SAFETY DATA SHEET

Date of issue/Date of revision 30 June 2024

Version9.01

Section 1. Identification

Product code	: 00370550
Product name	: SIGMACOVER 410 LT HARDENER
Other means of identification	: Not available.
Product type	: Liquid.
Relevant identified uses	of the substance or mixture and uses advised against
Product use	: Coating. Professional applications, Used by spraying.
Uses advised against	: Product is not intended, labelled or packaged for consumer use.
Supplier's details	: PT PPG Coatings Indonesia JI. Rawagelam III No.1 13930 Jakarta Indonesia Tel +62 21 4605710 PMC.Safety@PPG.com
Emergency telephone number	: CHEMTREC 001-803-017-9114 (CCN 17704)

Section 2. Hazards identification

Classification of the	: FLAMMABLE LIQUIDS - Category 3
substance or mixture	ACUTE TOXICITY (oral) - Category 4
	ACUTE TOXICITY (inhalation) - Category 4
	SKIN CORROSION/IRRITATION - Category 1
	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	SKIN SENSITIZATION - Category 1
	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
	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 53.7%

GHS label elements, including precautionary statements



Indonesia

Product code 00370550

Product name SIGMACOVER 410 LT HARDENER

Version 9.01

Section 2. Hazards identification

Hazard statements	:	Flammable liquid and vapor. Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.
Precautionary statements		
Prevention	:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. 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. 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.
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. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage	:	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not result in classification	:	Causes digestive tract burns. 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.

Ingredient name	%	CAS number
xylene	25- <50	1330-20-7
nonylphenol	20- <25	25154-52-3
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil	10- <20	68082-29-1
fatty acids and triethylenetetramine		
2-methylpropan-1-ol	10- <20	78-83-1
Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol	5- <10	445498-00-0
2,4,6-tris(dimethylaminomethyl)phenol	5- <10	90-72-2
ethylbenzene	3- <5	100-41-4
3,6-diazaoctanethylenediamin	1- <3	112-24-3
toluene	0.1- <0.3	108-88-3
		Indonesia [:] Page: 2/15

Section 3. Composition/information on ingredients

p-nonylphenol

0.1- <0.3

104-40-5

There are no 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.

SUB codes represent substances without registered CAS Numbers.

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

Section 4. First aid measures

Description of necess	ary 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	: Harmful if swallowed. Corrosive to the digestive tract. Causes burns.		
Over-exposure signs/sympto	<u>oms</u>		
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 skeletal malformations		

Product code 00370550 Product name SIGMACOVER 410 LT HARDENER Date of issue 30 June 2024

Version 9.01

Section 4. First aid measures

Ingestion	:	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
Indication of immediate me	<u>dica</u>	l 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	1	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 mediaSuitable 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 haz In a fire or if heated, a pressure increase will occur and the container may burs the risk of a subsequent explosion. This material is very toxic to aquatic life wi long lasting effects. Fire water contaminated with this material must be contain 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		
 media 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 haz In a fire or if heated, a pressure increase will occur and the container may burst 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 container and prevented from being discharged to any waterway, sewer or drain. Decomposition products 		
 media Specific hazards arising from the chemical Flammable liquid and vapor. Runoff to sewer may create fire or explosion haz. In a fire or if heated, a pressure increase will occur and the container may burst the risk of a subsequent explosion. This material is very toxic to aquatic life will long lasting effects. Fire water contaminated with this material must be contain and prevented from being discharged to any waterway, sewer or drain. Hazardous thermal decomposition products 	: Use dry chemical, CO ₂ , water spray (fog) or foam.	
 from the chemical In a fire or if heated, a pressure increase will occur and the container may burst 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 	: Do not use water jet.	
decomposition products carbon oxides	In a fire or if heated, a pressure increase will occur and the container may the risk of a subsequent explosion. This material is very toxic to aquatic lif long lasting effects. Fire water contaminated with this material must be co	burst, with e with
	carbon oxides	
 Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incid 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 ris Use water spray to keep fire-exposed containers cool. 	there is a fire. No action shall be taken involving any personal risk or with suitable training. Move containers from fire area if this can be done without	out
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.	breathing apparatus (SCBA) with a full face-piece operated in positive pre-	

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.
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Product code 00370550

Version 9.01

Product name SIGMACOVER 410 LT HARDENER

Section 6. Accidental release measures

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 co	ont	ainment 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.
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.

Section 7. Handling and storage

Conditions for safe storage,	: Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in
including any	accordance with local regulations. Store in a segregated and approved area. Store
incompatibilities	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.
	contamination. See Section to for incompatible materials before nandling of use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
vylene	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). [xilen] TWA: 434 mg/m³ 8 hours. TWA: 100 BDS 8 hours. STEL: 651 mg/m³ 15 minutes. STEL: 150 BDS 15 minutes. Ministry of Employment and Labor (Indonesia, 2/1997). STEL: 651 mg/m³ 15 minutes. STEL: 150 BDS 15 minutes. STEL: 150 BDS 15 minutes.
2-methylpropan-1-ol	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). Absorbed through skin. TWA: 152 mg/m ³ 8 hours. TWA: 50 BDS 8 hours.
ethylbenzene	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). TWA: 20 BDS 8 hours. Ministry of Employment and Labor (Indonesia, 2/1997). STEL: 543 mg/m ³ 15 minutes. STEL: 125 BDS 15 minutes.
toluene	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). TWA: 20 BDS 8 hours.
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.

Section 8. Exposure controls/personal protection

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.
Color	: Not available.
Odor	: Characteristic.
Odor threshold	: Not available.
рН	Not applicable.
Melting point	: Not available.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 26°C (78.8°F)
Evaporation rate	: Not available.
Flammability/Combustible properties (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Greatest known range: Lower: 1.7% Upper: 10.9% (2-methylpropan-1-ol)

Section 9. Physical and chemical properties

Vapor pressure	1	Not available.	
Vapor density	1	Not available.	
Relative density	1	0.92	
Bulk Density (g/cm³)	:	0.945	
Solubility(ies)		Media	Result
Solubility(les)	•	cold water	Not soluble
Partition coefficient: n- octanol/water	:	Not applicable.	
Auto-ignition temperature	:	Not available.	
Decomposition temperature	1	Not available.	
Viscosity	:	Kinematic (40°C): >21 mm	² /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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
x ylene	LD50 Dermal	Rabbit	1.7 g/kg	-
-	LD50 Oral	Rat	4.3 g/kg	-
nonylphenol	LD50 Dermal	Rabbit	2.14 g/kg	-
	LD50 Oral	Rat	580 mg/kg	-
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapor	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-
2,4,6-tris	LD50 Dermal	Rat	1280 mg/kg	-

Section 11. Toxicological information

	0				
(dimethylaminomethyl)					
phenol					
	LD50 Oral	Rat		1200 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat		17.8 mg/l	4 hours
	LD50 Dermal	Rabbi	t	17.8 g/kg	-
	LD50 Oral	Rat	:	3.5 g/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbi	t	1465 mg/kg	-
	LD50 Oral	Rat		1716 mg/kg	-
toluene	LC50 Inhalation Vapor	Rat		49 g/m³	4 hours
	LD50 Dermal	Rabbi	t i	8.39 g/kg	-
	LD50 Oral	Rat	4	5580 mg/kg	-
p-nonylphenol	LD50 Oral	Rat		1620 mg/kg	-
Conclusion/Summary	: There are no data availa	able on the mix	ture itself.		
Irritation/Corrosion					
Product/ingredient name	Result	Species	Score	Exposure	Observation

Product/ingredient name	Result	Species	Score	Exposure	Observation
x ylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
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 in	self.
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: There are no data available on the mixture itself. Eyes Respiratory

: There are no data available on the mixture itself.

Sensitization

••••••	Route of exposure	Species	Result
Atty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	skin	Mouse	Sensitizing
3,6-diazaoctanethylenediamin	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.
<u>Mutagenicity</u>	
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 toxi	<u>city (single exposure)</u>

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
toluene	Category 3 Category 3	-	Narcotic effects Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	•••	Route of exposure	Target organs
	Category 2 Category 2	-	hearing organs -

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure	:	Not available.
Potential acute health effects	5	
Eye contact	:	Causes serious eye damage.
Inhalation	:	Harmful if inhaled. May cause respiratory irritation.
Skin contact	1	Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	1	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

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
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

Product code 00370550 Product name SIGMACOVER 410 LT HARDENER Version 9.01

Section 11. Toxicological information

Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations		
Delayed and immediate effect	ts and also chronic effects from short and long term exposure		
Short term exposure			
Potential immediate effects	: There are no data available on the mixture itself.		
Potential delayed effects	: There are no data available on the mixture itself.		
<u>Long term exposure</u>			
Potential immediate effects	: There are no data available on the mixture itself.		
Potential delayed effects	: There are no data available on the mixture itself.		
Potential chronic health eff	e <u>cts</u>		
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	: No known significant effects or critical hazards.		

: No known significant effects or critical hazards.

: Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Reproductive toxicity

Mutagenicity

Route	ATE value
Øral	1889.17 mg/kg
Dermal	4628.01 mg/kg
Inhalation (vapors)	16.98 mg/l
Inhalation (dusts and mists)	2.18 mg/l

Other information

Zauses 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. 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
nonylphenol	Acute EC50 0.056 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic EC10 0.003 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 1 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	EC10 1.78 mg/l	Algae	72 hours
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
2,4,6-tris (dimethylaminomethyl)phenol	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
p-nonylphenol	Acute EC50 134.1 µg/l Marine water	Algae - <i>Phaeodactylum</i> <i>tricornutum</i> - Exponential growth phase	72 hours
	Chronic EC10 73.8 µg/l Marine water	Algae - <i>Phaeodactylum</i> <i>tricornutum</i> - Exponential growth phase	72 hours

Persistence/degradability

Not available.

Product/ingredient name	Test	Result		Dose	Inoculum
₽,4,6-tris (dimethylaminomethyl)phenol	OECD 301D Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 2	8 days	-	-
ethylbenzene	-	79 % - Readily - 10	days	-	-
Product/ingredient name	Aquatic half-life		Photolysis	S	Biodegradability
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	-		-		Readily Not readily
2,4,6-tris (dimethylaminomethyl)phenol	-		-		Not readily
ethylbenzene toluene	-		-		Readily Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogPow	BCF	Potential
x ylene	3.12	7.4 to 18.5	Low
nonylphenol	3.28	154.88	Low
2-methylpropan-1-ol	1	-	Low
2,4,6-tris	0.219	-	Low
(dimethylaminomethyl)phenol			
ethylbenzene	3.6	79.43	Low
3,6-diazaoctanethylenediamin	-1.66 to -1.4	-	Low
toluene	2.73	8.32	Low
p-nonylphenol	5.76	380.19	Low

Mobility in soil

Soil/water partition coefficient (Koc)

: 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

	UN	IMDG	ΙΑΤΑ
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	I	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.	(nonylphenol)	Not applicable.

Indonesia Page: 13/15

Section 14. Transport information

Additional information

UN	: None identified.
IMDG	: The marine pollutant mark is not required when transported in sizes of \leq 5 L or \leq 5 kg.
ΙΑΤΑ	: 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 : Not applicable. to IMO instruments

Section 15. Regulatory information

- Safety, health and environmental regulations specific for the product
- : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Law No. 74/2001 - Banned

None of the components are listed.

Law No. 74/2001 - Restricted

None of the components are listed.

Law No. 74/2001 - : Not determined Chemicals that may be used

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

	Indonesia Page: 14/1
Prepared by 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
	: EHS
Version	: 9.01
Date of previous issue	: 5/18/2021
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<u>History</u>	

Indonesia Page: 14/15

Section 16. Other information

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

V 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.