

SAFETY DATA SHEET



Date of issue/Date of revision 4 February 2026

Version 1.01

Section 1. Identification

Product code : 000010023633

Product name : AMERLOCK 2C/2GF HARDENER

Other means of identification

00327392

Product type : Liquid.

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

Product use : Coating.
Professional applications, Used by spraying.

Supplier's details : PPG Coatings (Singapore) Pte Ltd.
1 Cleantech Loop, CleanTech One, #04-04
Singapore 637141
Tel : +65 6865 3737

Emergency telephone number (with hours of operation) : CHEMTREC +(65)-31581349 (CCN 17704)

Section 2. Hazards identification

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements, including precautionary statements

Hazard pictograms



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Flammable liquid and vapor. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	: 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. Avoid release to the environment. Avoid breathing vapor.
Response	: Collect spillage. 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. 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 in a well-ventilated place. Keep container tightly closed.
Disposal	: Not applicable.
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.																																			
EC number	: Mixture.																																			
<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Talc, not containing asbestos fibers</td> <td>25 - <50</td> <td>14807-96-6</td> </tr> <tr> <td>4-methylpentan-2-one</td> <td>10 - <20</td> <td>108-10-1</td> </tr> <tr> <td>Polyaminoamide</td> <td>5 - <10</td> <td>68082-29-1</td> </tr> <tr> <td>2,4,6-tris(dimethylaminomethyl)phenol</td> <td>3 - <5</td> <td>90-72-2</td> </tr> <tr> <td>benzyl alcohol</td> <td>3 - <5</td> <td>100-51-6</td> </tr> <tr> <td>cyclohexanone</td> <td>3 - <5</td> <td>108-94-1</td> </tr> <tr> <td>Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine</td> <td>3 - <5</td> <td>68082-29-1</td> </tr> <tr> <td>3-aminomethyl-3,5,5-trimethylcyclohexylamine</td> <td>3 - <5</td> <td>2855-13-2</td> </tr> <tr> <td>nonylphenol</td> <td>3 - <5</td> <td>25154-52-3</td> </tr> <tr> <td>4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine</td> <td>3 - <5</td> <td>38294-64-3</td> </tr> </tbody> </table>				Ingredient name	%	CAS number	Talc, not containing asbestos fibers	25 - <50	14807-96-6	4-methylpentan-2-one	10 - <20	108-10-1	Polyaminoamide	5 - <10	68082-29-1	2,4,6-tris(dimethylaminomethyl)phenol	3 - <5	90-72-2	benzyl alcohol	3 - <5	100-51-6	cyclohexanone	3 - <5	108-94-1	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	3 - <5	68082-29-1	3-aminomethyl-3,5,5-trimethylcyclohexylamine	3 - <5	2855-13-2	nonylphenol	3 - <5	25154-52-3	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	3 - <5	38294-64-3
Ingredient name	%	CAS number																																		
Talc, not containing asbestos fibers	25 - <50	14807-96-6																																		
4-methylpentan-2-one	10 - <20	108-10-1																																		
Polyaminoamide	5 - <10	68082-29-1																																		
2,4,6-tris(dimethylaminomethyl)phenol	3 - <5	90-72-2																																		
benzyl alcohol	3 - <5	100-51-6																																		
cyclohexanone	3 - <5	108-94-1																																		
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	3 - <5	68082-29-1																																		
3-aminomethyl-3,5,5-trimethylcyclohexylamine	3 - <5	2855-13-2																																		
nonylphenol	3 - <5	25154-52-3																																		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	3 - <5	38294-64-3																																		

Section 3. Composition/information on ingredients

2-methylpropan-1-ol Amines, polyethylenepoly-, triethylenetetramine fraction	1 - <3 0.3 - <1	78-83-1 90640-67-8
---	--------------------	-----------------------

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Causes serious eye damage.
Inhalation	: Harmful if inhaled. May cause respiratory irritation.
Skin contact	: Causes severe burns. Defatting to the skin. 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: respiratory tract irritation coughing 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

Section 4. First aid measures

Ingestion skeletal malformations

- : 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 : 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, CO₂, 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 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 oxides
nitrogen oxides
halogenated compounds
metal oxide/oxides

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.

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

Protective measures : 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. 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.

Section 7. Handling and storage

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, 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

 talc, not containing asbestos fibers

4-methylpentan-2-one

cyclohexanone

2-methylpropan-1-ol

Workplace Safety and Health Act (Singapore, 1/2025)

PEL (long term) 8 hours: 2 mg/m³.

Workplace Safety and Health Act (Singapore, 1/2025)

PEL (long term) 8 hours: 50 ppm.
PEL (long term) 8 hours: 205 mg/m³.
PEL (short term) 15 minutes: 307 mg/m³.
PEL (short term) 15 minutes: 75 ppm.

Workplace Safety and Health Act (Singapore, 1/2025)

PEL (long term) 8 hours: 25 ppm.
PEL (long term) 8 hours: 100 mg/m³.

Workplace Safety and Health Act (Singapore, 1/2025)

PEL (long term) 8 hours: 50 ppm.
PEL (long term) 8 hours: 152 mg/m³.

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.

Section 8. Exposure controls/personal protection

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/face 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	: butyl rubber
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 9. Physical and chemical properties

Appearance

Physical state

: Liquid.

Odor

: Characteristic.

pH

: Not applicable.

Boiling point

: >37.78°C (>100°F)

Flash point

: Closed cup: 31°C (87.8°F)

Evaporation rate

: Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	:	liquid				
Vapor pressure	:	Not available.				
Relative density	:	1.36				
Solubility(ies)	:	<table border="1"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>cold water</td> <td>Not soluble</td> </tr> </tbody> </table>	Media	Result	cold water	Not soluble
Media	Result					
cold water	Not soluble					
Auto-ignition temperature	:	Not available.				
Viscosity	:	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): >21 mm ² /s (>21 cSt)				

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 halogenated compounds metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
4-methylpentan-2-one	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	11 mg/l >5000 mg/kg 2.08 g/kg	4 hours - -
2,4,6-tris (dimethylaminomethyl) phenol	LD50 Dermal	Rat	1280 mg/kg	-
benzyl alcohol	LD50 Oral LC50 Inhalation Dusts and mists LD50 Dermal	Rat Rat Rabbit	1200 mg/kg >5 mg/l >2000 mg/kg	- 4 hours -
cyclohexanone	LD50 Oral LC50 Inhalation Gas. LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	1200 mg/kg 8000 ppm 1100 mg/kg 1800 mg/kg	- 4 hours - -

Section 11. Toxicological information

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	LD50 Dermal	Rat	>2000 mg/kg	-
3-aminomethyl-3,5,5-trimethylcyclohexylamine	LD50 Oral LC50 Inhalation Dusts and mists	Rat Rat	>2000 mg/kg >5.01 mg/l	- 4 hours
nonylphenol	LD50 Dermal LD50 Oral LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	>2000 mg/kg 1030 mg/kg 2.14 g/kg 580 mg/kg	- - - -
2-methylpropan-1-ol	LC50 Inhalation Vapor LD50 Dermal	Rat Rabbit	24.6 mg/l 2460 mg/kg	4 hours
Amines, polyethylenepoly-, triethylenetetramine fraction	LD50 Oral LD50 Dermal LD50 Oral	Rat Rabbit Rabbit	2830 mg/kg 1465 mg/kg	- -
	LD50 Oral	Rat	1716 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Irritant	Human	-	-	-

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	skin	Mouse	Sensitizing
3-aminomethyl-3,5,5-trimethylcyclohexylamine	skin	Guinea pig	Sensitizing

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

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

Section 11. Toxicological information

Carcinogenicity

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Talc , not containing asbestosiform fibres	Category 3	-	Respiratory tract irritation
4-methylpentan-2-one	Category 3	-	Narcotic effects
cyclohexanone	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
-	Category 3	-	Narcotic effects
Amines, polyethylenepoly-, triethylenetetramine fraction	Category 1	-	respiratory tract

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Skin contact : Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

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:
respiratory tract irritation
coughing
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

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
 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

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 : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4878.37 mg/kg
Dermal	5791.62 mg/kg
Inhalation (gases)	55717.6 ppm
Inhalation (vapors)	31.96 mg/l
Inhalation (dusts and mists)	4.36 mg/l

Other information :

Section 11. Toxicological 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. 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	Exposure
4-methylpentan-2-one	Acute LC50 >179 mg/l	Fish	96 hours
2,4,6-tris (dimethylaminomethyl)phenol	Acute LC50 >100 mg/l	Daphnia	48 hours
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine nonylphenol	Acute LC50 >100 mg/l EC10 1.78 mg/l	Fish Algae	96 hours 72 hours
2-methylpropan-1-ol	Acute EC50 0.056 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
Amines, polyethylenepoly-, triethylenetetramine fraction	Chronic EC10 0.003 mg/l Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Chronic NOEC 1 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
	Acute EC50 1100 mg/l	Daphnia	48 hours
	Acute EC50 20 mg/l	Aquatic plants - <i>Daphnia magna</i>	72 hours
	Acute EC50 31.1 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 330 mg/l	Fish - <i>Pimephales promelas</i>	96 hours
	Acute NOEC 2.5 mg/l	Crustaceans	72 hours

Conclusion/Summary : Not available.

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
4-methylpentan-2-one	OECD 301F	83 % - Readily - 28 days	-	-
2,4,6-tris (dimethylaminomethyl)phenol	OECD Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	- -	- -

Conclusion/Summary : Not available.

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
4-methylpentan-2-one	-	-	Readily
2,4,6-tris	-	-	Not readily
(dimethylaminomethyl)phenol			
benzyl alcohol	-	-	Readily
Fatty acids, C18-unsatd.,			
dimers, oligomeric reaction			
products with tall-oil fatty			
acids and			
triethylenetetramine			Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
4-methylpentan-2-one	1.9	-	Low
2,4,6-tris	0.219	-	Low
(dimethylaminomethyl)phenol			
benzyl alcohol	0.87	-	Low
cyclohexanone	0.86	-	Low
3-aminomethyl-	0.99	-	Low
3,5,5-trimethylcyclohexylamine			
nonylphenol	3.28	154.88	Low
4,4'-Isopropylidenediphenol,	-	5.13	Low
oligomeric reaction products			
with 1-chloro-			
2,3-epoxypropane, reaction			
products with 3-aminomethyl-			
3,5,5-trimethylcyclohexylamine			
2-methylpropan-1-ol	1	-	Low
Amines, polyethylenepoly-,			
triethylenetetramine fraction	-2.65	-	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
------------------	--

Section 13. Disposal considerations

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

	UN	IMDG	IATA
UN number	UN3470	UN3470	UN3470
UN proper shipping name	PAINT, CORROSIVE, FLAMMABLE	PAINT, CORROSIVE, FLAMMABLE	PAINT, CORROSIVE, FLAMMABLE
Transport hazard class(es)	8 (3)	8 (3)	8 (3)
Packing group	II	II	II
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	(Polyamide)	Not applicable.

Additional information

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

Singapore - hazardous chemicals under government control

Ingredient name	Status
nonylphenol and nonylphenol ethoxylates	Listed

International regulations

Montreal Protocol

Section 15. Regulatory information

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

History

Date of issue/Date of revision	:	4 February 2026
Date of previous issue	:	4/20/2025
Version	:	1.01
Prepared by	:	EHS
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) UN = United Nations

 Indicates information that has changed from previously issued version.

Notice to reader

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.