Safety Data Sheet
acc. to OSHA HCS

Printing date 06/01/2017 Reviewed on 06/01/2017

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1 Identification

· **Product identifier**

· **Trade name: EP1287 B**

· **Application of the substance / the mixture** Epoxy Hardener

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
ResinLab, LLC
N109 W13300 Ellsworth Drive
Germantown, WI 53022
1-877-259-1669
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: 01-703-527-3887 (24 hours)

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2 Hazard(s) identification

· **Classification of the substance or mixture**

Acute Tox. 4	H332	Harmful if inhaled.
Skin Corr. 1A	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).

· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Fatty acids, tall-oil, reaction products with tetraethylenepentamine
Bisphenol A
Benzyl alcohol
N-(2-Aminoethyl)piperazine
Triethylenetetramine

· **Hazard statements**
H332 Harmful if inhaled.
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**
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
In case of inadequate ventilation wear respiratory protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical advice/attention if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Wash contaminated clothing before reuse.
Collect spillage.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
12.6 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:**

· **NFPA System**

· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 1
Reactivity = 0

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

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· **HMIS System**
· **HMIS-ratings (scale 0 - 4)**

HEALTH	*3
FIRE	1
REACTIVITY	0

Health = *3
Fire = 1
Reactivity = 0

· **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**

· **Dangerous components:**

CAS: 13560-89-9 EINECS: 236-948-9	Bis(hexachlorocyclopentadieno) STOT RE 2, H373	20-30%
CAS: 68953-36-6 EINECS: 273-201-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine Skin Corr. 1A, H314 Skin Sens. 1, H317	10-20%
CAS: 65997-17-3 EINECS: 266-046-0	Fibrous Glass	10-20%
CAS: 80-05-7 EINECS: 201-245-8 Index number: 604-030-00-0 RTECS: SL 6300000	Bisphenol A Repr. 2, H361 Eye Dam. 1, H318 Skin Sens. 1, H317; STOT SE 3, H335	10-20%
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	10-20%
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	5-<10%
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	5-<10%
CAS: 100-51-6 EINECS: 202-859-9 Index number: 603-057-00-5 RTECS: DN 3150000	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2A, H319 Aquatic Acute 2, H401	1-<2.5%
CAS: 103-83-3 EINECS: 203-149-1 Index number: 612-074-00-7 RTECS: DP 4500000	Benzyldimethylamine Flam. Liq. 3, H226 Acute Tox. 3, H301 Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Chronic 2, H411 Acute Tox. 4, H312; Acute Tox. 4, H332	1-<2.5%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	0.1-1%
CAS: 112-24-3 EINECS: 203-950-6 Index number: 612-059-00-5 RTECS: YE6650000	Triethylenetetramine Skin Corr. 1B, H314 Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	0.1-<1%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-01-8 RTECS: TZ 4300000	isobutane Flam. Gas 1, H220 Press. Gas, H280	0.1-1%

· **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.

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Keep warm, position comfortably and cover well.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Supply fresh air and if symptoms occur call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

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· ***After skin contact:***
Wash skin immediately with soap and water. Remove all contaminated clothing and shoes, continue to rinse skin for 10 minutes. Clean shoes before reuse.
Seek medical advice.
· ***After eye contact:***
Rinse opened eye for 10-15 minutes under running water. Then consult a doctor.
Remove contact lenses if present and easy to do so; continue rinsing.
Do not put any ointments, oils or medication in eyes without specific instructions.
Get medical attention.
· ***After swallowing:***
If victim is unconscious; never give anything by mouth.
If victim is conscious rinse mouth and give small amounts of water.
Do NOT induce vomiting.
Seek immediate medical advice.
If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration of liquid into lungs.

· ***After Exposure***
Move to fresh air at once.
Get medical advice/attention.
· ***Information for doctor:***
· ***Most important symptoms and effects, both acute and delayed*** *No further relevant information available.*
· ***Indication of any immediate medical attention and special treatment needed***
Check section 11 Toxicological Information for further relevant information.

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5 Fire-fighting measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:***
Water spray
Alcohol resistant foam
Fire-extinguishing powder
Carbon dioxide
water fog
Use fire fighting measures that suit the environment.
· ***For safety reasons unsuitable extinguishing agents:*** *Water with full jet*
· ***Special hazards arising from the substance or mixture***
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)
May generate ammonia gas.
Carbon dioxide (CO_2) and Carbon monoxide (CO)
Formaldehyde, a skin and lung sensitizer and a regulated carcinogen, may be formed during fires.
· ***Advice for firefighters***
· ***Protective equipment:***
Mouth respiratory protective device.
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.

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6 Accidental release measures

· ***Personal precautions, protective equipment and emergency procedures***
Wear protective clothing.
Wear protective equipment. Keep unprotected persons away.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
· ***Environmental precautions:***
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· ***Methods and material for containment and cleaning up:***
For large spills: provide diking or containment to minimize spreading. If possible pump and store material in appropriate container.
For small spills: Ventilate and wash area. Collect spills and absorbant material in appropriate container.
Ensure adequate ventilation.
Allow molten product to cool.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent if necessary.
Dispose contaminated material as waste according to item 13.

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7 Handling and storage

· ***Handling:***
· ***Precautions for safe handling***
Do not breathe dust created by cutting, sanding, grinding or machining.
Avoid breathing vapor or spray mists.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Keep away from incompatible material(s).
Avoid any release into the environment.
For industrial or professional use only
Do not breathe dust/fumes/mist/vapor/spray.
Avoid contact with eyes, skin and clothing.
Keep away from heat,sparks, flames and ignition sources.

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Observe all the personal protection requirements in Section 8.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Provide ventilation for receptacles.
Keep stored in accordance with local, regional, national, and international regulations.

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8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
13560-89-9 Bis(hexachlorocyclopentadieno)	
TWA	Short-term value: 1 mg/m³ MFG recommendation 8 hour TWA
65997-17-3 Fibrous Glass	
ACGIH TLV	Long-term value: 10 mg/m³
OSHA PEL	Long-term value: 15 mg/m³ Total dust
140-31-8 N-(2-Aminoethyl)piperazine	
TEEL-1	Short-term value: 7.5 mg/m³
TEEL-2	Short-term value: 50.0 mg/m³
TEEL-3	Short-term value: 500 mg/m³
112-57-2 Tetraethylenepentamine	
WEEL	Long-term value: 5 mg/m³ Skin; DSEN
84852-15-3 4-Nonylphenol, branched	
TEEL-1	Short-term value: 20 mg/m³
TEEL-2	Short-term value: 125 mg/m³
TEEL-3	Short-term value: 500 mg/m³
100-51-6 Benzyl alcohol	
TEEL-1	Short-term value: 260 mg/m³, 60.0 ppm
TEEL-2	Short-term value: 660 mg/m³, 150.0 ppm
TEEL-3	Short-term value: 660 mg/m³, 150.0 ppm
WEEL	Long-term value: 10 ppm
103-83-3 Benzyldimethylamine	
TEEL-1	Short-term value: 3.0 mg/m³
TEEL-2	Short-term value: 20.0 mg/m³
TEEL-3	Short-term value: 200.0 mg/m³
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
OSHA PEL	Short-term value: 15 mg/m³
US ACGIH	Short-term value: 10 mg/m³
112-24-3 Triethylenetetramine	
WEEL	Long-term value: 6 mg/m³, 1 ppm Skin
75-28-5 isobutane	
TLV	Short-term value: 2370 mg/m³, 1000 ppm (EX)

· **Additional Occupational Exposure Limit Values for possible hazards during processing:** None.

· **Exposure controls**
If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
If exposure limits have not been established, maintain airborne levels to an acceptable level.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Be sure to clean skin thoroughly after work and before breaks.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.

· **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.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **Material of gloves**

Chemical resistant gloves

· **Eye protection:**

Safety Glasses with side shields

· **Body protection:** Appropriate chemical resistant clothing.

· **Limitation and supervision of exposure into the environment**
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.

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
· **Form:**	Pasty
· **Color:**	White
· **Odor:**	Amine-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
· **Melting point/Melting range:**	Undetermined.
· **Boiling point/Boiling range:**	Undetermined.
· **Flash point:**	>100 °C (>212 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapor pressure:**	Not determined.
· **Vapor Density:**	not determined
· **Density at 20 °C (68 °F):**	0.57 g/cm³ (4.757 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
· **Water:**	Partly miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
· **Dynamic:**	Not determined.
· **Kinematic:**	Not determined.
· **Solvent content:**	
· **Organic solvents:**	not determined
· **VOC content:**	not determined not determined
· **Solids content:**	46.6 %

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10 Stability and reactivity

· **Reactivity** Not a regulated physical hazard under GHS.

· **Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
· **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions** Exothermic polymerization.
· **Conditions to avoid** Keep away from heat, sparks, flame and any other ignition sources.
· **Incompatible materials:**
Oxidizing agents

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metals
Acids
Bases (Alkalis)
acrylates,alcohols,ketones,nitrites.
· **Hazardous decomposition products:**
Possible in traces.
Refer to section 5.
· **Additional information:**
As long as the prescribed application concentrations are maintained there is no danger that stable emulsions will form.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:**
If swallowed, may cause:
diarrhea
cramps
abnormal pain, headache, nausea, vomiting, drowsiness
See acute inhalative effect(s) for further information

13560-89-9 Bis(hexachlorocyclopentadieno)		
Oral	LD50	> 25000 mg/kg (rat) Reference: EPA HPVIS (2011).
Dermal	LD50	> 8000 mg/kg (rabbit) No mortality was observed; the substance was not classified as an acute oral hazard. Reference: EPA HPVIS (2011).
Inhalative	LC50/4 h	> 2.25 mg/l (rat) No mortality or any adverse effects were observed; classification was not possible. Reference: ACToR (2011).
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)
65997-17-3 Fibrous Glass		
Oral	LD50	2000-5000 mg/kg LD50 estimated to be between 2000-5000 mg/kg. Reference: Vendor SDS 2015
Dermal	LD50	>5000 mg/kg LD50 estimated to be >5000 mg/kg Reference: Vendor SDS 2015
Inhalative	LC50/4 h	(mouse) LD > 20 mg/kg Exposure time unknown. Reference: ChemID (2010).
80-05-7 Bisphenol A		
Oral	LD50	3300 mg/kg (Rats and Mice) Reference: IUCLID Dataset (2000) and ECHA (2011).
Dermal	LD50	3000 mg/kg (rabbit) (3 out of 15 treated rabbits died at 2000 mg/kg) Reference: IUCLID Dataset (2000).
Inhalative	LC50/4 h	(rat) (LC0 > 0.17 mg/l: no death occurred) Reference: ECHA (2011).
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)
112-57-2 Tetraethylenepentamine		
Oral	LD50	2100 mg/kg (white rats) (Classified as Cat 4 by EU)
Dermal	LD50	660 mg/kg (rabbit)
Inhalative	LC50/4 h	(Test species: n/a) Symptoms include mucosal irritations, cough, shortness of breath, inhalation may lead to formation of oedemas in the respiratory tract. Corrosive to respiratory system.
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 satured vapor value)
100-51-6 Benzyl alcohol		
Oral	LD50	1580 mg/kg (mouse)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	not classified mg/l (rat) (LC50 exceeded the satured vapor value)
103-83-3 Benzyldimethylamine		
Oral	LD50	265 mg/kg (rat) Reference: Sigma Aldrich

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Dermal	LD50	1660 mg/kg (rabbit) Behavioral: Tremors/Excitement Reference: Sigma Aldrich
Inhalative	LC50/4 h	2.05 mg/l (rat) (All animals died at 500ppm group) Calculation was based on all death of rats in 500 ppm (2721 mg/m³) group and no death in all other groups.Reference: ECHA (2011).

· **Specific symptoms in biological assay:**
Not a classified acute dermal hazard.
See acute inhalative effect(s) for further information.
· **Primary irritant effect:**
Harmful if inhaled.
dizziness or lightheadedness
sneezing
sore throat
· **on the skin:** Strong caustic effect on skin and mucous membranes.
· **on the eye:** Strong caustic effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
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)**		
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
13560-89-9 Bis(hexachlorocyclopentadieno)	
EC50	(No data available)
68953-36-6 Fatty acids, tall-oil, reaction products with tetraethylenepentamine	
EC50	(No data available)
65997-17-3 Fibrous Glass	
EC50	The substance in dust form causes skin irritation. Reference: Haz-Map (2010).
80-05-7 Bisphenol A	
EC50	not irritating mg/kg (rabbit) The substance was not classified as irritating to skin.Reference: ECHA (2011).
140-31-8 N-(2-Aminoethyl)piperazine	
EC50	corrosive mg/kg (rabbit) (US DOT Corrosivity Assay)
112-57-2 Tetraethylenepentamine	
EC50	corrosive mg/kg (rabbit) (serious skin burns within 20-30 min of application)
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).
100-51-6 Benzyl alcohol	
EC50	(rabbit) (slightly irritating)
103-83-3 Benzyldimethylamine	
EC50	corrosive mg/kg (rabbit) (OECD TG 404) Reference: ECHA (2011).

· **Persistence and degradability** No further relevant information 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.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· **Results of PBT and vPvB assessment**
· **PBT:** None of the ingredients is listed.
· **vPvB:** None of the ingredients is listed.

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· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

· **Waste treatment methods**

· **RCRA Waste:**

103-83-3	Benzyldimethylamine	D001, D002	1-<2.5%

· **Recommendation:**
Must be specially treated adhering to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Dispose of according to your local waste regulations.

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14 Transport information

· **UN-Number**
· **DOT, IMDG, IATA** UN3267

· **UN proper shipping name**
· **DOT** Corrosive liquid, basic, organic, n.o.s. (N-Aminoethylpiperazine, Nonylphenol)
· **IMDG** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (N-AMINOETHYLPIPERAZINE, Nonylphenol), MARINE POLLUTANT
· **IATA** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (N-AMINOETHYLPIPERAZINE, Nonylphenol)

· **Transport hazard class(es)**

· **DOT**

· **Class** 8 Corrosive substances
· **Label** 8

· **IMDG**

· **Class** 8 Corrosive substances
· **Label** 8

· **IATA**

· **Class** 8 Corrosive substances
· **Label** 8

· **Packing group**
· **DOT, IMDG, IATA** III

· **Environmental hazards:**
· **Marine pollutant:** Yes
Symbol (fish and tree)

· **Special precautions for user** Warning: Corrosive substances
· **Danger code (Kemler):** 80
· **EMS Number:** F-A,S-B
· **Segregation groups** Alkalis
· **Stowage Category** A
· **Stowage Code** SW2 Clear of living quarters.
· **Segregation Code** SG35 Stow "separated from" acids.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
· **Quantity limitations** On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

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· **Remarks:** Special marking with the symbol (fish and tree).

· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (N-AMINOETHYLPIPERAZINE, NONYLPHENOL), 8, III

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **SARA Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **SARA Section 313 (Specific toxic chemical listings):**

80-05-7	Bisphenol A	10-20%
84852-15-3	4-Nonylphenol, branched	5-<10%

· **SARA Section 311/312 (Hazardous Chemical Inventory Reporting)**

65997-17-3	Fibrous Glass	Acute Health, Chronic Health	10-20%
80-05-7	Bisphenol A	A, C	10-20%
140-31-8	N-(2-Aminoethyl)piperazine	A, C	10-20%
112-57-2	Tetraethylenepentamine	A	5-<10%
84852-15-3	4-Nonylphenol, branched	A	5-<10%
112-24-3	Triethylenetetramine	A	0.1-<1%

· **Hazard Abbreviations for SARA 311/312**
A - Acute Health Hazard
C - Chronic Health Hazard
F - Fire Hazard
R - Reactive Hazard
S - Sudden Release of Pressure Hazard

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
80-05-7 Bisphenol A

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **International Regulation Lists**

· **Chinese Chemical Inventory of Existing Chemical Substances:**
All ingredients are listed.

· **GHS label elements** GHS label elements

· **National regulations:**

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

13560-89-9	Bis(hexachlorocyclopentadieno)
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine
80-05-7	Bisphenol A
140-31-8	N-(2-Aminoethyl)piperazine
112-57-2	Tetraethylenepentamine
84852-15-3	4-Nonylphenol, branched
100-51-6	Benzyl alcohol
103-83-3	Benzyldimethylamine
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
25214-39-5	Vinylidene chloride, methyl methacrylate, acrylonitrile polymer
7631-86-9	silicon dioxide, chemically prepared
112-24-3	Triethylenetetramine

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Safety Data Sheet
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75-28-5	isobutane	

· **Korean Existing Chemical Inventory:**
All ingredients are listed.

· **European Pre-registered substances:**
All ingredients are listed.

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

80-05-7	Bisphenol A	10-20%
84852-15-3	4-Nonylphenol, branched	5-<10%

· **Restriction of Hazardous Substances Directive (RoHS) list:**
None of the ingredients is listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
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 Development Department
· **Contact:** msds@resinlab.com
· **Date of preparation / last revision** 06/01/2017 / 5
· *** Data compared to the previous version altered.**