

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/20/2018

Version No. 5

Reviewed on 08/20/2018

## 1 Identification

- **Trade name:** *Pallmann P108 Comp. A*
- **Application of the substance / the mixture**  
*2-component epoxy resin primer for moisture vapor reduction (component A)*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Manufacturer:  
 PALLMANN GmbH  
 Im Kreuz 6  
 D-97076 Würzburg  
 Germany  
 Phone +49 931-27964-0  
 Fax +49 931-27964-50  
  
 Supplier:  
 Uzin Utz North America, Inc.  
 14509 E. 33rd. Place, Unit G  
 Aurora, CO 80011  
 Phone: +720-374-4810  
 Toll-Free: +1 866-505-4810  
 Fax: +1 720-374-2113
- **Information department:**  
 Products Development Lab  
 E-Mail: [msds.info@uzin-utz.com](mailto:msds.info@uzin-utz.com)
- **Emergency telephone number:**  
 For Chemical Emergency Spill Leak Fire Exposure or Accident  
 Call CHEMTREC Day or Night: DOMESTIC NORTH AMERICA 800-424-9300  
 International, call +49 621 60 43 333

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS09 Environment

*Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.*



GHS07

*Skin Irrit. 2            H315 Causes skin irritation.  
 Eye Irrit. 2A        H319 Causes serious eye irritation.  
 Skin Sens. 1        H317 May cause an allergic skin reaction.*

- **Label elements**
- **GHS label elements**  
*The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms** GHS07, GHS09
- **Signal word** *Warning*

- **Hazard-determining components of labeling:**  
*Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight  $\leq 700$ )  
 reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (with an average molecular weight  $\leq 700$ )  
 oxirane, mono[(C12-14-alkyloxy)methyl] derivs*
- **Hazard statements**  
*Causes skin irritation.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.*

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*Toxic to aquatic life with long lasting effects.*

· **Precautionary statements**

*Avoid release to the environment.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If on skin: Wash with plenty of soap and water.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **NFPA ratings (scale 0 - 4)**



Health = 2

Flammability = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Flammability = 1

Reactivity = 0

· **Other hazards**

*NFPA Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe.*

*NFPA is the National Fire Protection Association.*

*HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe.*

*HMIS®, the Hazardous Materials Identification System, is a registered mark of the National Paint and Coatings Association (NPCA).*

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous ingredients:**

CAS: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight $\leq 700$ ) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	50-75%
CAS: 9003-36-5	reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (with an average molecular weight $\leq 700$ ) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; Aquatic Acute 2, H401	10-<25%
CAS: 68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	10-<25%

· **Additional information:**

*The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.*

*For the wording of the listed hazard phrases refer to section 16.*

### 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

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- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** Allergic reactions
- **Indication of any immediate medical attention and special treatment needed**  
Also observe SDS of component B.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub> extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information:** Flash point: > 100°C (> 212°F).

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

#### · PAC-1:

CAS: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight ≤ 700)	90 mg/m <sup>3</sup>
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#### · PAC-2:

CAS: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight ≤ 700)	990 mg/m <sup>3</sup>
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#### · PAC-3:

CAS: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight ≤ 700)	5,900 mg/m <sup>3</sup>
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### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Wear suitable protective clothing, gloves and eye/face protection.  
Immediately remove all soiled and contaminated clothing.  
Avoid contact with the eyes and skin.

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**Trade name: Pallmann P108 Comp. A**

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*Keep away from foodstuffs, beverages and feed.*

*Do not eat or drink while working.*

*Wash hands before breaks and at the end of work.*

· **Information about protection against explosions and fires:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** *No special requirements.*

· **Information about storage in one common storage facility:** *Not required.*

· **Further information about storage conditions:**

*Keep receptacle tightly sealed.*

*Protect from humidity and water.*

*Protect from frost.*

· **Specific end use(s)** *No further relevant information available.*

### 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

*The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

*Immediately remove all soiled and contaminated clothing.*

*Avoid contact with the eyes and skin.*

*Wear suitable protective clothing, gloves and eye/face protection.*

*Keep away from foodstuffs, beverages and feed.*

*Wash hands before breaks and at the end of work.*

· **Respiratory protection:** *Not necessary. Ensure that room is well-ventilated during processing.*

· **Protection of hands:**



*Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.*

· **Material of gloves**

*Butyl rubber, BR*

*Nitrile rubber, NBR*

*Recommended thickness of the material:  $\geq 0.5$  mm*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



*Tightly sealed goggles*

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## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Yellowish
<b>Odor:</b>	Light

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

- **Flash point:** > 100 °C (>212 °F)

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Vapor pressure at 20 °C (68 °F):** 5 hPa (3.8 mm Hg)

- **Density at 20 °C (68 °F):** 1.1 g/cm<sup>3</sup> (9.18 lbs/gal)

- **Solubility in / Miscibility with**

- **Water:** Not miscible or difficult to mix.

- **Viscosity:**

- **Dynamic at 20 °C (68 °F):** 1500 mPas

- **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

- **Possibility of hazardous reactions**

May produce violent reactions with bases and numerous organic substances including alcohols and amines.  
Exothermic polymerization.

- **Conditions to avoid** No further relevant information available.

- **Incompatible materials:** No further relevant information available.

- **Hazardous decomposition products:**

Irritant gases/vapors

At elevated temperatures hazardous decomposition products such as carbon dioxide, carbon monoxide, smoke or nitric oxids may be evolved.

## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **Specific symptoms in biological assay:**

- **Primary route(s) of entry:** Skin contact, eye contact, ingestion.

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitization:** Sensitization possible through skin contact.

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- **Additional toxicological information:**

- **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:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

Do not allow product to reach ground water, water course or sewage system.  
Toxic for aquatic organisms  
Also poisonous for fish and plankton in water bodies.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

The product contains materials that are harmful to the environment.  
Do not allow product to reach ground water, water course or sewage system.  
Disposal should be in accordance with local, state or national legislation.

- **Uncleaned packagings:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

## 14 Transport information

- **DOT** Void
- **ADR, IMDG, IATA** UN3082

- **UN proper shipping name**

- **DOT** Void
- **ADR** 3082 Environmentally hazardous substances, liquid, n.o.s. (Bisphenol-A-epoxy resin (average molecular weight  $\leq$  700), Bisphenol-F-epoxy resin (average molecular weight  $\leq$  700))
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-epoxy resin (average molecular weight  $\leq$  700), Bisphenol-

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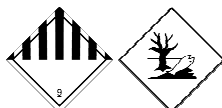
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· **IATA** F-epoxy resin (average molecular weight  $\leq 700$ ), MARINE POLLUTANT  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-epoxy resin (average molecular weight  $\leq 700$ ), Bisphenol-F-epoxy resin (average molecular weight  $\leq 700$ ))

· **DOT**  
· **Class** Void

· **IMDG, IATA**

· **Class** 9 Miscellaneous dangerous substances and articles  
· **Label** 9  
· **DOT** Void  
· **IMDG, IATA** III

· **Environmental hazards:**  
· **Marine pollutant:** Yes  
Symbol (fish and tree)  
· **Special marking (ADR):** Symbol (fish and tree)  
· **Special marking (IATA):** Symbol (fish and tree)

· **Special precautions for user** Warning: Miscellaneous dangerous substances and articles  
· **EMS Number:** F-A,S-F  
· **Stowage Category** A

· **Transport/Additional information:** Not regulated as hazardous material according to the above specifications.

· **DOT**  
· **Remarks:** Not regulated under DOT.  
In accordance with 49 CFR 171.22 this material will be transported in the U.S. as described, marked and labeled in accordance with the IMDG Code.

· **UN "Model Regulation":** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BISPHENOL-A-EPOXY RESIN (AVERAGE MOLECULAR WEIGHT  $\leq 700$ ), BISPHENOL-F-EPOXY RESIN (AVERAGE MOLECULAR WEIGHT  $\leq 700$ )), 9, III

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
· **SARA (Superfund Amendments and Reauthorization Act)**

· **EPCRA Section 302 (Extremely Hazardous Substances):**

None of the ingredient is listed.

· **SARA Title III Section 313 (Toxic Release Inventory - TRI):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· 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.

**· Carcinogenicity 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.

**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms** GHS07, GHS09

**· Signal word** Warning

**· Hazard-determining components of labeling:**

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (with an average molecular weight  $\leq 700$ )  
 reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (with an average molecular weight  $\leq 700$ )  
 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

**· Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

**· Precautionary statements**

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of soap and water.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

## 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.

**· Recommended restriction of use** For professional use only.

**· Contact:**

Mr. Adam Vernati, phone +1 720-420-4685

mobile +1 307-314-8312

**· Date of preparation / last revision** 08/20/2018 / 4

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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*ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Skin Sens. 1: Skin sensitisation – Category 1**Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2***\* Data compared to the previous version altered.**

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## 1 Identification

- **Trade name:** *Pallmann P 108 Comp. B*
- **Application of the substance / the mixture**  
*2-component epoxy resin primer for moisture vapor reduction (component B)*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Manufacturer:  
 PALLMANN GmbH  
 Im Kreuz 6  
 D-97076 Würzburg  
 Germany  
 Phone +49 931-27964-0  
 Fax +49 931-27964-50  
  
 Supplier:  
 Uzin Utz North America, Inc.  
 14509 E. 33rd. Place, Unit G  
 Aurora, CO 80011  
 Phone: +720-374-4810  
 Toll-Free: +1 866-505-4810  
 Fax: +1 720-374-2113
- **Information department:**  
 Products Development Lab  
 E-Mail: [msds.info@uzin-utz.com](mailto:msds.info@uzin-utz.com)
- **Emergency telephone number:**  
 For Chemical Emergency Spill Leak Fire Exposure or Accident  
 Call CHEMTREC Day or Night: DOMESTIC NORTH AMERICA 800-424-9300  
 International, call +49 621 60 43 333

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1B      H314 Causes severe skin burns and eye damage.  
 Eye Dam. 1      H318 Causes serious eye damage.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.  
 Skin Sens. 1      H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements**  
*The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms** GHS05, GHS07, GHS09
- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
*m-phenylenebis(methylamine)*

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3-aminomethyl-3,5,5-trimethylcyclohexylamine

Polyoxypropylenediamine

Phenol, styrenated

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine

**· Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

**· Precautionary statements**

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face 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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

If skin irritation or rash occurs: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**· NFPA ratings (scale 0 - 4)**


Health = 3

Flammability = 1

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**


Health = \*3

Flammability = 1

Reactivity = 0

**· Other hazards**

NFPA Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe.

NFPA is the National Fire Protection Association.

HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe.

HMIS®, the Hazardous Materials Identification System, is a registered mark of the National Paint and Coatings Association (NPCA).

**· Results of PBT and vPvB assessment**
**· PBT:** Not applicable.

**· vPvB:** Not applicable.

### 3 Composition/information on ingredients

**· Chemical characterization: Mixtures**
**· Description:** Mixture of the substances listed below with nonhazardous additions.

**· Hazardous ingredients:**

CAS: 1477-55-0	<i>m</i> -phenylenebis(methylamine) ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Acute 3, H402; Aquatic Chronic 3, H412	10-<25%
CAS: 61788-44-1	Phenol, styrenated ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Acute 2, H401	10-<25%
CAS: 2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-<25%

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**Trade name: Pallmann P 108 Comp. B**

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CAS: 68082-29-1	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	10-<25%
CAS: 9046-10-0	Polyoxypropylenediamine ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; Aquatic Acute 3, H402	5-<10%
CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-<10%
CAS: 112-53-8	Lauryl alcohol ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315	3-<5%

**Additional information:**

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.  
 For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Call a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** Allergic reactions
- **Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
 CO<sub>2</sub> extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information:** Flash point: > 100°C (> 212°F).

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
 Wear protective equipment. Keep unprotected persons away.  
 Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

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### · Protective Action Criteria for Chemicals

#### · PAC-1:

CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	6.5 mg/m <sup>3</sup>
CAS: 112-53-8	Lauryl alcohol	12 mg/m <sup>3</sup>

#### · PAC-2:

CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	72 mg/m <sup>3</sup>
CAS: 112-53-8	Lauryl alcohol	140 mg/m <sup>3</sup>

#### · PAC-3:

CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	430 mg/m <sup>3</sup>
CAS: 112-53-8	Lauryl alcohol	820 mg/m <sup>3</sup>

## 7 Handling and storage

### · Handling:

#### · Precautions for safe handling

Wear suitable protective clothing, gloves and eye/face protection.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

#### · Storage:

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Protect from frost.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

### · Control parameters

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

### · Exposure controls

#### · Personal protective equipment:

· **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

Wear suitable protective clothing, gloves and eye/face protection.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not necessary. Ensure that room is well-ventilated during processing.

· **Protection of hands:**



Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.

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- **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.5$  mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Fluid
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<b>Color:</b>	Brown
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<b>Odor:</b>	Fish-like
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<b>Odor threshold:</b>	Not determined.
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<b>pH-value at 20 °C (68 °F):</b>	11
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- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
-------------------------------------	---------------

<b>Boiling point/Boiling range:</b>	Undetermined.
-------------------------------------	---------------

<b>Flash point:</b>	> 100 °C (>212 °F)
---------------------	--------------------

<b>Flammability (solid, gaseous):</b>	Not applicable.
---------------------------------------	-----------------

<b>Ignition temperature:</b>	> 200 °C (>392 °F)
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<b>Decomposition temperature:</b>	Not determined.
-----------------------------------	-----------------

<b>Auto igniting:</b>	Product is not selfigniting.
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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- **Explosion limits:**

<b>Lower:</b>	Not determined.
---------------	-----------------

<b>Upper:</b>	Not determined.
---------------	-----------------

<b>Vapor pressure:</b>	Not determined.
------------------------	-----------------

<b>Density at 20 °C (68 °F):</b>	1.0 g/cm <sup>3</sup> (8.35 lbs/gal)
----------------------------------	--------------------------------------

<b>Relative density</b>	Not determined.
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<b>Vapor density</b>	Not determined.
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<b>Evaporation rate</b>	Not determined.
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- **Solubility in / Miscibility with**

<b>Water:</b>	Not miscible or difficult to mix.
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<b>Partition coefficient (n-octanol/water):</b>	Not determined.
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- **Viscosity:**

<b>Dynamic at 20 °C (68 °F):</b>	900 mPas
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<b>Kinematic:</b>	Not determined.
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<b>Other information</b>	No further relevant information available.
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### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Strong exothermic reaction with acids.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
Corrosive gases/vapors  
At elevated temperatures hazardous decomposition products such as carbon dioxide, carbon monoxide, smoke or nitric oxids may be evolved.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
- |  |      |   |
|--|------|---|
| · <b>LD/LC50 values that are relevant for classification:</b>      |      |   |
| <b>CAS: 1477-55-0 m-phenylenebis(methylamine)</b>                  |      |   |
| Oral   | LD50 | 1,040 mg/kg (rat)   |
| <b>CAS: 2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine</b> |      |   |
| Oral   | LD50 | 1,030 mg/kg (rat) (OECD 401)<br>Aus SDB ipox EH 2081-1 vom 17.01.2015 |
| Dermal   | LD50 | 1,840 mg/kg (rabbit)<br>aus SDB CeTePox 1595 NF H vom 15.06.2015      |
| <b>CAS: 112-53-8 Lauryl alcohol</b>                                |      |   |
| Oral   | LD50 | 12,800 mg/kg (rat)  |
- **Specific symptoms in biological assay:**
  - **Primary route(s) of entry:** Inhalation, skin contact, eye contact, ingestion.
  - **Primary irritant effect:**
  - **on the skin:** Caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
  - **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

- **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:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Toxic for aquatic organisms  
Also poisonous for fish and plankton in water bodies.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
The product contains materials that are harmful to the environment.  
Do not allow product to reach ground water, water course or sewage system.  
Disposal should be in accordance with local, state or national legislation.
- **Uncleaned packagings:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

## 14 Transport information

- **DOT, ADR, IMDG, IATA** UN2735
- **UN proper shipping name**
- **DOT** Polyamines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine), Isophoronediamine)
- **ADR** 2735 Polyamines, liquid, corrosive, n.o.s. (m-phenylenebis(methylamine), Isophoronediamine), ENVIRONMENTALLY HAZARDOUS
- **IMDG** POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), MARINE POLLUTANT
- **IATA** POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE)
- **DOT**
-  CORROSIVE 8
- **Class** 8 Corrosive substances
- **Label** 8
- **IMDG**
-  
- **Class** 8 Corrosive substances

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· **Label** 8· **IATA**· **Class** 8 Corrosive substances· **Label** 8· **DOT, IMDG, IATA** III· **Environmental hazards:** Product contains environmentally hazardous substances: Lauryl alcohol· **Marine pollutant:** Yes

Symbol (fish and tree)

· **Special marking (ADR):** Symbol (fish and tree)· **Special precautions for user** Warning: Corrosive substances· **EMS Number:** F-A,S-B· **Segregation groups** Alkalis· **Stowage Category** A· **Segregation Code** SG35 Stow "separated from" acids.· **UN "Model Regulation":** UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (M-PHENYLENEBIS(METHYLAMINE), ISOPHORONEDIAMINE), 8, III, ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **SARA (Superfund Amendments and Reauthorization Act)**· **EPCRA Section 302 (Extremely Hazardous Substances):**

None of the ingredient is listed.

· **SARA Title III Section 313 (Toxic Release Inventory - TRI):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California)**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **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.

· **Carcinogenicity 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.

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- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS05, GHS07, GHS09
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
*m-phenylenebis(methylamine)*  
*3-aminomethyl-3,5,5-trimethylcyclohexylamine*  
*Polyoxypropylenediamine*  
*Phenol, styrenated*  
*Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine*
- **Hazard statements**  
*Harmful if swallowed.*  
*Causes severe skin burns and eye damage.*  
*May cause an allergic skin reaction.*  
*Toxic to aquatic life with long lasting effects.*
- **Precautionary statements**  
*Avoid release to the environment.*  
*Wear protective gloves/protective clothing/eye protection/face 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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Immediately call a poison center/doctor.*  
*If skin irritation or rash occurs: Get medical advice/attention.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

### \* 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.*

- **Recommended restriction of use** *For professional use only.*
- **Contact:**  
*Mr. Adam Vernati, phone +1 720-420-4685*  
*mobile +1 307-314-8312*
- **Date of preparation / last revision** *08/21/2018 / 4*
- **Abbreviations and acronyms:**  
*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*  
*ICAO: International Civil Aviation Organisation*  
*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*ACGIH: American Conference of Governmental Industrial Hygienists*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMS: Hazardous Materials Identification System (USA)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*

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*Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Skin Sens. 1: Skin sensitisation – Category 1**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2**Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3***\* Data compared to the previous version altered.**

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