2, H315 Eye Dam. 1, H318
2-Propanol, 1-chloro-, phosphate (3:1)	(CAS No) 13674-84-5	<20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332
1-Propanol, 2,2-dimethyl-, tribromo derivative	(CAS No) 36483-57-5	<10	Eye Irrit. 2A, H319
Triethyl phosphate	(CAS No) 78-40-0	<7.5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
Diethylene glycol	(CAS No) 111-46-6	<6	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl-	(CAS No) 33329-35-0	<1.5	Acute Tox. 4 (Dermal), H312 Skin Corr. 1C, H314 Eye Dam. 1, H318
Ethylene glycol	(CAS No) 107-21-1	0.125 - 1	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Bis(2-dimethylaminoethyl) ether	(CAS No) 3033-62-3	<0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.

First-aid measures after skin contact

Remove contaminated clothing immediately. Wash skin thoroughly with mild soap and water. Seek medical attention immediately.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Contact lenses should be removed. Immediately get medical attention.

First-aid measures after ingestion

: If swallowed, rinse mouth with water (only if the person is conscious). Call a POISON CENTER or doctor/physician. Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person. Seek medical attention immediately. If unconscious, place in the recovery position and seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries

: Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation

: Inhalation of mist or aerosol may cause irritation to nose and throat. May cause irritation to the respiratory tract.

Symptoms/injuries after skin contact

: Causes skin irritation.

Symptoms/injuries after eye contact

: Corrosive to eyes. Causes serious eye damage.

Symptoms/injuries after ingestion

: Harmful if swallowed. At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water. Dry extinguishing powder. Carbon dioxide. Foam.

Unsuitable extinguishing media : None known.

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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protective equipment for firefighters : Use self-contained breathing apparatus and chemically protective clothing.

Other information : Prevent entry to sewers and public waters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Spills of this product present a serious slipping hazard. Avoid

breathing mist or vapor. Avoid contact with skin, eyes and clothing.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Refer to section 8.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ensure adequate ventilation.

6.2. Environmental precautions

Prevent entry to sewers and public waters. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into inert absorbent material. Sweep or shovel spills into appropriate

container for disposal. Ensure all national/local regulations are observed.

6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid mixing with air or use for any purpose above atmospheric pressure. Product should not

be mixed with air above atmospheric pressure for leak testing or any other purpose.

Use dry nitrogen to transfer or leak test equipment pressurized with product.

Hygiene measures: Wash contaminated clothing prior to re-use. Always wash hands and face immediately after

wash contaminated clothing prior to re-use. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke

when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. A washing facility/water for eye and skin

cleaning purposes should be present.

Storage conditions : Keep out of direct sunlight. Store in original container. Keep container tightly closed in a cool,

well-ventilated place. Keep away from heat. Do not freeze. Product that is frozen and/or tending to sedimentation can be liquefied or homogenized by careful application of indirect heat (do not

use flames or direct contact with a heat source). Protect from moisture.

Incompatible materials : Keep away from strong acids, strong bases and oxidizing agents.

Storage temperature : 21 - 26 °C (70 - 80 °F)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)			
ACGIH	ACGIH Ceiling (mg/m³) 100 mg/m³ (aerosol only)		
Bis(2-dimethylaminoethyl) ether (3033-62-3)			
ACGIH	ACGIH TWA (ppm)	H TWA (ppm) 0.05 ppm	
ACGIH	ACGIH STEL (ppm)	0.15 ppm	

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any

potential exposure.

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Personal protective equipment : Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory

protection.









Hand protection : Wear suitable gloves resistant to chemical penetration. For special purposes, it is

recommended to check the resistance to chemicals of the protective gloves mentioned above

together with the supplier of these gloves.

Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when

possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Wear protective clothing.

Respiratory protection : Wear a self-contained breathing apparatus and appropriate personal protective equipment

(PPE). An approved organic vapor respirator/supplied air or self-contained breathing apparatus

must be used when vapor concentration exceeds applicable exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Dark orange brown

Odor : Amine-like

Odor threshold : No data available

pH : >= 7

Melting point : No data available No data available Freezing point Boiling point No data available > 200 °C (closed cup) Flash point Relative evaporation rate (butyl acetate=1) No data available Flammability (solid, gas) : No data available **Explosive limits** No data available : No data available Explosive properties Oxidizing properties : No data available No data available Vapor pressure : No data available Relative density Relative vapor density at 20 °C No data available

Density : 1.15 - 1.17 g/cm³ @ 25°C (Bulk Density)

Solubility : Water: Slightly soluble
Log Pow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available
Viscosity, kinematic : No data available

Viscosity, dynamic : 800 - 1000 mPa.s @ 23 °C

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No additional information available

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10.4. Conditions to avoid

Temperatures > 26 °C. Moisture. Direct sunlight. Heat.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids, bases.

10.6. Hazardous decomposition products

Toxic fumes. Carbon oxides (CO, CO2). Nitrogen oxides. Unburned hydrocarbons. Possibly carbonyl fluoride. Hydrogen fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Foam-Lok LPA 2800	
ATE US (oral)	1630.432 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 oral rat	4700 mg/kg
LD50 dermal rat	10600 mg/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	10600.000 mg/kg bodyweight
2-Propanol, 1-chloro-, phosphate (3:1) (13674-	-84-5)
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	1230 mg/kg
LC50 inhalation rat (mg/l)	5 mg/l/4h
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	1230.000 mg/kg bodyweight
ATE US (vapors)	5.000 mg/l/4h
ATE US (dust,mist)	5.000 mg/l/4h
1-Propanol, 2,2-dimethyl-, tribromo derivative	(36483-57-5)
LD50 oral rat	1630 mg/kg
Bis(2-dimethylaminoethyl) ether (3033-62-3)	
LD50 oral rat	910 mg/kg
LD50 dermal rabbit	238 mg/kg
LC50 inhalation rat (ppm)	117 ppm (Exposure time: 6 h)
ATE US (oral)	910.000 mg/kg bodyweight
ATE US (dermal)	238.000 mg/kg bodyweight
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 mg/l/4h
Triethyl phosphate (78-40-0)	
LD50 oral rat	1100 - 1600 mg/kg
ATE US (oral)	1100.000 mg/kg bodyweight
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)	
ATE US (dermal)	1100.000 mg/kg bodyweight
Diethylene glycol (111-46-6)	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	11890.000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

pH: >= 7

Serious eye damage/irritation : Causes serious eye damage.

pH: >= 7

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

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Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated

exposure)

: Not classified: Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : Inhalation of mist or aerosol may cause irritation to nose and throat. May cause irritation to the

respiratory tract.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Corrosive to eyes. Causes serious eye damage.

Symptoms/injuries after ingestion : Harmful if swallowed. At levels above the recommended exposure limit, the fluorocarbon acts

as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and

may result in cardiac sensitization.

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)		
LC50 fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)	
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)	
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])	
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)		
LC50 fish 2	180 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])	
EC50 other aquatic organisms 2	4 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)	
Diethylene glycol (111-46-6)		
LC50 fish 1	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])	
EC50 Daphnia 1	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	-1.93
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
BCF fish 1	1.9 - 4.6
Log Pow	2.59
Triethyl phosphate (78-40-0)	
Log Pow	0.8 - 1.11
Diethylene glycol (111-46-6)	
BCF fish 1	100 - 180
Log Pow	-1.98 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Product wastes can

often be incinerated in approved facilities. Consult the appropriate authorities about waste

disposal.

Additional information : Do not re-use empty containers. Do not dispose of waste into sewer. Do not cut, grind, drill,

weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Container Disposal: Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used

containers. Ensure all national/local regulations are observed

Ecology - waste materials : Avoid release to the environment. Do not allow into drains or water courses.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

TDG

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1) (52019-35-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethylene glycol (107-21-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)

5000 lb

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-Propanol, 2,2-dimethyl-, tribromo derivative (36483-57-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Bis(2-dimethylaminoethyl) ether (3033-62-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Triethyl phosphate (78-40-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Diethylene glycol (111-46-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1) (52019-35-9)

Listed on the Canadian DSL (Domestic Substances List)

Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Listed on the Canadian DSL (Domestic Substances List)

1-Propanol, 2,2-dimethyl-, tribromo derivative (36483-57-5)

Listed on the Canadian DSL (Domestic Substances List)

Bis(2-dimethylaminoethyl) ether (3033-62-3)

Listed on the Canadian DSL (Domestic Substances List)

Triethyl phosphate (78-40-0)

Listed on the Canadian DSL (Domestic Substances List)

1, 3- Propane diamine, N, N-bis [3-(dimethylamino) propyl]-N', N'-dimethyl- (33329-35-0)

Listed on the Canadian DSL (Domestic Substances List)

Diethylene glycol (111-46-6)

Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

No additional information available

National regulations

Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1) (52019-35-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Ethylene glycol (107-21-1)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Canadian IDL (Ingredient Disclosure List)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

1-Propanol, 2,2-dimethyl-, tribromo derivative (36483-57-5)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on Turkish inventory of chemical

Bis(2-dimethylaminoethyl) ether (3033-62-3)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on Turkish inventory of chemical

Triethyl phosphate (78-40-0)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on Turkish inventory of chemical

1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on Turkish inventory of chemical

Diethylene glycol (111-46-6)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican national Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

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15.3. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes : according to the federal final rule of hazard communication revised on 2012 (HazCom 2012).

Revision date : 09/29/2016

Sources of Key data : Data sources: SDS - Safety Data Sheet.

Abbreviations and acronyms : CAS - Chemical Abstracts Service. CSR - Chemical Safety Report. EC - European Community.

EEC - European Economic Community. MSDS - Material Śafety Data Sheet. PBT - Persistent, Bioaccumulative and Toxic substance. SDS - Safety Data Sheet . STEL- Short-Term Exposure Limit . TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and

Very Bioaccumulative.

Full text of H-statements:

Acute Tox. 3 (Dermal) Acute Tox. 4 (Dermal) Acute Tox. 4 (Inhalation) Acute Tox. 4 (Inhalation) Acute Tox. 4 (Inhalation) Acute toxicity (inhalation) Category 4 Acute Tox. 4 (Inhalation:dust,mist) Acute toxicity (inhalation:dust,mist) Category 4 Acute Tox. 4 (Inhalation:dust,mist) Acute toxicity (inhalation:dust,mist) Category 4 Acute toxicity (oral), Category 4 Eye Dam. 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin corrosion/irritation Category 1B Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 Hamful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye damage H330 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated exposure			
Acute Tox. 4 (Inhalation) Acute toxicity (inhalation) Category 4 Acute Tox. 4 (Inhalation:dust,mist) Acute toxicity (inhalation:dust,mist) Category 4 Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4 Eye Dam. 1 Eye Dam. 1 Serious eye damage/eye irritation, Category 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin Corr. 1B Skin corrosion/irritation Category 1B Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3	
Acute Tox. 4 (Inhalation:dust,mist) Acute toxicity (inhalation:dust,mist) Category 4 Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4 Eye Dam. 1 Serious eye damage/eye irritation, Category 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin corrosion/irritation Category 1B Skin Corr. 1C Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4	
Acute Tox. 4 (Oral) Eye Dam. 1 Serious eye damage/eye irritation, Category 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin corrosion/irritation Category 1B Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation May cause damage to organs through prolonged or repeated	Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4	
Eye Dam. 1 Eye Irrit. 2A Serious eye damage/eye irritation, Category 1 Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin corrosion/irritation Category 1B Skin Corr. 1C Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled May cause damage to organs through prolonged or repeated	Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4	
Eye Irrit. 2A Serious eye damage/eye irritation, Category 2A Skin Corr. 1B Skin Corr. 1C Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 Harmful if swallowed Harmful if swallowed Harmful in contact with skin Harmful in contact with skin Causes severe skin burns and eye damage Harmful Harmful Causes serious eye damage Harmful Causes serious eye irritation Harmful Harmful if inhaled Harmful if inhaled Harmful if inhaled May cause damage to organs through prolonged or repeated	Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Skin Corr. 1B Skin Corr. 1C Skin Irrit. 2 Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
Skin Corr. 1C Skin Irrit. 2 Skin corrosion/irritation Category 1C Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 Hamful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A	
Skin Irrit. 2 Skin corrosion/irritation Category 2 STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Skin Corr. 1B	Skin corrosion/irritation Category 1B	
STOT RE 2 Specific target organ toxicity (repeated exposure) Category 2 H302 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Skin Corr. 1C	Skin corrosion/irritation Category 1C	
H302 Harmful if swallowed H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	Skin Irrit. 2	Skin corrosion/irritation Category 2	
H311 Toxic in contact with skin H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2	
H312 Harmful in contact with skin H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H302	Harmful if swallowed	
H314 Causes severe skin burns and eye damage H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H311	Toxic in contact with skin	
H315 Causes skin irritation H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H312	Harmful in contact with skin	
H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H314	Causes severe skin burns and eye damage	
H319 Causes serious eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H315	Causes skin irritation	
H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated	H318	Causes serious eye damage	
H373 May cause damage to organs through prolonged or repeated	H319	Causes serious eye irritation	
	H332	Harmful if inhaled	
exposure	H373	May cause damage to organs through prolonged or repeated	
		exposure	

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