

Date of issue 4/29/2021 (month/day/year)

Version 3

## Section 1. Chemical product and company identification

- A. Product name** : AMERLOCK SEALER HARDENER NF  
**Product code** : 00429356
- B. 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.  
**Uses advised against** : Product is not intended, labelled or packaged for consumer use.
- C. Supplier's information** : PPG SSC  
(680-090)  
19, Yeocheon-ro 217beon-gil, Nam-gu,  
Ulsan, Korea  
Tel: +82-52-210-8222
- Email Address** : Korea.MSDS@PPG.COM
- Emergency telephone number:** : +82-52-210-8222

## Section 2. Hazards identification

- A. Hazard classification** :  CORROSIVE TO METALS - Category 1  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (dermal) - Category 3  
ACUTE TOXICITY (inhalation) - Category 2  
SKIN CORROSION/IRRITATION - Category 1  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
AQUATIC HAZARD (LONG-TERM) - Category 3

This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act.

**B. GHS label elements, including precautionary statements**

**Symbol** :



**Signal word** :

Danger

## Section 2. Hazards identification

- Hazard statements** : H290 - May be corrosive to metals.  
H302 - Harmful if swallowed.  
H311 - Toxic in contact with skin.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H330 - Fatal if inhaled.  
H335 - May cause respiratory irritation.  
H351 - Suspected of causing cancer.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H412 - Harmful to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : P201 - Obtain special instructions before use.  
P280 - Wear protective gloves, protective clothing and eye or face protection.  
P284 - In case of inadequate ventilation wear respiratory protection.  
P234 - Keep only in original packaging.  
P273 - Avoid release to the environment.  
P260 - Do not breathe vapor.  
P270 - Do not eat, drink or smoke when using this product.  
P264 - Wash thoroughly after handling.
- Response** : P390 - Absorb spillage to prevent material damage.  
P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep 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.  
P363 - Wash contaminated clothing before reuse.  
P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.  
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.
- Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- C. Other hazards which do not result in classification** : Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C ( 140F).

## Section 3. Composition/information on ingredients

### CAS number/other identifiers

**CAS number** : Not applicable.

### Section 3. Composition/information on ingredients

Chemical name	Common name	Identifiers	%
2-Furanmethanol and mixtures which contain 25% or more.	FURFURYL ALCOHOL	CAS: 98-00-0	20 - <30
Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -(2-aminomethylethyl)- $\omega$ -(2-aminomethylethoxy)-	POLYOXY PROPYLENE DIAMINE	CAS: 9046-10-0 (n = 2-6)	10 -<20
Polyaminoamide	POLYAMIDE (POLYMER)	CAS: 68082-29-1	10 -<20
Formaldehyde, polymer with 1,3-dimethylbenzene	FORMALDEHYDE POLYMER WITH 1,3-DIMETHYLBENZENE	CAS: 26139-75-3	10 -<20
benzyl alcohol	BENZYL ALCOHOL	CAS: 100-51-6	10 -<20
Formaldehyde, polymer with benzenamine, hydrogenated	FORMALDEHYDE, POLYMER WITH BENZENAMINE, HYDROGENATED	CAS: 135108-88-2	5 - <10
2,4,6-tris(dimethylaminomethyl)phenol	2;4;6 TRIS (DIMETHYLAMINOMETHYL) PHENOL	CAS: 90-72-2	1 - <5
3,6-diazaoctanethylenediamin	TRIETHYLENETETRAMINE	CAS: 112-24-3	1 - <5
salicylic acid	Salicylic acid	CAS: 69-72-7	1 - <5
4,4'-methylenebis(cyclohexylamine)	METHYLENEDI(CYCLOHEXYLAMINE)	CAS: 1761-71-3	1 - <5

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.

### Section 4. First aid measures

- A. 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.
- B. 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.
- C. 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.
- D. Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- E. 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

### A. Extinguishing media

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

**Unsuitable extinguishing media** : None known.

**B. 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 harmful 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  
Formaldehyde.

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

**Fire-fighting procedures** : 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.

## Section 6. Accidental release measures

**A. Personal precautions, protective equipment and emergency procedures** : 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.

**B. 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.

### C. Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. 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. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. 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

- A. Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). 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. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- B. 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 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 in a corrosion resistant container with a resistant inner liner. Store locked up. Keep away from metals. 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

### A. Occupational exposure limits

Ingredient name	Exposure limits
2-Furanmethanol and mixtures which contain 25% or more.	<b>Ministry of Employment and Labor (Republic of Korea, 1/2020). Absorbed through skin.</b> STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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.
- B. 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.
- 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.

## Section 8. Exposure controls/personal protection

### C. Personal protective equipment

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

## Section 9. Physical and chemical properties

### A. Appearance

**Physical state** : Liquid.

**Color** : Colorless.

**B. Odor** : Characteristic.

**C. Odor threshold** : Not available.

**D. pH** : Not applicable.

**E. Melting/freezing point** : Not available.

**F. Boiling point/boiling range** : >37.78°C (>100°F)

**G. Flash point** : Closed cup: 80°C (176°F)

**H. Evaporation rate** : Not available.

**I. Flammability (solid, gas)** : Not available.

**J. Lower and upper explosive (flammable) limits** : Greatest known range: Lower: 1.8% Upper: 16.3% (furfuryl alcohol)

**K. Vapor pressure** : Not available.

**L. Solubility** : Insoluble in the following materials: cold water.

**Solubility in water** : Not available.

**M. Vapor density** : Not available.

**N. Relative density** : 1.02

## Section 9. Physical and chemical properties

- O. Partition coefficient: n-octanol/water : Not applicable.
- P. Auto-ignition temperature : Not available.
- Q. Decomposition temperature : Not available.
- R. Viscosity : Kinematic (40°C (104°F)): >0.21 cm<sup>2</sup>/s (>21 cSt)
- S. Molecular weight : Not applicable.

## Section 10. Stability and reactivity

- A. Chemical stability : The product is stable.  
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- B. Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.
- C. Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
- D. Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides Formaldehyde.

## Section 11. Toxicological information

- A. Information on the likely routes of exposure : Not available.

### Potential acute health effects

- Inhalation : Fatal if inhaled. May cause respiratory irritation.
- Ingestion : Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
- Skin contact : Causes severe burns. Toxic in contact with skin. Defatting to the skin. May cause an allergic skin reaction.
- Eye contact : Causes serious eye damage.

### Over-exposure signs/symptoms

- Inhalation : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Ingestion : Adverse symptoms may include the following:  
stomach pains
- Skin contact : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur

## Section 11. Toxicological information

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

### B. Health hazards

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-Furanmethanol and mixtures which contain 25% or more.	LC50 Inhalation Vapor	Rat	934 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapor	Rat	233 ppm	4 hours
	LD50 Dermal	Rabbit	400 mg/kg	-
	LD50 Dermal	Rat	3825 mg/kg	-
	LD50 Oral	Rat	0.132 g/kg	-
Poly[oxy(methyl-1,2-ethanediy)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-	LD50 Dermal	Rat	2980 mg/kg	-
	LD50 Oral	Rat	2885 mg/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1.23 g/kg	-
2,4,6-tris(dimethylaminomethyl)phenol	LD50 Dermal	Rabbit	1.28 g/kg	-
	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbit	1465 mg/kg	-
	LD50 Oral	Rat	1716 mg/kg	-
salicylic acid	LD50 Oral	Rat	0.891 g/kg	-
4,4'-methylenebis(cyclohexylamine)	LD50 Dermal	Rabbit	2.11 g/kg	-
	LD50 Oral	Rat	0.625 g/kg	-

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

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,4,6-tris(dimethylaminomethyl)phenol	Skin - Visible necrosis	Rabbit	-	4 hours	7 days

#### 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
Formaldehyde, polymer with benzenamine, hydrogenated	skin	Guinea pig	Sensitizing
2,4,6-tris(dimethylaminomethyl)phenol	skin	Guinea pig	Sensitizing
3,6-diazaoctanethylenediamin	skin	Guinea pig	Sensitizing

#### Conclusion/Summary



## Section 11. Toxicological information

**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.

### 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	Classification	Route of exposure	Target organs
<input checked="" type="checkbox"/> Furanmethanol and mixtures which contain 25% or more.	Category 3	-	Respiratory tract irritation
Formaldehyde, polymer with 1,3-dimethylbenzene	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Classification	Route of exposure	Target organs
<input checked="" type="checkbox"/> Furanmethanol and mixtures which contain 25% or more.	Category 2	-	-
Formaldehyde, polymer with benzenamine, hydrogenated	Category 2	oral	kidneys
4,4'-methylenebis(cyclohexylamine)	Category 2	oral	-

### Aspiration hazard

Name	Result
benzyl alcohol	ASPIRATION HAZARD - Category 2

### Potential chronic health effects

**General** : May cause damage to organs through prolonged or repeated exposure. 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** :  No known significant effects or critical hazards.

### Additional information

## Section 11. Toxicological information

Causes digestive tract burns. 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. 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.

Chemical name	Common name	CAS #	GHS Classification
2-Furanmethanol and mixtures which contain 25% or more.	FURFURYL ALCOHOL	CAS: 98-00-0	ACUTE TOXICITY (oral) - Category 3  ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 CORROSIVE TO METALS - Category 1
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-	POLYOXY PROPYLENE DIAMINE	CAS: 9046-10-0 (n = 2-6)	SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3
Polyaminoamide	POLYAMIDE (POLYMER)	CAS: 68082-29-1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Formaldehyde, polymer with 1,3-dimethylbenzene	FORMALDEHYDE POLYMER WITH 1,3-DIMETHYLBENZENE	CAS: 26139-75-3	SKIN CORROSION/IRRITATION - Category 2  SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
benzyl alcohol	BENZYL ALCOHOL	CAS: 100-51-6	ACUTE TOXICITY (oral) - Category 4  ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 ASPIRATION HAZARD - Category 2 CORROSIVE TO METALS - Category 1
Formaldehyde, polymer with benzenamine, hydrogenated	FORMALDEHYDE, POLYMER WITH BENZENAMINE, HYDROGENATED	CAS: 135108-88-2	CORROSIVE TO METALS - Category 1  ACUTE TOXICITY (oral) - Category 4

## Section 11. Toxicological information

2,4,6-tris (dimethylaminomethyl) phenol	2;4;6 TRIS (DIMETHYLAMINOMETHYL) PHENOL	CAS: 90-72-2	SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3 CORROSIVE TO METALS - Category 1  ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CORROSIVE TO METALS - Category 1
3,6-diazaoctanethylenediamin	TRIETHYLENETETRAMINE	CAS: 112-24-3	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3 ACUTE TOXICITY (oral) - Category 4
salicylic acid	Salicylic acid	CAS: 69-72-7	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 TOXIC TO REPRODUCTION - Category 2 CORROSIVE TO METALS - Category 1
4,4'-methylenebis (cyclohexylamine)	METHYLENEDI (CYCLOHEXYLAMINE)	CAS: 1761-71-3	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2

## Section 12. Ecological information

### A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ - (2-aminomethylethyl)- $\omega$ -(2-aminomethylethoxy)-  Formaldehyde, polymer with benzenamine, hydrogenated 2,4,6-tris (dimethylaminomethyl) phenol salicylic acid	EC50 15 mg/l	Algae	72 hours
	Acute EC50 63 mg/l	Fish	96 hours
	Acute LC50 175 mg/l	Fish	96 hours
	Acute EC50 1147.57 mg/l Fresh water	Daphnia - Daphnia longispina - Neonate	48 hours
	Chronic NOEC 5.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days

### B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ - (2-aminomethylethyl)- $\omega$ -(2-aminomethylethoxy)-  benzyl alcohol	-	-	Not readily
	-	-	Readily

### C. Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> Furanmethanol and mixtures which contain 25% or more. benzyl alcohol	0.28	-	low
Formaldehyde, polymer with benzenamine, hydrogenated	1.1	-	low
3,6-diazaoctanethylenediamin salicylic acid	-	209 to 219	low
	-1.66 to -1.4	-	low
	2.26	-	low

### D. Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

E. Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

- A. 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.
- B. Disposal precautions** : 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.

## Section 14. Transport information

	UN	IMDG	IATA
<b>A. UN number</b>	UN3066	UN3066	UN3066
<b>B. UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>C. Transport hazard class(es)</b>	8	8	8
<b>D. Packing group</b>	II	II	II
<b>Environmental hazards</b>	No.	No.	No.
<b>E. Marine pollutant substances</b>	Not applicable.	Not applicable.	Not applicable.

### Additional information

- UN** : None identified.  
**IMDG** : None identified.  
**IATA** : None identified.

### F. Special precaution which a user to be aware of or needs to comply with in connection with transport or transportation

**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

### A. Regulation according to ISHA

**ISHA article 117 (Harmful substances prohibited from manufacture)** : None of the components are listed.

**ISHA article 118 (Harmful substances requiring permission)** : None of the components are listed.

**Article 2 of Youth Protection Act on Substances Hazardous to Youth** : It is not allowed to sell to persons under the age of 19.

### Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:

Furanmethanol and mixtures which contain 25% or more.

**ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors)** : None of the components are listed.

**ISHA Enforcement Regs Annex 11-5 (Harmful factors subject to Work Environment Measurement)** : None of the components are listed.

**ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up)** : None of the components are listed.

**Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)** : None of the components are listed.

### B. Regulation according to Chemicals Control Act

**CCA Article 11 (TRI)** : The following components are listed: 2-Furanmethanol

**CCA Article 18 Prohibited (K-Reach Article 27)** : None of the components are listed.

**CCA Article 19 Subject to authorization (K-Reach Article 25)** :  None of the components are listed.

**CCA Article 20 Restricted (K-Reach Article 27)** : None of the components are listed.

**CCA Article 20 Toxic Chemicals (K-Reach Article 20)** : Not applicable

**Korea inventory** : All components are listed or exempted.

## Section 15. Regulatory information

- CCA Article 39** : None of the components are listed.  
(Accident Precaution Chemicals)
- C. Dangerous Materials** : **Class:** Class 4 - Flammable Liquid  
**Safety Management Act** **Item:** 5. Class 3 petroleum - Water-insoluble liquid  
**Threshold:** 2000 L  
**Danger category:** III  
**Signal word:** Contact with sources of ignition prohibited
- D. Wastes regulation** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- E. Regulation according to other foreign laws**  
**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

- A. References** : Korean Ministry of Environment; Chemical Control Act  
Korean Ministry of Labor; Industrial Safety and Health Act  
NIER Notice  
Registry of Toxic Effects of Chemical Substances (RTECS)  
U.S. Environmental Protection Agency, AQUIRE (Aquatic toxicity Information Retrieval) ECOTOX Database System.
- B. Date of issue/Date of revision** : 4/29/2021
- C. Version** : 3  
**Prepared by** : EHS
- D. Other**

✔ Indicates information that has changed from previously issued version.

### Disclaimer

*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.*