

# SAFETY DATA SHEET



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

Date of issue/Date of revision 11 February 2026

Version 20.05

## Section 1. Chemical product and company identification

**Product code** : 00257286  
**Product name** : PHENGUARD 965 HARDENER  
**Product name** : PHENGUARD 965 HARDENER  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Professional applications, Used by spraying.  
**Use of the substance/  
mixture** : Coating.; Hardener.  
**Uses advised against** : Not applicable.

**Supplier's details** : PPG Coatings (Kunshan) Co., Ltd  
53 Jinyang Road, Lujia Town,  
215331 Kunshan City, Jiangsu Province, P.R. China  
Tel: 86 512 57678859 Fax: 86 512 57678857

**Emergency telephone  
number (with hours of  
operation)** : 00 86 532 83889090

## Section 2. Hazards identification

**Classification of the substance or mixture according to GB 30000.1-30**

### Emergency overview

Liquid.  
Clear.  
Amine-like. [Strong]  
Flammable liquid and vapor.  
Harmful if swallowed or if inhaled.  
May be harmful if swallowed and enters airways.  
May be harmful in contact with skin.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Suspected of causing cancer.  
May damage fertility or the unborn child.  
Toxic to aquatic life.  
Toxic to aquatic life with long lasting effects.  
Prolonged or repeated contact may dry skin and cause irritation.

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.

## Section 2. Hazards identification

See Section 12 for environmental precautions.

### Classification of the substance or mixture

- : FLAMMABLE LIQUIDS - Category 3
- ACUTE TOXICITY (oral) - Category 4
- ACUTE TOXICITY (dermal) - Category 5
- ACUTE TOXICITY (inhalation) - Category 4
- SKIN CORROSION/IRRITATION - Category 1C
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 2
- TOXIC TO REPRODUCTION - Category 1B
- ASPIRATION HAZARD - Category 2
- AQUATIC HAZARD (ACUTE) - Category 2
- AQUATIC HAZARD (LONG-TERM) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 26.3%

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 35.7%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 46.8%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 48.5%

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

- : Flammable liquid and vapor.
- Harmful if swallowed or if inhaled.
- May be harmful if swallowed and enters airways.
- May be harmful in contact with skin.
- Causes severe skin burns and eye damage.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- Suspected of causing cancer.
- May damage fertility or the unborn child.
- Toxic to aquatic life.
- 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Ground and bond container and receiving equipment. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

## Section 2. Hazards identification

- 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.
- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Physical and chemical hazards** : Flammable liquid and vapor.
- Health hazards** : Harmful if swallowed or if inhaled. May be harmful if swallowed and enters airways. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. May damage fertility or the unborn child. Prolonged or repeated contact may dry skin and cause irritation.

### 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  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
nausea or vomiting  
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.

## Section 2. Hazards identification

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

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

**Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

### CAS number/other identifiers

**CAS number** : Not applicable.

Ingredient name	%	CAS number
Benzyl alcohol	10 - <25	100-51-6
xylene isomers mixture	10 - <25	1330-20-7
Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol	1 - <10	445498-00-0
2-methylpropan-1-ol	1 - <10	78-83-1
2,4,6-tris(dimethylaminomethyl)phenol	1 - <10	90-72-2
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1 - <10	1760-24-3
ethylbenzene	1 - <10	100-41-4
m-phenylenebis(methylamine)	1 - <10	1477-55-0
bisphenol A	1 - <10	80-05-7
salicylic acid	1 - <10	69-72-7
N,N-dimethyl-1,3-diaminopropane	0.1 - <1	109-55-7

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.

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

## Section 4. First aid measures

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

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes severe burns. May be harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. May be harmful if swallowed and enters airways.

#### 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  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

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

**Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is 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 oxides  
nitrogen oxides  
metal oxide/oxides  
Formaldehyde.

**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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

- Precautions for safe handling** : 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 swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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
Xylene	<b>GBZ 2.1 (China, 7/2024) [Xylene]</b> PC-TWA 8 hours: 50 mg/m <sup>3</sup> . PC-STEL 15 minutes: 100 mg/m <sup>3</sup> .
2-methylpropan-1-ol	<b>ACGIH TLV (United States, 1/2025)</b> TWA 8 hours: 50 ppm. TWA 8 hours: 152 mg/m <sup>3</sup> .
ethylbenzene	<b>GBZ 2.1 (China, 7/2024)</b> PC-TWA 8 hours: 100 mg/m <sup>3</sup> .

## Section 8. Exposure controls/personal protection

m-phenylenebis(methylamine)

bisphenol A

PC-STEL 15 minutes: 150 mg/m<sup>3</sup>.  
**ACGIH TLV (United States, 1/2025)**  
 Absorbed through skin.  
 C: 0.018 ppm.  
**GBZ 2.1 (China, 7/2024)**  
 PC-TWA 8 hours: 5 mg/m<sup>3</sup>.

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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.

### Individual protection measures

**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 protection** : Chemical splash goggles and face shield.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Gloves** : nitrile neoprene

**Body protection** : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**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** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 8. Exposure controls/personal protection

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid.
Color	: Clear.
Odor	: Amine-like. [Strong]
Odor threshold	: Not available.
pH	: Not applicable.
Melting point/freezing point	: Not available.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 28°C (82.4°F)
Evaporation rate	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1

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): <14 mm <sup>2</sup> /s

## 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.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides Formaldehyde. metal oxide/oxides

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Dose
benzyl alcohol	Rabbit - Dermal - LD50	>2000 mg/kg
-	Rat - Oral - LD50	1200 mg/kg
-	Rat - Inhalation - LC50 Dusts and mists	>5 mg/l [4 hours]
xylene isomers mixture	Rat - Oral - LD50	4.3 g/kg
-	Rabbit - Dermal - LD50	1.7 g/kg
2-methylpropan-1-ol	Rat - Oral - LD50	2830 mg/kg
-	Rabbit - Dermal - LD50	2460 mg/kg
-	Rat - Inhalation - LC50 Vapor	24.6 mg/l [4 hours]
2,4,6-tris(dimethylaminomethyl)phenol	Rat - Dermal - LD50	1280 mg/kg
-	Rat - Oral - LD50	1200 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Rat - Oral - LD50	2413 mg/kg
-	Rabbit - Dermal - LD50	>2000 mg/kg
ethylbenzene	Rat - Oral - LD50	3.5 g/kg
-	Rabbit - Dermal - LD50	17.8 g/kg
-	Rat - Inhalation - LC50 Vapor	17.8 mg/l [4 hours]
m-phenylenebis(methylamine)	Rat - Oral - LD50	930 mg/kg
-	Rat - Male, Female - Dermal - LD50	>3100 mg/kg
-	Rat - Inhalation - LC50 Gas.	700 ppm [1 hours]
bisphenol A	Rat - Oral - LD50	3.25 g/kg
-	Rabbit - Dermal - LD50	3600 mg/kg
salicylic acid	Rat - Oral - LD50	0.891 g/kg
N,N-dimethyl-1,3-diaminopropane	Rat - Oral - LD50	410 mg/kg
-	Rabbit - Dermal - LD50	2139 mg/kg
-	Rat - Dermal - LD50	400 to 2000 mg/kg
-	Rat - Inhalation - LC50 Dusts and mists	>21.9 mg/l [4 hours]

**Product Conclusion** : There are no data available on the mixture itself.

#### Skin corrosion/irritation

Product/ingredient name	Species	Dose	Score
xylene isomers mixture	Rabbit - Skin - Moderate irritant	Amount/concentration applied: 500 mg Duration of treatment/exposure: 24 hours	-
m-phenylenebis(methylamine)	Rat - Skin - Severe irritant	Duration of treatment/exposure: 4 hours Observation period: 4 hours	-

**Conclusion/Summary** : There are no data available on the mixture itself.

#### Serious eye damage/eye irritation

**Conclusion/Summary** : There are no data available on the mixture itself.

#### Respiratory corrosion/irritation

**Conclusion/Summary** : There are no data available on the mixture itself.

#### Sensitization

Product/ingredient name	Species	Result
m-phenylenebis(methylamine)	Mouse - skin OECD 429	Result: Sensitizing

#### Skin

## Section 11. Toxicological information

**Conclusion/Summary** : There are no data available on the mixture itself.

### Respiratory

**Conclusion/Summary** : There are no data available on the mixture itself.

### Mutagenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Carcinogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Classification

Product/ingredient name	IARC
xylene isomers mixture	3
ethylbenzene	2B

### Reproductive toxicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Result
2-methylpropan-1-ol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
-	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
N-(3-(trimethoxysilyl)propyl)ethylenediamine	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
bisphenol A	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
ethylbenzene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

### Aspiration hazard

Product/ingredient name	Result
benzyl alcohol	ASPIRATION HAZARD - Category 2
ethylbenzene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Harmful if inhaled.

**Skin contact** : Causes severe burns. May be harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction.

**Ingestion** : Harmful if swallowed. May be harmful if swallowed and enters airways.

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

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

## Section 11. Toxicological information

- 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  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
nausea or vomiting  
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

**Conclusion/Summary** : There are no data available on the mixture itself.

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

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

**Reproductive toxicity** : May damage fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
PHENGUARD 965 HARDENER	1375.2	2173.3	82541.3	29.7	3.8
benzyl alcohol	1200	2500	N/A	N/A	N/A
xylene isomers mixture	4300	1700	N/A	11	1.5
Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol	500	N/A	N/A	N/A	N/A
2-methylpropan-1-ol	2830	2460	N/A	24.6	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1200	1280	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	2413	2500	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
m-phenylenebis(methylamine)	930	2500	4500	N/A	N/A
bisphenol A	3250	3600	N/A	N/A	N/A
salicylic acid	891	N/A	N/A	N/A	N/A
N,N-dimethyl-1,3-diaminopropane	410	2139	N/A	N/A	N/A

### Other information :

Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C ( 140F). Avoid contact with skin and clothing. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Dose / Exposure
2-methylpropan-1-ol	Acute - EC50	Daphnia	1100 mg/l [48 hours]
2,4,6-tris(dimethylaminomethyl)phenol	Acute - LC50	Daphnia	>100 mg/l [48 hours]
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Acute - LC50	Fish	>100 mg/l [96 hours]
ethylbenzene	EC50	Fish	597 mg/l [96 hours]
bisphenol A	Acute - EC50 - Fresh water	Daphnia	1.8 mg/l [48 hours]
	Chronic - NOEC - Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	1 mg/l
	Acute - LC50 - Fresh water	Fish	4.6 mg/l [96 hours]
	Acute - LC50 - Fresh water	Crustaceans	0.885 mg/l [48 hours]
salicylic acid	Chronic - NOEC - Fresh water	Fish	0.000174 mg/l [5 months]
	Acute - EC50	Algae - Green algae - <i>Raphidocelis subcapitata</i>	1.32 mg/l [72 hours]
	Chronic - EC10	Algae - Green algae - <i>Raphidocelis subcapitata</i>	1189 µg/l [72 hours]
	Acute - EC50 - Fresh water	Daphnia - Water flea -	1147.57 mg/l [48 hours]

## Section 12. Ecological information

	Chronic - NOEC - Fresh water	<i>Daphnia longispina</i> - Neonate <i>Daphnia</i> - Water flea - <i>Daphnia magna</i> - Neonate	5.6 mg/l [21 days]
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**Conclusion/Summary** : Not available.

### Persistence/degradability

Product/ingredient name	Test	Result	Dose / Inoculum
2,4,6-tris (dimethylaminomethyl)phenol	OECD [Ready Biodegradability - Closed Bottle Test]	4% [28 days] - Not readily	
ethylbenzene	-	79% [10 days] - Readily	

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily
xylene isomers mixture	-	-	Readily
2,4,6-tris (dimethylaminomethyl) phenol	-	-	Not readily
ethylbenzene	-	-	Readily
bisphenol A	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
benzyl alcohol	0.87	-	Low
xylene isomers mixture	3.12	7.4 to 18.5	Low
2-methylpropan-1-ol	1	-	Low
2,4,6-tris (dimethylaminomethyl)phenol	0.219	-	Low
ethylbenzene	3.6	79.43	Low
m-phenylenebis (methylamine)	0.18	2.69	Low
bisphenol A	3.4	43.65	Low
salicylic acid	2.21 to 2.26	-	Low
N,N-dimethyl- 1,3-diaminopropane	-0.352	-	Low

### 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	China	UN	IMDG	IATA
<b>UN number</b>	UN3469	UN3469	UN3469	UN3469
<b>UN proper shipping name</b>	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
<b>Transport hazard class(es)</b>	3 (8)	3 (8)	3 (8)	3 (8)
<b>Packing group</b>	III	III	III	III
<b>Environmental hazards</b>	Yes. The environmentally hazardous substance mark is not required.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Marine pollutant substances</b>	Not applicable.	Not applicable.	(Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol)	Not applicable.

### Additional information

**CN** : None identified.

**UN** : None identified.

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**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.

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

## Section 15. Regulatory information

**China inventory (IECSC)** : All components are listed or exempted.

**References** :

- Production Safety Law of the People's Republic of China
- Code of Occupational Disease Prevention of the People's Republic of China
- Environmental Protection Law of the People's Republic of China
- Fire Control Law of the People's Republic of China
- Regulations on the Control over Safety of Dangerous Chemicals
- Occupational exposure limits for hazardous agents in the workplace chemical hazardous agents (GBZ2.1)
- Specification for classification and labelling of chemicals according to Part 1: General rules (GB 30000.1-2024)
- Safety data sheet for chemical products - Content and order of sections (GB/T16483)
- Guidance on the compilation of safety data sheet for chemical products (GB/T17519)
- General rule for preparation of precautionary label for chemicals (GB15258)
- Safety rules for classification, precautionary labeling and precautionary statements of chemicals (GB30000.2-30)

## Section 16. Other information

### History

**Date of issue/Date of revision** : 11 February 2026

**Version** : 20.05

**Date of previous issue** : 8/9/2025

**First issue date** : 6/20/2018

**Prepared by** : EHS

**Key to abbreviations** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- 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)
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- UN = United Nations



Indicates information that has changed from previously issued version.

### Notice to reader

## Section 16. Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.