

## Safety Data Sheet

acc. to OSHA HCS

Print Date 03/23/2017

Revision Date 03/23/2017

- **Product Identifier**
  - **Trade Name:** EP1295 NULBLACK B
  - **Application of the Substance or Mixture:** Epoxy Hardener
- **Details of the Supplier of the Safety Data Sheet (SDS)**
  - **Manufacturer or Supplier:**  
Resinlab, LLC  
N109 W13300 Ellsworth Drive,  
Germantown, WI 53022  
1-800-388-8605  
www.resinlab.com
  - **Information Department:** Product Safety Department:  
msds@resinlab.com
  - **Emergency Telephone Number:**  
North America - Chemtrec: 1-800-424-9300 (24 hours)  
International - Chemtrec: 01-703-527-3667 (24 hours)

### 2 Hazard(s) identification

- **Hazard Classification**

Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.  
 Repr. 2 H361 Suspected of damaging fertility or the unborn child.

- **Label Elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Pictogram(s)**



GHS05    GHS07    GHS08

- **Signal Word** Danger

- **Hazard-determining Component(s)**

4-Nonylphenol, branched  
 N-(2-Aminoethyl)piperazine  
 Polyamide CAS not available per 29CFR1910.1200(i)  
 Fatty acids, tall-oil, reaction products with tetraethylenepentamine  
 Amino ether -CAS withheld per 29CFR1910.1200(i).

- **Hazard statements**

H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H361 Suspected of damaging fertility or the unborn child.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Wear protective gloves / eye protection / face protection.  
 Wash thoroughly after handling.  
 Contaminated work clothing must not be allowed out of the workplace.  
 Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Wash contaminated clothing before reuse.  
 IF exposed or concerned: Get medical advice/attention.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Hazard Rating System**

- **NFPA System**

- **NFPA Ratings (scale 0 - 4)**



NFPA special hazards (water reactivity and oxidizing property): None

- **HMIS System**

- **HMIS Ratings (scale 0 - 4)**



- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

#### Chemical Characterization: Mixtures

##### Composition/Information on Ingredients

CAS: 84852-15-3 EINECS: 284-625-5 Index Number: 601-053-00-8	4-Nonylphenol, branched Repr. 2, H361 Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Chronic 1, H410 Acute Tox. 4, H302	10-20%
	Polyamide CAS not available per 29CFR1910.1200(i) Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	10-20%
CAS: 61788-32-7 EINECS: 262-967-7 RTECS: WZ6535000	Hydrogenated Terphenyl Aquatic Chronic 4, H413	5-<10%
CAS: 140-31-8 EINECS: 205-411-0 Index Number: 612-105-00-4 RTECS: TK 8050000	N-(2-Aminoethyl)piperazine Acute Tox. 3, H311 Skin Corr. 1B, H314 Acute Tox. 4, H302; Skin Sens. 1, H317 Aquatic Chronic 3, H412	5-<10%
CAS: 68953-36-6 EINECS: 273-201-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine  Skin Corr. 1A, H314 Skin Sens. 1, H317	1-2.5%
	Amino ether -CAS withheld per 29CFR1910.1200(i) Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	1-2.5%
CAS: 26140-60-3 EINECS: 247-477-3	Terphenyls Aquatic Chronic 1, H410 STOT SE 3, H335	0.25-1%
CAS: 112-57-2 EINECS: 203-986-2 Index Number: 612-060-00-0 RTECS: KH8585000	Tetraethylenepentamine Skin Corr. 1B, H314 Aquatic Chronic 2, H411 Acute Tox. 4, H312	0.1-<0.25%

#### Additional Information:

If the chemical name/CAS number is proprietary and or weight percentage is listed as a range, the specific chemical identity and or percentage of composition has been withheld as a trade secret.

### 4 First-aid measures

#### Description of First Aid Measures

##### General Information

Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

##### After Inhalation

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing.  
In case of unconsciousness place patient stably in side position for transportation.  
If breathing is difficult, administer oxygen.  
Supply fresh air; consult doctor in case of complaints.

##### After Skin Contact

Immediately remove all contaminated clothing and put them in a tightly sealed bag.  
Immediately wash contaminated skin with water and soap and rinse them thoroughly.  
Get medical attention

##### After Eye Contact

Immediately rinse opened eyes for at least 15 minutes under running water.  
Immediately remove contact lenses if present. Continue rinsing.  
Do not put any ointments, oils or medication in eyes without specific instructions.  
Seek medical advice.

##### After Swallowing

If victim is unconscious; never give anything by mouth.  
If victim is conscious; rinse out mouth and give victim small amounts of water.  
Do NOT induce vomiting.  
If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration of liquid into lungs.  
Get medical attention

##### Information for Doctor

**Indication of any Immediate Medical Attention and Special Treatment Needed**  
Check section 11 Toxicological Information for further relevant information.

### 5 Fire-fighting measures

#### Extinguishing Media

##### Suitable Extinguishing Agent(s)

Use fire fighting measures and extinguishing agents that suit the environment.  
In case of fire, suitable extinguishing agents are:  
Alcohol resistant foam.  
Dry chemical or fire-extinguishing powder.  
Carbon dioxide (CO<sub>2</sub>).  
Water spray or water fog.

##### Unsuitable Extinguishing Agent(s)

Water with full jet

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- **Firefighting Procedures**

Solid stream of water may spread fire; use water spray or water fog.  
 Cool all affected containers with flooding quantities of water.  
 Runoff from fire control or dilution water may be corrosive and/or toxic; protect personnel and minimize property damage.  
 Contain fire water runoff if possible to prevent environmental pollution.  
 Apply water from as far as a distance as possible.

- **Special Hazards Arising in Fire**

In case of fire, following can be released:  
 May generate ammonia gas.  
 low molecular weight hydrocarbons.  
 Carbon dioxide (CO<sub>2</sub>) and Carbon monoxide (CO)

- **Advice for Firefighters**

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).

As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

- **Additional Information** Ensure adequate and functional fire fighting facilities equipped in working area at all times.

### 6 Accidental release measures

- **Personal Precautions**

Do not touch damaged containers or spills unless wearing appropriate protective equipment.  
 Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.  
 Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

- **Environmental Precautions**

Keep away from sewage system or other water courses; do not penetrate ground/soil.  
 Inform respective authorities in case of any seepage to the environment.

- **Cleaning Up Methods**

Ensure adequate ventilation.  
 Eliminate all ignition sources.  
 Keep unauthorized personnel away.  
 Absorb residues with liquid-binding materials.  
 Ventilate and wash area after clean-up is complete.  
 Collect spills in suitable and properly labeled containers.  
 Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.  
 Dispose contaminated chemicals as waste according to Section 13.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

21645-51-2	Aluminum hydroxide	8.7 mg/m <sup>3</sup>
84852-15-3	4-Nonylphenol, branched	3.9 mg/m <sup>3</sup>
61788-32-7	Hydrogenated Terphenyl	1.5 ppm
140-31-8	N-(2-Aminoethyl)piperazine	6.4 mg/m <sup>3</sup>
26140-60-3	Terphenyls	0.45 mg/m <sup>3</sup>
112-57-2	Tetraethylenepentamine	15 mg/m <sup>3</sup>

- **PAC-2:**

21645-51-2	Aluminum hydroxide	73 mg/m <sup>3</sup>
84852-15-3	4-Nonylphenol, branched	43 mg/m <sup>3</sup>
61788-32-7	Hydrogenated Terphenyl	47 ppm
140-31-8	N-(2-Aminoethyl)piperazine	71 mg/m <sup>3</sup>
26140-60-3	Terphenyls	5 mg/m <sup>3</sup>
112-57-2	Tetraethylenepentamine	130 mg/m <sup>3</sup>

- **PAC-3:**

21645-51-2	Aluminum hydroxide	440 mg/m <sup>3</sup>
84852-15-3	4-Nonylphenol, branched	260 mg/m <sup>3</sup>
61788-32-7	Hydrogenated Terphenyl	280 ppm
140-31-8	N-(2-Aminoethyl)piperazine	420 mg/m <sup>3</sup>
26140-60-3	Terphenyls	1,400 mg/m <sup>3</sup>
112-57-2	Tetraethylenepentamine	790 mg/m <sup>3</sup>

### 7 Handling and storage

- **Handling**

- **Precautions for Safe Handling**

Avoid any body contact of containers or contents unless wearing appropriate personal protective equipment.  
 Keep away from incompatible material(s).  
 Avoid any release into the environment.  
 For industrial or professional use only  
 Observe all the personal protection requirements in Section 8.

- **Information about Protection Against Explosions and Fires**

Keep away from heat, sparks, open flame and other ignition sources during handling.  
 Be prepared with respirators.

- **Storage**

- **Requirements to be Met by Storerooms and Receptacles**

Store in a well-ventilated place; provide ventilation for receptacles.  
 Keep stored in accordance with local, regional, national, and international regulations.

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• **Additional Information** No further relevant information.

### 8 Exposure controls/personal protection

• **Engineering Measures or Controls**

• **Exposure Limit Values that Require Monitoring at the Workplace**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**84852-15-3 4-Nonylphenol, branched**

TEEL-1 Short-term value: 20 mg/m<sup>3</sup>

TEEL-2 Short-term value: 125 mg/m<sup>3</sup>

TEEL-3 Short-term value: 500 mg/m<sup>3</sup>

**61788-32-7 Hydrogenated Terphenyl**

REL Long-term value: 5 mg/m<sup>3</sup>, 0.5 ppm

TLV Long-term value: 4.9 mg/m<sup>3</sup>, 0.5 ppm  
nonirradiated

**140-31-8 N-(2-Aminoethyl)piperazine**

TEEL-1 Short-term value: 7.5 mg/m<sup>3</sup>

TEEL-2 Short-term value: 50.0 mg/m<sup>3</sup>

TEEL-3 Short-term value: 500 mg/m<sup>3</sup>

**112-57-2 Tetraethylenepentamine**

WEEL Long-term value: 5 mg/m<sup>3</sup>  
Skin, DSEN

• **Other Engineering Measures or Controls**

Ventilation rates should be matched to conditions.

If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

• **Personal Protective**

• **General Protective and Hygienic Measures**

Use of this material at elevated temperatures or aerosol/spray applications may require additional precautions.

Avoid any contact with skin or eye.

Do not eat, drink or smoke during work.

Clean hands and exposed skin thoroughly after work and before breaks.

Pregnant women should avoid direct skin contact with this product.

• **Personal Protective Equipment (PPE)**

• **Breathing Equipment**

Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air supplied respirator.

Observe OSHA regulations (29CFR 1910.134) for respirator use.

• **Hand Protection**

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Nitrile Gloves

Butyl Rubber Gloves

• **Eye Protection**

do not wear contacts.

safety glasses with side shields and or face shield.

• **Body Protection** Appropriate chemical resistant clothing.

• **Additional Information**

All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work.

The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

### 9 Physical and chemical properties

• **Information on Basic Physical and Chemical Properties**

• **Appearance:**

• **Form:**

Liquid

• **Color:**

Cream

• **Odor:**

Amine-like

• **Odor Threshold:**

Not determined.

• **PH-Value:**

Not determined.

• **Change in Condition:**

• **Melting Point:**

Not determined.

• **Boiling Point:**

Not determined.

• **Flash Point:**

>93 °C (>199 °F)

• **Decomposition Temperature:**

Not determined.

• **Auto-ignition Temperature:**

Not determined.

• **Flammability:**

Not determined.

• **Explosion:**

Not determined.

• **Explosion Limits:**

• **Lower:**

Not determined.

• **Upper:**

Not determined.

• **Vapor Pressure:**

Not determined.

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- **Vapor Density:** not determined
- **Density at 20 °C (68 °F):** 1.32 g/cm<sup>3</sup> (11.015 lbs/gal)
- **Solubility in or Miscibility with**
- **Water:** Partially miscible.
- **Viscosity:**
- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

· **Additional Information** No further relevant information.

### 10 Stability and reactivity

- **Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.
- **Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
- **Thermal Decomposition and Conditions to be Avoided**  
Keep away from incompatible material(s).  
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.
- **Possibility of Other Hazardous Reaction(s)**  
May slowly corrode Copper, Aluminum, Nickel, Cobalt, Zinc and Galvanized surfaces.  
May react with strong reducing agents generating flammable hydrogen (H<sub>2</sub>).
- **Incompatible Material(s)**  
Oxidizing agents  
Acids  
Bases (Alkalis)
- **Hazardous Decomposition Product(s)**  
Phosphoric acid  
Ammonia (NH<sub>3</sub>) and/or Amines.  
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute Toxicity**
- **LD/LC50 values that are relevant for classification:**  
If swallowed, may cause:  
diarrhea  
nausea  
shock or collapse  
See acute inhalative effect(s) for further information

#### 21645-51-2 Aluminum hydroxide

Oral	LD50	(rat) (LD0(OECD TG 401)>5000mg/kg; no death occurred)
Dermal	LD50	(Test species: n/a) (Toxicity not expected based on acute oral data)
Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected as a wetted form)

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

Oral	LD50	1604 mg/kg (rat) Reference: Vendor SDS (2015)
Dermal	LD50	2031 mg/kg (rabbit) Vendor SDS 2015
Inhalative	LC50/4 h	not classified mg/l (mouse) (Non-toxic; LC50 exceeded the saturated vapor value)

#### 68333-79-9 Ammonium Polyphosphate

Oral	LD50	5625 mg/kg (rat) LD0 (OECD TG 425) ≥ 2000mg/kg; no death occurred. All animals survived, gained weight and appeared active and healthy throughout the study period. Reference: SIDS Dossier (2007).
Dermal	LD50	(rat) (LD0 (OECD TG 402) ≥ 5000mg/kg; no death occurred) All animals survived, gained weight and appeared active and healthy throughout the study period. Reference: SIDS Dossier (2007).
Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected due to wetted form)

#### 61788-32-7 Hydrogenated Terphenyl

Oral	LD50	12500 mg/kg (mouse) (Adamson and Weeks method)
Dermal	LD50	6800 mg/kg (rabbit) (LD50; Industrial biotest laboratory method)
Inhalative	LC50/4 h	not classified mg/l (rat)

#### 140-31-8 N-(2-Aminoethyl)piperazine

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	866 mg/kg (rabbit)
Inhalative	LC50/4 h	not classified mg/l (rat) (No mortality observed at saturated atmosphere)

#### 68953-36-6 Fatty acids, tall-oil, reaction products with tetraethylenepentamine

Oral	LD50	(rat) (LD50 > 2000 mg/kg)
Dermal	LD50	(rabbit) (LD50 ≥ 8550 mg/kg)

#### 68956-74-1 Polyphenyls, quater- and higher, partially hydrogenated

Oral	LD50	>2000 mg/kg (read across from 101-68-8)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	>3.8 mg/l (read across from 101-68-8)

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**Amino ether -CAS withheld per 29CFR1910.1200(i).**

Oral	LD50	4310 mg/kg (read across from 101-68-8)
Dermal	LD50	2510 mg/kg (read across from 101-68-8)

**26140-60-3 Terphenyls**

Oral	LD50	2604 mg/kg (rat) (OECD TG 401)
Dermal	LD50	> 5000 mg/kg (rabbit) (OECD TG 402)
Inhalative	LC50/4 h	(rat) (LC0> 3.8mg/l; OECD TG 403; no death occurred)

- **Specific symptoms in biological assay:**

- Not a classified acute dermal hazard.
  - See acute inhalative effect(s) for further information.

- **Primary irritant effect:**

- While not a classified inhalative acute toxicity hazard, the product may cause the following symptoms:
  - burning sensation
  - sore throat
  - cough, headache, nausea, shortness of breath, vomiting, and wheezing

- **on the skin:** Caustic effect on the skin and mucous membranes.
    - **on the eye:** Strong caustic effect.

- **Sensitization:** Possible sensitization upon contact with skin.

- **Experience with humans:** Not applicable.

- **Additional toxicological information:**

- The product shows the following dangers according to internally approved calculation methods for preparations:

- Corrosive

- Irritant

- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

- None of the ingredients is listed.

- **NTP (National Toxicology Program)**

- None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

- None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

- **21645-51-2 Aluminum hydroxide**

- EC50 not irritating mg/kg (rabbit) (OECD TG 404; semiocclusive; 4hr-contact; undiluted)

- **84852-15-3 4-Nonylphenol, branched**

- EC50 corrosive mg/kg (rabbit) (Directive 84/449/EEC B4; Post-exposure: 8 days)

- All tested animals showed signs of erythema, edema, and eschar which were not fully reversible within 8 days. Reference: IUCLID Dataset (2000).

- **68333-79-9 Ammonium Polyphosphate**

- EC50 not irritation mg/kg (rabbit) (24hr-contact; Draize score: 0 (Max. 8))

- The substance caused slight irritation in an FDA-Richtlinie test; another study using 90% concentrated substance led no irritating effects. Meanwhile, it was not irritating through an 24-hr exposure in rabbits. When considering the weight of all evidence, the substance was not determined to be irritating to rabbit skin.
        - Reference: IUCLID Dataset (2000).

- **Polyamide CAS not available per 29CFR1910.1200(i)**

- EC50 moderate mg/kg (Test species: n/a)

- **61788-32-7 Hydrogenated Terphenyl**

- EC50 not irritating mg/kg (rabbit) (Draize test)

- **140-31-8 N-(2-Aminoethyl)piperazine**

- EC50 corrosive mg/kg (rabbit) (US DOT Corrosivity Assay)

- **68953-36-6 Fatty acids, tall-oil, reaction products with tetraethylenepentamine**

- EC50 (No data available)

- **68956-74-1 Polyphenyls, quater- and higher, partially hydrogenated**

- EC50 (No data available)

- **26140-60-3 Terphenyls**

- EC50 not irritating mg/kg (rabbit) (OECD TG 404; 0.5g neat substance; 24 hr-exposure)

- **Persistence and degradability** No data available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No data available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:** The product is non-rapid degradable, and low or not highly bioaccumulative.

- **General notes:**

- Water hazard class 3 (Self-assessment): extremely hazardous for water

- Do not allow product to reach ground water, water course or sewage system, even in small quantities.

- Must not reach bodies of water or drainage ditch undiluted or unneutralized.

- Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

- **PBT:** None of the ingredients is listed.

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- **vPvB:** None of the ingredients is listed.
- **Other adverse effects** No further relevant information.



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### 13 Disposal considerations



- **Waste treatment methods**
  - **Recommendation:**  
Generation of waste should be avoided or minimized wherever possible.  
Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.  
Dispose of contents/containers in accordance with local, regional, national, and international regulations.
- **Uncleaned packagings:**
  - **Recommendation** Dispose of according to your local waste regulations.

### 14 Transport information



- **UN-Number**  
· **DOT, ADR, IMDG, IATA** UN3267
- **UN Proper Shipping Name** Corrosive liquid, basic, organic, n.o.s. (4-Nonylphenol, branched, N-Aminoethylpiperazine)  
Corrosive liquid, basic, organic, n.o.s. (4-Nonylphenol, branched, N-Aminoethylpiperazine)  
CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (4-Nonylphenol, branched, N-AMINOETHYLPIPERAZINE), MARINE POLLUTANT  
CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (4-Nonylphenol, branched, N-AMINOETHYLPIPERAZINE)
- **DOT**
- **IMDG**
- **IATA**
- **Transport hazard class(es)**
  - **DOT**


    - **Class** 8 Corrosive substances
    - **Label** 8
  - **ADR**

    - **Class** 8 (C7) Corrosive substances
    - **Label** 8
  - **IMDG**

    - **Class** 8 Corrosive substances
    - **Label** 8
  - **IATA**



    - **Class** 8 Corrosive substances
    - **Label** 8
- **Packing group**  
· **DOT, ADR, IMDG, IATA** III
- **Environmental Hazards:**
  - **Marine Pollutant:** Yes  
Symbol (fish and tree)
  - **Special Marking (ADR):** Symbol (fish and tree)
- **Special Precautions:** Warning: Corrosive substances
  - **Danger Code (Kemler):** 80
  - **EMS Number:** F-A,S-B
  - **Segregation Groups** Alkalis

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<ul style="list-style-type: none"> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> <li>· <b>Segregation Code</b></li> </ul>	A SW2 Clear of living quarters. SG35 Stow "separated from" acids.
<ul style="list-style-type: none"> <li>· <b>Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional Information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> <li>· <b>Remarks:</b></li> </ul>	On passenger aircraft/rail: On cargo aircraft only: Special marking with the symbol (fish and tree).
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED, N-AMINOETHYLPIPERAZINE), 8, III, ENVIRONMENTALLY HAZARDOUS

### 15 Regulatory information

<ul style="list-style-type: none"> <li>· <b>USA Regulation Lists</b></li> <li>· <b>SARA (Superfund Amendments and Reauthorization Act of 1986)</b></li> <li>· <b>Section 302 (Extremely Hazardous Substances)</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>Section 313 (Toxics Release Inventory (TRI) reporting)</b></li> </ul>			
84852-15-3	4-Nonylphenol, branched		10-20%
<ul style="list-style-type: none"> <li>· <b>Section 311/312 (Hazardous Chemical Inventory Reporting)</b></li> </ul>			
84852-15-3	4-Nonylphenol, branched	A	10-20%
140-31-8	N-(2-Aminoethyl)piperazine	A, C	5-<10%
112-57-2	Tetraethylenepentamine	A	0.1-<0.25%
<ul style="list-style-type: none"> <li>· <b>Hazard Abbreviations for SARA 311/312</b></li> <li>A - Acute Health Hazard</li> <li>C - Chronic Health Hazard</li> <li>F - Fire Hazard</li> <li>R - Reactive Hazard</li> <li>S - Sudden Release of Pressure Hazard</li> </ul>			
<ul style="list-style-type: none"> <li>· <b>TSCA (Toxic Substances Control Act)</b></li> </ul>			
21645-51-2	Aluminum hydroxide		
84852-15-3	4-Nonylphenol, branched		
68333-79-9	Ammonium Polyphosphate		
61788-32-7	Hydrogenated Terphenyl		
140-31-8	N-(2-Aminoethyl)piperazine		
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine		
68956-74-1	Polyphenyls, quater- and higher, partially hydrogenated		
26140-60-3	Terphenyls		
112-57-2	Tetraethylenepentamine		
<ul style="list-style-type: none"> <li>· <b>Proposition 65</b></li> <li>· <b>Chemicals Known to Cause Cancer</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>Chemicals Known to Cause Reproductive Toxicity for Females</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>Chemicals Known to Cause Reproductive Toxicity for Males</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>Chemicals Known to Cause Developmental Toxicity</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>Carcinogenic Categories</b></li> <li>· <b>EPA (Environmental Protection Agency)</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>TLV (Threshold Limit Value Established by ACGIH)</b></li> </ul>			
None of the ingredients is listed.			
<ul style="list-style-type: none"> <li>· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b></li> </ul>			
None of the ingredients is listed.			

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**International Regulation Lists**
**Chinese Chemical Inventory of Existing Chemical Substances:**

21645-51-2	Aluminum hydroxide
84852-15-3	4-Nonylphenol, branched
68333-79-9	Ammonium Polyphosphate
61788-32-7	Hydrogenated Terphenyl
140-31-8	N-(2-Aminoethyl)piperazine
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine
68956-74-1	Polyphenyls, quater- and higher, partially hydrogenated
26140-60-3	Terphenyls
112-57-2	Tetraethylenepentamine

**Japanese Existing and New Chemical Substance List:**

21645-51-2	Aluminum hydroxide
84852-15-3	4-Nonylphenol, branched
68333-79-9	Ammonium Polyphosphate
61788-32-7	Hydrogenated Terphenyl
140-31-8	N-(2-Aminoethyl)piperazine
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine
68956-74-1	Polyphenyls, quater- and higher, partially hydrogenated
26140-60-3	Terphenyls
112-57-2	Tetraethylenepentamine

**Korean Existing Chemical Inventory:**

21645-51-2	Aluminum hydroxide
84852-15-3	4-Nonylphenol, branched
68333-79-9	Ammonium Polyphosphate
61788-32-7	Hydrogenated Terphenyl
140-31-8	N-(2-Aminoethyl)piperazine
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine
68956-74-1	Polyphenyls, quater- and higher, partially hydrogenated
26140-60-3	Terphenyls
112-57-2	Tetraethylenepentamine

**European Pre-registered substances:**

21645-51-2	Aluminum hydroxide
84852-15-3	4-Nonylphenol, branched
68333-79-9	Ammonium Polyphosphate
61788-32-7	Hydrogenated Terphenyl
140-31-8	N-(2-Aminoethyl)piperazine
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine
68956-74-1	Polyphenyls, quater- and higher, partially hydrogenated
26140-60-3	Terphenyls
112-57-2	Tetraethylenepentamine

**REACH - Substances of Very High Concern (SVHC) List:**

84852-15-3	4-Nonylphenol, branched	10-20%
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**Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department Issuing (M)SDS:** Product Safety Department
- **Contact:** msds@resinlab.com

**Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists  
 ACToR: US EPA Aggregated Computational Toxicology Resource  
 ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road  
 BCF: Bioconcentration Factor  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System  
 CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform  
 CLP/GHS: CLP (Classification, Labelling and Packaging of substances and mixtures) implements the Globally harmonised System (GHS) under Regulation (EC) No 1272/2008.  
 DOT: US Department of Transportation  
 DSL: Canada Domestic Substance List  
 ESIS: European Chemical Substances Information System  
 HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System  
 HPVIS: US EPA High Production Volume Information System  
 HSDB: US NLM TOXNET Hazardous Substances Databank  
 HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database  
 IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)

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IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)  
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)  
ICSC: International Chemical Safety Cards  
IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)  
IUCLID: EU REACH International Uniform Chemical Information Database  
Koc: Partition coefficient, soil Organic Carbon to water  
LC50/LD50: Lethal Concentration/Dose, 50 percent  
N/a: Not available or Not applicable  
NFPA: US National Fire Protection Association  
NIOSH: US National Institute of Occupational Safety and Health  
NITE: National Institute of Technology and Evaluation, Japan  
OECD: Organisation for Economic Co-operation and Development  
OSHA: US Occupational Safety and Health Administration  
P: Marine Pollutant  
RCRA: Resource Conservation and Recovery Act (USA)  
REACH: EU Registry, Evaluation and Authorisation of Chemicals  
RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)  
RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)  
RTECS: US Registry of Toxic Effects of Chemical Substances  
SARA: US Superfund Amendments and Reauthorization Act  
SIDS: OECD existing chemicals Screening Information Data Sets  
SIDS SIAM(R): SIDS Initial Assessment Meetings(Reports)  
SVHC: EU ECHA Substance of Very High Concern  
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)  
TOXLINE: US NLM bibliographic database search system  
TSCA: US Toxic Substance Control Act  
· **Date of preparation / last revision** 03/23/2017 / 2

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