

# SAFETY DATA SHEET

## Pipeclad 5000 Epoxy (Part A) - White

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

### Section 1. Identification

**Product code** : B62W560  
**GHS product identifier** : Pipeclad 5000 Epoxy (Part A)  
White  
**Product use** : Industrial applications, Used by spraying.  
**Material uses** : Paint or paint related material.

#### Company name

Mfg. in the U.S.A. and exported by:  
THE SHERWIN-WILLIAMS COMPANY  
101 W. Prospect Avenue  
Cleveland, OH 44115

Imported by:  
Sherwin Williams Asia Pacific  
Building 11, Shibe One Center, No1401 Jiangchang  
Road  
Jing'an District, Shanghai 200436, China  
Phone: +86 21 61937965  
regulatory.asia@sherwin.com

**Supplier Telephone number** : (216) 566-2902  
**e-mail address of person responsible for this SDS** : MSDS@sherwin.com

**Emergency telephone number** : 400-6267911 (24/7)  
**Hours of operation** : Emergency contact available 24 hours a day

### Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

#### Emergency overview

Liquid.  
White.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause cancer.  
Suspected of damaging fertility or the unborn child.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.  
None known. Please refer to the SDS for additional information.

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## Section 2. Hazards identification

IF exposed or concerned: Get medical advice or attention. IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Immediately call a POISON CENTER or doctor.

See Section 12 for environmental precautions.

### Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 1B  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 SKIN SENSITIZATION - Category 1  
 CARCINOGENICITY - Category 1A  
 TOXIC TO REPRODUCTION - Category 2  
 AQUATIC HAZARD (ACUTE) - Category 1  
 AQUATIC HAZARD (LONG-TERM) - Category 1

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Causes severe skin burns and eye damage.  
 May cause an allergic skin reaction.  
 Causes serious eye damage.  
 May cause cancer.  
 Suspected of damaging fertility or the unborn child.  
 Very toxic to aquatic life.  
 Very toxic to aquatic life with long lasting effects.

### Precautionary statements

#### Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

#### Response

: Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse. 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 or doctor.

#### Storage

: Store locked up.

#### Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Physical and chemical hazards

: No known significant effects or critical hazards.

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## Section 2. Hazards identification

**Health hazards** : Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause cancer. Suspected of damaging fertility or the unborn child.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Environmental hazards** : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Other hazards which do not result in classification** : None known. Please refer to the SDS for additional information.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

### Hazardous ingredients

### Section 3. Composition/information on ingredients

Ingredient name	%	CAS number	EC number	Hazard classification
Phenol-Formaldehyde Polymer	≥25 - ≤50	9003-36-5	500-006-8	H315, H317, H319, H411
Phenol, 4-Nonyl-, Branched	≤10	84852-15-3	284-325-5	H302, H314, H318, H361, H400, H410
Epoxy Polymer	≤10	1675-54-3	216-823-5	H315, H317, H319, H411
Zinc Phosphate	≤3	7779-90-0	231-944-3	H400, H410
Organosilane Ester	≤3	2530-83-8	219-784-2	H316, H318
Zinc Oxide	≤3	1314-13-2	215-222-5	H316, H320, H400, H410
Titanium Dioxide	≤3	13463-67-7	236-675-5	H316, H351
Phenol, 2-nonyl-, branched	<1	91672-41-2	294-048-1	H302, H314, H318, H361, H400, H410
Crystalline Silica, non-respirable	≤0.3	14808-60-7	238-878-4	H350
Crystalline Silica, respirable powder	≤0.3	14808-60-7	238-878-4	H350, H372

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### Section 4. First aid measures

#### First aid

##### Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

##### Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

##### Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### **Most important symptoms/effects, acute and delayed**

#### **Potential acute health effects**

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns. May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

#### **Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### **Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.  
**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray or mist.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
phosphorus oxides  
halogenated compounds  
metal oxide/oxides

### **Advice for firefighters**

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and materials for containment and cleaning up

**Spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## Section 6. Accidental release measures

**Precautionary measures to prevent the occurrence of secondary disasters** : Prevent entry into sewers, water courses, basements or confined areas.

## Section 7. Handling and storage

### Precautions for safe handling

**Precautions for operating** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Zinc Oxide	<b>GBZ 2.1 (China, 11/2022)</b> PC-TWA 8 hours: 3 mg/m <sup>3</sup> . PC-STEL 15 minutes: 5 mg/m <sup>3</sup> .
Titanium Dioxide	<b>GBZ 2.1 (China, 11/2022)</b> PC-TWA 8 hours: 8 mg/m <sup>3</sup> . Form: dust.
Crystalline Silica, non-respirable	<b>GBZ 2.1 (China, 11/2022) G1 (crystalline).</b> PC-TWA 8 hours: 1 mg/m <sup>3</sup> . Form: total dust, 10% ≤ free SiO <sub>2</sub> ≤ 50%. PC-TWA 8 hours: 0.7 mg/m <sup>3</sup> . Form: total dust, 50% < free SiO <sub>2</sub> ≤ 80%. PC-TWA 8 hours: 0.5 mg/m <sup>3</sup> . Form: total dust, free SiO <sub>2</sub> > 80%.
Crystalline Silica, respirable powder	<b>GBZ 2.1 (China, 11/2022) G1 (crystalline).</b> PC-TWA 8 hours: 0.7 mg/m <sup>3</sup> . Form: respirable dust, 10% ≤ free SiO <sub>2</sub> ≤ 50%. PC-TWA 8 hours: 0.3 mg/m <sup>3</sup> . Form: respirable dust, 50% < free SiO <sub>2</sub> ≤ 80%.

## Section 8. Exposure controls/personal protection

PC-TWA 8 hours: 0.2 mg/m<sup>3</sup>. Form: respirable dust, free SiO<sub>2</sub> > 80%.

### Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Personal protective equipment

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** : Use safety eyewear designed to protect against splash of liquids.

#### Skin protection

##### **Hand protection**

##### **Gloves**

- : Wear suitable gloves tested to EN374.
- : Short Term Exposure less than 10 minutes Continuous use Nitrile gloves. Hazardous ingredients Section 3 For more than 4 hours of protection in the presence of Ethyl methyl ketone or Methyl ethyl ketone Acetone or Methyl isobutyl ketone Butyl gloves 0.7mm For more than 4 hours of protection in the presence of Aromatic solvent use polyvinyl alcohol (PVA) gloves.
- Long Term Exposure Spill / For prolonged or repeated handling, use PE / PE Laminate gloves > 8 hours (breakthrough time) .
- There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
- The breakthrough time must be greater than the end use time of the product.
- The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
- Gloves should be replaced regularly and if there is any sign of damage to the glove material.
- Always ensure that gloves are free from defects and that they are stored and used correctly.
- The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.
- Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
- The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

##### **Body protection**

- : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.
- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.



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## Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance and physical state

- Physical state** : Liquid.
- Color** : White.
- Odor** : Solvent.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 94°C (201.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : Not available.
- Relative vapor density** : Not available.
- Relative density** : 1.55
- Solubility(ies)** :

Media	Result
cold water	Not soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)
- VOC content** : 9 g/L
- Heat of combustion** : 0.266 kJ/g

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

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## Section 10. Stability and reactivity

**Conditions to avoid** : No specific data.  
: Avoid high temperature.

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

*Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.*

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

**Product/ingredient name**

4-nonylphenol, branched

**Result**

**Rat - Oral - LD50**

1300 mg/kg

Toxic effects: Liver - Other changes Blood - Hemorrhage

Gross Metabolite Changes - Weight loss or decreased weight gain

Epoxy Polymer

**Rabbit - Dermal - LD50**

20 g/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea Gross Metabolite Changes - Weight loss or decreased weight gain

Organosilane Ester

**Rat - Oral - LD50**

7.01 g/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Coma

**Conclusion/Summary [Product]** : Not available.

#### Skin corrosion/irritation

**Product/ingredient name**

Phenol-Formaldehyde Polymer

**Result**

**Rabbit - Skin - Mild irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 uL

4-nonylphenol, branched

**Rabbit - Skin - Severe irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Epoxy Polymer

**Rabbit - Skin - Mild irritant**

Amount/concentration applied: 500 mg

Organosilane Ester

**Rabbit - Skin - Mild irritant**

Amount/concentration applied: 500 mg

Zinc Oxide

**Rabbit - Skin - Mild irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Titanium Dioxide

**Human - Skin - Mild irritant**

Duration of treatment/exposure: 72 hours

Amount/concentration applied: 300 ug l

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## Section 11. Toxicological information

**Conclusion/Summary [Product]** : Not available.

### Serious eye damage/eye irritation

**Product/ingredient name**

4-nonylphenol, branched

Epoxy Polymer

Organosilane Ester

Zinc Oxide

**Result**

**Rabbit - Eyes - Severe irritant**

Amount/concentration applied: 100 mg

**Rabbit - Eyes - Severe irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 2 mg

**Rabbit - Eyes - Mild irritant**

Amount/concentration applied: 100 mg

**Rabbit - Eyes - Mild irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Not available.

### Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not available.

### Respiratory or skin sensitization

Not available.

### **Skin**

**Conclusion/Summary [Product]** : Not available.

### **Respiratory**

**Conclusion/Summary [Product]** : Not available.

### Germ Cell Mutagenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### **Classification**

**Product/ingredient name**

**IARC**

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## Section 11. Toxicological information

Epoxy Polymer	3
Titanium Dioxide	2B
Crystalline Silica, non-respirable	1
Crystalline Silica, respirable powder	1

### Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Crystalline Silica, respirable powder	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

<b>Eye contact</b>	: Causes serious eye damage.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Causes severe burns. May cause an allergic skin reaction.
<b>Ingestion</b>	: No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

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## Section 11. Toxicological information

**Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary [Product]** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Pipeclad 5000 Epoxy (Part A)	10584.3	N/A	N/A	N/A	N/A
4-nonylphenol, branched	1300	N/A	N/A	N/A	N/A
Epoxy Polymer	N/A	20000	N/A	N/A	N/A
Organosilane Ester	7010	N/A	N/A	N/A	N/A
Phenol, 2-nonyl-, branched	500	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result
4-nonylphenol, branched	<p><b>Chronic - NOEC - Fresh water</b>  Fish - Fathead minnow - <i>Pimephales promelas</i> - Embryo  <u>Age</u>: &lt;24 hours  7.4 µg/l [33 days]  <u>Effect</u>: Mortality</p> <p><b>Acute - LC50 - Marine water</b>  Fish - Winter flounder - <i>Pleuronectes americanus</i> - Larvae  <u>Age</u>: 2 days  17 µg/l [96 hours]  <u>Effect</u>: Mortality</p> <p><b>Acute - EC50 - Marine water</b>  Algae - Diatom - <i>Skeletonema costatum</i>  0.027 mg/l [96 hours]  <u>Effect</u>: Population</p> <p><b>Chronic - EC10 - Marine water</b>  Algae - Diatom - <i>Skeletonema costatum</i>  0.012 mg/l [96 hours]  <u>Effect</u>: Population</p> <p><b>Chronic - NOEC - Fresh water</b>  Crustaceans - Scud - <i>Gammarus fossarum</i> - Adult  5 µg/l [21 days]  <u>Effect</u>: Reproduction</p> <p><b>Acute - EC50</b>  OECD  Crustaceans - Water flea - <i>Moina macrocopa</i>  0.044 mg/l [48 hours]  <u>Effect</u>: Intoxication</p>
Zinc Phosphate	<p><b>Acute - LC50 - Fresh water</b>  Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>  <u>Age</u>: 180 days; <u>Weight</u>: 1.5 g  90 µg/l [96 hours]  <u>Effect</u>: Mortality</p>
Zinc Oxide	<p><b>Acute - LC50 - Fresh water</b>  Daphnia - Water flea - <i>Daphnia magna</i> - Neonate  <u>Age</u>: &lt;24 hours  98 µg/l [48 hours]  <u>Effect</u>: Mortality</p> <p><b>Acute - LC50 - Fresh water</b>  US EPA  Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>  <u>Weight</u>: 0.78 g  1.1 ppm [96 hours]  <u>Effect</u>: Mortality</p> <p><b>Acute - IC50 - Fresh water</b>  Algae - Green algae - <i>Raphidocelis subcapitata</i> - Exponential growth phase  46 µg/l [72 hours]  <u>Effect</u>: Population</p>
Titanium Dioxide	<p><b>Acute - LC50 - Marine water</b>  Fish - Mummichog - <i>Fundulus heteroclitus</i>  &gt;1000 mg/l [96 hours]  <u>Effect</u>: Mortality</p>

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## Section 12. Ecological information

**Conclusion/Summary [Product]** : Not available.

### Persistence/degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### Bioaccumulation/Accumulation

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
4-nonylphenol, branched	-	740	High
Zinc Phosphate	-	60960	High
Zinc Oxide	-	28960	High

### Mobility in soil

**Soil/Water partition coefficient** : Not available.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations





**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Do not incinerate closed container. Incinerate in a licensed, high-temperature, hazardous-waste incinerator.

## Section 14. Transport information

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## Section 14. Transport information

	China	ADR	IMDG	IATA
UN number	UN3066	UN3066	UN3066	UN3066
UN proper shipping name	PAINT. Marine pollutant (Phenol, 4-Nonyl-, Branched, Zinc Phosphate)	PAINT	PAINT. Marine pollutant (Phenol, 4-Nonyl-, Branched, Zinc Phosphate)	PAINT
Transport Hazard Class(es)/Label(s)	8 	8 	8 	8 
Packing group	III	III	III	III
Environmental hazards/Marine pollutant	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

- China** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-A, S-B
- ADR** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Tunnel code** E
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-A, S-B
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Incompatible materials** : No specific data.

**Transport in bulk according to IMO instruments** : Not available.

**Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.**



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## Section 15. Regulatory information

**National inventory** : **Australia inventory (AIIC)**: Not determined.  
**Canada inventory**: Not determined.  
**China inventory (IECSC)**: Not determined.  
**Japan inventory (CSCL)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Korea inventory**: Not determined.  
**Mexico inventory**: Not determined.  
**New Zealand Inventory of Chemicals (NZIoC)**: Not determined.  
**Philippines inventory (PICCS)**: Not determined.  
**Russian Federation inventory**: Not determined.  
**Thailand inventory**: Not determined.  
**Turkey inventory**: Not determined.  
**Taiwan Chemical Substances Inventory (TCSI)**: Not determined.  
**United States inventory (TSCA 8b)**: Not determined.  
**Vietnam inventory**: Not determined.

### List of Goods banned for Importing

None of the components are listed.

### Drug Precursors Requiring an Import/Export License

None of the components are listed.

### Inventory of Hazardous Chemicals

Ingredient name	CAS number	Status	Reference number
Phenol, 4-nonyl-,branched	84852-15-3	Listed	2800

### List of Explosive Precursors

None of the components are listed.

### List of Goods banned for Exporting

None of the components are listed.

### List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

### Catalogue and classification of drug precursor chemicals

Category	Ingredient name	%	Status
Category 3	toluene	≤0.1	Listed

### Inventory of Highly Toxic Articles

None of the components are listed.

### Catalogue of Hazardous Chemicals of Priority Management

Listed  
Listed  
Listed  
Listed

### China MEE 12 Registration number

Not applicable.

## Section 16. Other information

### History

Date of printing : 2025/04/11.

Date of issue/Date of revision : 2025/04/11.

Date of previous issue : 2024/12/13.

Version : 16

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

### Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 1B	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Full text of classifications [CLP/GHS]** : SKIN CORROSION/IRRITATION - Category 1B  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION - Category 2  
AQUATIC HAZARD (ACUTE) - Category 1  
AQUATIC HAZARD (LONG-TERM) - Category 1

**Full text of abbreviated H statements** : H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H350 - May cause cancer.  
H361 - Suspected of damaging fertility or the unborn child.  
H400 - Very toxic to aquatic life.  
H410 - Very toxic to aquatic life with long lasting effects.

**Precautionary statements** : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P280 - Wear protective gloves, protective clothing and eye or face protection.  
P273 - Avoid release to the environment.  
P261 - Avoid breathing vapor.  
P264 - Wash thoroughly after handling.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P391 - Collect spillage.  
P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep

## Section 16. Other information

comfortable for breathing. Immediately call a POISON CENTER or doctor.

P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.

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

P363 - Wash contaminated clothing before reuse.

P305 + P351 + P338, P310 - 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 or doctor.

P405 - Store locked up.

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Indicates information that has changed from previously issued version.

### Notice to reader

***It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.***