

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Version: 1.1

Issue date: 10/01/2021 Revision date: 11/04/2021 Supersedes: 10/01/2021

#### **SECTION 1: Identification**

#### 1.1. Identification

Product name : EP1121 Black B

#### 1.2. Recommended use and restrictions on use

Recommended use : Epoxy hardener

Restrictions on use : Product for industrial use only

#### 1.3. Supplier

ResinLab, LLC

N109 W13300 Ellsworth Drive

Germantown, WI 53022 - United States

T 1-877-259-1669

msds@resinlab.com - www.resinlab.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC:1-800-424-9300 (USA); +1 703-527-3887 (International)

## SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage Skin sensitization, Category 1 H317 May cause an allergic skin reaction Reproductive toxicity Category 1B H360 May damage fertility or the unborn child

Full text of H statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction H360 - May damage fertility or the unborn child

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P302+P352 - If on skin: Wash with plenty of water.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin

with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

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.

P310 - Immediately call a poison center or doctor.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage. P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance

with local, regional, national and/or international regulation.

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#### 2.3. Other hazards which do not result in classification

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

## **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
fatty acids, C18-unsatd., dimers, reaction products with 1- piperazineethanamine and tall oil	(CAS-No.) 206565-89-1	30 – 50	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-Nonylphenol, branched	(CAS-No.) 84852-15-3	10 – 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Poly(oxypropylene)diamine	(CAS-No.) 9046-10-0	10 – 30	Skin Corr. 1, H314 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
4-tert-butylphenol	(CAS-No.) 98-54-4	5 – 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 2, H401 Aquatic Chronic 1, H410
Diethylenetriamine	(CAS-No.) 111-40-0	1 – 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1, H314 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 3, H402
Bisphenol A	(CAS-No.) 80-05-7	0.5 – 1	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Tetraethylenepentamine	(CAS-No.) 112-57-2	0.1 – 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

## **SECTION 4: First-aid measures**

4.1.	Descri	ption	of first	aid	measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory

symptoms, call a doctor.

First-aid measures after skin contact : Rinse immediately with plenty of water for 15 minutes. Remove/Take off immediately all

contaminated clothing. Wash contaminated clothing before reuse. Thoroughly clean shoes

before reuse. Rinse skin with water/shower. Call a physician immediately.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical advice/attention. Rinse cautiously with

water for several minutes. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. If you feel unwell, seek medical advice.

Rinse mouth. Call a physician immediately.

## 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

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#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : Do not use water jet to extinguish.

#### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of

: Nitrogen oxides, Carbon dioxide, Carbon monoxide, For further information, refer to section 10 :

"Stability and Reactivity"

#### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not

breathe dust/fume/gas/mist/vapors/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

## 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public

waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed : Use only with adequate ventilation. Use caution when heating, properly ventilate area. Store

and use with adequate ventilation.

Precautions for safe handling : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the

workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin

and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not

before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

## 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

#### SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

## 4-Nonylphenol, branched (84852-15-3)

Not applicable

#### Poly(oxypropylene)diamine (9046-10-0)

Not applicable

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Diethylenetriamine (111-40-0)			
ACGIH	Local name	Diethylenetriamine	
ACGIH	ACGIH OEL TWA [ppm]	1 ppm	
ACGIH	Remark (ACGIH)	TLV® Basis: URT & eye irr. Notations: Skin	
ACGIH	Regulatory reference	ACGIH 2020	

## Bisphenol A (80-05-7)

Not applicable

## Tetraethylenepentamine (112-57-2)

Not applicable

## fatty acids, C18-unsatd., dimers, reaction products with 1-piperazineethanamine and tall oil (206565-89-1)

Not applicable

## 4-tert-butylphenol (98-54-4)

Not applicable

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the

workplace.

Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses with side shields

## Skin and body protection:

Wear suitable protective clothing

## Respiratory protection:

In case of inadequate ventilation, wear respiratory protection.

## Personal protective equipment symbol(s):







# **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Liquid Color : Amber Odor Ammonia-like Odor threshold : No data available рΗ : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available

Flash point : > 93 °C

Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : Not applicable. Vapor pressure : No data available

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Relative vapor density at 20 °C : No data available Relative density : No data available Density 0.97 g/cm<sup>3</sup> : No data available Solubility Partition coefficient n-octanol/water (Log Pow) : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available Viscosity, dynamic : No data available **Explosion limits** : No data available Explosive properties : No data available Oxidizing properties : No data available VOC content No data available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

## 10.5. Incompatible materials

Bases (Alkalis).

## 10.6. Hazardous decomposition products

ammonia. Carbon oxides (CO, CO2). Nitrogen oxides. ketones. Aldehydes.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified.

4-Nonylphenol, branched (84852-15-3	
LD50 oral rat	1412 mg/kg body weight (Other, Rat, Male / female, Experimental value, Oral)
ATE US (oral)	1412 mg/kg body weight
Poly(oxypropylene)diamine (9046-10-	0)
LD50 oral rat	2627 mg/kg
LD50 dermal rat	2980 mg/kg
LD50 dermal rabbit	2980 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat	> 0.74 mg/l
ATE US (oral)	2627 mg/kg body weight
ATE US (dermal)	2980 mg/kg body weight
Diethylenetriamine (111-40-0)	
LD50 oral rat	1553 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	1045 mg/kg body weight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	70 mg/m³
LC50 Inhalation - Rat [ppm]	16.4 ppm/4h
ATE US (oral)	1553 mg/kg body weight
ATE US (dermal)	1045 mg/kg body weight
ATE US (gases)	16.4 ppmV/4h
ATE US (vapors)	0.07 mg/l/4h

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Diethylenetriamine (111-40-0) ATE US (dust, mist)	0.07 mg/l/4h
Bisphenol A (80-05-7)	
LD50 oral rat	2000 – 5000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female,
EBOO Ordi rat	Experimental value, Oral (one dose), 14 day(s))
LD50 dermal rabbit	3000 mg/kg body weight (Rabbit, Experimental value, Dermal)
ATE US (oral)	2000 mg/kg body weight
ATE US (dermal)	3000 mg/kg body weight
Tetraethylenepentamine (112-57-2)	
LD50 oral rat	3990 mg/kg
LD50 dermal rabbit	660 mg/kg
LC50 Inhalation - Rat	> 9.9 mg/l air (8 h, Rat, Male, Literature study, Inhalation)
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	660 mg/kg body weight
4-tert-butylphenol (98-54-4)	
LD50 oral rat	> 2000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral,
2200 0.4.1.4.	14 day(s))
LD50 dermal rabbit	> 16000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female,
	Experimental value, Dermal)
LC50 Inhalation - Rat	> 5.6 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
kin corrosion/irritation	: Causes severe skin burns.
erious eye damage/irritation	: Assumed to cause serious eye damage
espiratory or skin sensitization	: May cause an allergic skin reaction.
erm cell mutagenicity	: Not classified
arcinogenicity	: Not classified
Diethylenetriamine (111-40-0)	May agua ragairetan irritation
STOT-single exposure	May cause respiratory irritation.
Bisphenol A (80-05-7)	
STOT-single exposure	May cause respiratory irritation.
TOT repeated expenses	
101-repeated exposure	: Not classified
<u> </u>	: Not classified
4-Nonylphenol, branched (84852-15-3)	
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Da
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days) NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days) NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0)  LOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7) LOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7) LOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7) LOAEL (oral,rat,90 days)  spiration hazard	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7) LOAEL (oral,rat,90 days)  spiration hazard  ymptoms/effects after skin contact	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  : Not classified
4-Nonylphenol, branched (84852-15-3) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0) LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Bisphenol A (80-05-7) LOAEL (oral,rat,90 days)  spiration hazard ymptoms/effects after skin contact ymptoms/effects after eye contact	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  : Not classified : Burns. May cause an allergic skin reaction.
LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)  Diethylenetriamine (111-40-0)  LOAEL (oral,rat,90 days)  NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  530 – 620 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  70 – 80 mg/kg body weight Animal: rat, Guideline: other:OECD Guideline for Testing of Chemicals, No. 451, May 12, 1981  600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)  : Not classified  : Burns. May cause an allergic skin reaction.  : Serious damage to eyes.

4-Nonylphenol, branched (84852-15-3)

Poly(oxypropylene)diamine (9046-10-0)

Persistence and degradability

Persistence and degradability

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#### **SECTION 12: Ecological information** 12.1. **Toxicity** Ecology - general : Very toxic to aquatic life with long lasting effects. 4-Nonylphenol, branched (84852-15-3) LC50 - Fish [1] 0.08 mg/l (ASTM E729-96, 96 h, Hybopsis monacha, Static system, Fresh water, Experimental value, Nominal concentration) EC50 - Crustacea [1] 0.084 mg/l (ASTM E729-88, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value) NOEC chronic fish 0.006 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '91 d' Poly(oxypropylene)diamine (9046-10-0) LC50 - Fish [1] 772.14 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinodon variegatus, Static system, Salt water, Experimental value, GLP) 80 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static EC50 - Crustacea [1] system, Fresh water, Experimental value, GLP) ErC50 algae 15 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) Diethylenetriamine (111-40-0) LC50 - Fish [1] 430 mg/l (EU Method C.1, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, GLP) EC50 - Crustacea [1] 64.6 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) EC50 - Crustacea [2] 16 mg/l Test organisms (species): Daphnia magna 1164 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static ErC50 algae system, Fresh water, Experimental value, GLP) LOEC (chronic) 11.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC (chronic) 5.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC chronic fish > 10 mg/l Test organisms (species): Gasterosteus aculeatus Duration: '28 d' Bisphenol A (80-05-7) 4.6 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through LC50 - Fish [1] system, Fresh water, Experimental value, GLP) EC50 - Crustacea [1] 10.2 mg/l (ASTM E-35.21, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) 2.73 – 3.1 mg/l (EPA 600/9-78-018, 96 h, Pseudokirchneriella subcapitata, Static system, ErC50 algae Fresh water, Experimental value, GLP) LOEC (chronic) 3.6 mg/l Test organisms (species): other:Rotifer (Brachionus calyciflorus) Duration: '48 h' Tetraethylenepentamine (112-57-2) 420 mg/l (EU Method C.1, 96 h, Poecilia reticulata, Semi-static system, Fresh water, LC50 - Fish [1] Experimental value, GLP) EC50 - Crustacea [1] 24.1 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Experimental value, GLP) ErC50 algae 6.8 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Experimental value) 4-tert-butylphenol (98-54-4) LC50 - Fish [1] > 1 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Lethal) EC50 - Crustacea [1] 4.8 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test. 48 h. Daphnia magna. Static system, Fresh water, Experimental value, Locomotor effect) 14 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static ErC50 algae system, Fresh water, Experimental value, Nominal concentration) 12.2. Persistence and degradability

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Not readily biodegradable in water.

Biodegradability in soil: no data available. Readily biodegradable in water.

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Diethylenetriamine (111-40-0)		
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.	
Bisphenol A (80-05-7)		
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.	
Chemical oxygen demand (COD)	0.036 g O₂/g substance	
ThOD	2.5 g O₂/g substance	
Tetraethylenepentamine (112-57-2)		
Persistence and degradability	Not readily biodegradable in water.	
4-tert-butylphenol (98-54-4)		
Persistence and degradability	Readily biodegradable in water.	
ThOD	2.77 g O₂/g substance	

# 12.3. Bioaccumulative potential

4-Nonylphenol, branched (84852-15-3)	
BCF - Fish [1]	1200 – 1300 (OECD 305: Bioconcentration: Flow-Through Fish Test, 16 day(s), Gasterosteus aculeatus, Flow-through system, Salt water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	5.4 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
Poly(oxypropylene)diamine (9046-10-0)	
Partition coefficient n-octanol/water (Log Pow)	1.34 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Not bioaccumulative.
Diethylenetriamine (111-40-0)	
BCF - Fish [1]	0.3 – 6.3 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-1.58 (Calculated, 20 °C)
Bioaccumulative potential	Not bioaccumulative.
Bisphenol A (80-05-7)	
BCF - Fish [1]	5.1 – 67 (Other, 42 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3.4 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 21.5 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Tetraethylenepentamine (112-57-2)	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-3.16 (Estimated value, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4-tert-butylphenol (98-54-4)	
BCF - Fish [1]	20 – 48 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

## 12.4. Mobility in soil

4-Nonylphenol, branched (84852-15-3)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.35 – 5.69 (log Koc, Other, Experimental value, GLP)	
Ecology - soil	Adsorbs into the soil.	
Poly(oxypropylene)diamine (9046-10-0)		
Surface tension	Data waiving	
Ecology - soil	No (test)data on mobility of the substance available.	

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Diethylenetriamine (111-40-0)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.4 – 4.6 (log Koc, Other, Experimental value, GLP)	
Ecology - soil	Adsorbs into the soil. Low potential for mobility in soil. Soil contaminant.	
Bisphenol A (80-05-7)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.4 – 3.18 (log Koc, Equivalent or similar to OECD 106, Experimental value)	
Ecology - soil	Low potential for adsorption in soil.	
Tetraethylenepentamine (112-57-2)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.04 (log Koc, Calculated value)	
Ecology - soil	Low potential for mobility in soil.	
4-tert-butylphenol (98-54-4)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.1 (log Koc, QSAR)	
Ecology - soil	Low potential for mobility in soil.	

#### 12.5. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## **SECTION 14: Transport information**

## **Department of Transportation (DOT)**

In accordance with DOT

Transport document description (DOT) : UN3267 Corrosive liquid, basic, organic, n.o.s. (4-Nonylphenol, branched;

Poly(oxypropylene)diamine), 8, III

UN-No.(DOT) : UN3267

Proper Shipping Name (DOT) : Corrosive liquid, basic, organic, n.o.s.

4-Nonylphenol, branched; Poly(oxypropylene)diamine

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : III - Minor Danger Hazard labels (DOT) : 8 - Corrosive



Dangerous for the environment : Yes
Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203 DOT Packaging Bulk (49 CFR 173.xxx) : 241

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DOT Special Provisions (49 CFR 172.102)

: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters",52 - Stow "separated from" acids

Emergency Response Guide (ERG) Number : 153

Other information : No supplementary information available.

#### **Transportation of Dangerous Goods**

Not applicable

#### Transport by sea

Transport document description (IMDG) : UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (4-Nonylphenol, branched;

Poly(oxypropylene)diamine), 8, III

UN-No. (IMDG) : 3267

CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. 4-Nonylphenol, branched; Poly(oxypropylene)diamine

Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : III - substances presenting low danger

Limited quantities (IMDG) : 5 L

Marine pollutant : Yes



#### Air transport

Transport document description (IATA) : UN 3267 Corrosive liquid, basic, organic, n.o.s. (4-Nonylphenol, branched;

Poly(oxypropylene)diamine), 8, III

UN-No. (IATA) : 3267

Proper Shipping Name (IATA) : Corrosive liquid, basic, organic, n.o.s.

4-Nonylphenol, branched; Poly(oxypropylene)diamine

Class (IATA) : 8 - Corrosives
Packing group (IATA) : III - Minor Danger

## **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

4-Nonylphenol, branched	CAS-No. 84852-15-3	10 – 30%
Bisphenol A	CAS-No. 80-05-7	0.5 – 1%

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4-Nonylphenol, branched (84852-15-3)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313			
EPA TSCA Regulatory Flag SP - SP - indicates a substance that is identified in a proposed Significant New Use Rule.			
Poly(oxypropylene)diamine (9046-10-0)			
Listed on the United States TSCA (Toxic Substan	ices Control Act) inventory		
EPA TSCA Regulatory Flag  XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).			
Diethylenetriamine (111-40-0)			
Listed on the United States TSCA (Toxic Substan	ices Control Act) inventory		
Bisphenol A (80-05-7)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313			
Tetraethylenepentamine (112-57-2)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
fatty acids, C18-unsatd., dimers, reaction products with 1-piperazineethanamine and tall oil (206565-89-1)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			
EPA TSCA Regulatory Flag	PMN - PMN - indicates a commenced PMN substance. S - S - indicates a substance that is identified in a final Significant New Use Rule.		
4-tert-butylphenol (98-54-4)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory			

## 15.2. International regulations

#### **CANADA**

4-Non	vlphenol	. branched	(84852-15-3)

Listed on the Canadian DSL (Domestic Substances List)

#### Poly(oxypropylene)diamine (9046-10-0)

Listed on the Canadian DSL (Domestic Substances List)

## Diethylenetriamine (111-40-0)

Listed on the Canadian DSL (Domestic Substances List)

## Bisphenol A (80-05-7)

Listed on the Canadian DSL (Domestic Substances List)

## Tetraethylenepentamine (112-57-2)

Listed on the Canadian DSL (Domestic Substances List)

#### fatty acids, C18-unsatd., dimers, reaction products with 1-piperazineethanamine and tall oil (206565-89-1)

Listed on the Canadian NDSL (Non-Domestic Substances List)

# 4-tert-butylphenol (98-54-4)

Listed on the Canadian DSL (Domestic Substances List)

## **EU-Regulations**

Contains the following REACH ingredient(s): 4-Nonylphenol, branched (EC 284-325-5, CAS 84852-15-3), Bisphenol A (EC 201-245-8, CAS 80-05-7), 4-tert-butylphenol (EC 202-679-0, CAS 98-54-4)

## **National regulations**

No additional information available

## 15.3. US State regulations



This product can expose you to Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Diethylenetriamine(111-40-0)	U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List

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Component	State or local regulations
Bisphenol A(80-05-7)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List
Tetraethylenepentamine(112-57-2)	U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List

# **SECTION 16: Other information**

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## Full text of H-phrases:

Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
Harmful if inhaled
May cause respiratory irritation
May damage fertility or the unborn child
Suspected of damaging fertility or the unborn child
Very toxic to aquatic life
Toxic to aquatic life
Harmful to aquatic life
Very toxic to aquatic life with long lasting effects
Toxic to aquatic life with long lasting effects
Harmful to aquatic life with long lasting effects

## SDS US - ResinLab

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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