# SAFETY DATA SHEET



Date of issue/Date of revision 22 May 2024

**Version 2** 

### Section 1. Identification

Product code : 00445181

Product name : SIGMACOVER 256/435/456/522 HARDENER

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 Industries (Singapore) Pte. Ltd., No. 1 Tuas Basin Close, Singapore 638803.

Tel +65 68653737

**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 2

ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1C

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

SKIN SENSITISATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) -

Category 3

#### GHS label elements, including precautionary statements

Hazard pictograms :







Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful if inhaled.

May cause respiratory irritation. May cause drowsiness or dizziness.

**Precautionary statements** 

Singapore English (GB) Page: 1/14

Product name SIGMACOVER 256/435/456/522 HARDENER

### Section 2. Hazards identification

**Prevention**: 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 breathing vapour.

Response : 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. 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 in a well-ventilated place. Keep container tightly closed.

**Disposal** : Mot applicable.

Other hazards which do not result in classification

Other hazards which do not : 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	20 - <25	1330-20-7
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil	20 - <25	68082-29-1
fatty acids and triethylenetetramine		
2-methylpropan-1-ol	20 - <25	78-83-1
Epoxy Resin (700 <mw<=1100)< td=""><td>10 - &lt;20</td><td>25036-25-3</td></mw<=1100)<>	10 - <20	25036-25-3
2,4,6-tris(dimethylaminomethyl)phenol	3 - <5	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

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.

Singapore English (GB) Page: 2/14

Product name SIGMACOVER 256/435/456/522 HARDENER

### 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 recognised skin cleanser. Do NOT use solvents or thinners.

**Ingestion**: If swallowed, seek medical advice immediately and show the 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. Can cause central nervous system (CNS) depression. May

cause drowsiness or dizziness. May cause respiratory irritation.

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

Ingestion : Corrosive to the digestive tract. Causes burns. Can cause central nervous system

(CNS) depression.

#### 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

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

**Skin contact**: Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

### 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.

Singapore English (GB) Page: 3/14

Product code 00445181

Date of issue 22 May 2024

Version 2

Product name SIGMACOVER 256/435/456/522 HARDENER

### Section 4. First aid measures

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. Firefighting measures

#### **Extinguishing media**

Suitable extinguishing media

: Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

Unsuitable extinguishing media

: Do not use water jet.

Specific hazards arising from the chemical

: Highly flammable liquid and vapour. 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.

**Hazardous thermal** decomposition products : Decomposition products may include the following materials: carbon oxides nitrogen 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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised 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 spilt 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).

#### Methods and material for containment and cleaning up

English (GB) Page: 4/14 **Singapore** 

Product name SIGMACOVER 256/435/456/522 HARDENER

### Section 6. Accidental release measures

### **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 the 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 noncombustible, 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 spilt 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. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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.

# including any incompatibilities

Conditions for safe storage, : 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 oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Singapore** English (GB) Page: 5/14

# Section 8. Exposure controls/personal protection

#### **Control parameters**

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>x</b> ýlene	Workplace Safety and Health Act (Singapore, 2/2006). [Xylene] PEL (short term): 651 mg/m³ 15 minutes. PEL (short term): 150 ppm 15 minutes. PEL (long term): 434 mg/m³ 8 hours. PEL (long term): 100 ppm 8 hours.
2-methylpropan-1-ol	Workplace Safety and Health Act (Singapore, 2/2006).  PEL (long term): 152 mg/m³ 8 hours.  PEL (long term): 50 ppm 8 hours.
ethylbenzene	Workplace Safety and Health Act (Singapore, 2/2006).  PEL (short term): 543 mg/m³ 15 minutes.  PEL (short term): 125 ppm 15 minutes.  PEL (long term): 434 mg/m³ 8 hours.
toluene	PEL (long term): 100 ppm 8 hours.  Workplace Safety and Health Act (Singapore, 2/2006).  PEL (long term): 188 mg/m³ 8 hours. PEL (long term): 50 ppm 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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

# **Environmental exposure** controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **Individual protection measures**

**Hygiene measures** 

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Skin protection

: Chemical splash goggles and face shield.

Singapore English (GB) Page: 6/14

Product code 00445181

Date of issue 22 May 2024

Version 2

Product name SIGMACOVER 256/435/456/522 HARDENER

# Section 8. Exposure controls/personal protection

**Hand protection** 

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

Gloves : nitrile neoprene

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist

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

Other skin protection : Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the

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

necessary.

# Section 9. Physical and chemical properties

**Appearance** 

Physical state : Liquid.
Colour : Clear.

Odour : Characteristic.

pH : insoluble in water.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 22°C (71.6°F)

Evaporation rate: . Fighest known value: 0.84 (ethylbenzene) Weighted average: 0.72compared with

butyl acetate

Flammability (solid, gas) : liquid

Vapour pressure : Fighest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol).

Weighted average: 0.73 kPa (5.48 mm Hg) (at 20°C)

Vapour density : Mighest known value: 5.04 (Air = 1) (3,6-diazaoctanethylenediamin). Weighted

average: 3.29 (Air = 1)

Relative density : 0.92 Bulk Density (g/cm³) : 0.93

Solubility(ies) : Media Result

∞old water Not soluble

**Auto-ignition temperature**: Lowest known value: 337.78°C (640°F) (3,6-diazaoctanethylenediamin).

Singapore English (GB) Page: 7/14

Product name SIGMACOVER 256/435/456/522 HARDENER

## Section 9. Physical and chemical properties

: Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt) **Viscosity** 

# Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

**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.

: Keep away from the following materials to prevent strong exothermic reactions: **Incompatible materials** 

oxidising agents, strong alkalis, strong acids.

**Hazardous decomposition** 

: Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides products

# Section 11. Toxicological information

### Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
<b>x</b> ylene	LD50 Dermal	Rabbit	1.7 g/kg	-
-	LD50 Oral	Rat	4.3 g/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 Vapour	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-
Epoxy Resin (700 <mw <="1100)&lt;/td"><td>LD50 Dermal</td><td>Rat</td><td>&gt;2000 mg/kg</td><td>-</td></mw>	LD50 Dermal	Rat	>2000 mg/kg	-
,	LD50 Oral	Rat	>2000 mg/kg	-
2,4,6-tris	LD50 Dermal	Rat	1280 mg/kg	-
(dimethylaminomethyl) phenol				
	LD50 Oral	Rat	1200 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
•	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbit	1465 mg/kg	-
-	LD50 Oral	Rat	1716 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	49 g/m³	4 hours

English (GB) Page: 8/14 **Singapore** 

Product name SIGMACOVER 256/435/456/522 HARDENER

## **Section 11. Toxicological information**

LD50 D	Permal R	Rabbit 8	3.39 g/kg	-
LD50 C	Oral R	Rat 5	5580 mg/kg	-

**Conclusion/Summary** 

: There are no data available on the mixture itself.

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>x</b> 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 itself.Eyes: There are no data available on the mixture itself.Respiratory: There are no data available on the mixture itself.

### **Sensitisation**

Product/ingredient name Route of exposure	-	
dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Mouse Guinea pig	Sensitising Sensitising

### **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.

**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)

Singapore English (GB) Page: 9/14

Product name SIGMACOVER 256/435/456/522 HARDENER

## **Section 11. Toxicological information**

Name	Category	Route of exposure	Target organs
kylene	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
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2		-

### **Aspiration hazard**

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

Information on likely routes : Not available.

of exposure

Potential acute health effects

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

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May

cause drowsiness or dizziness. May cause respiratory irritation.

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

Ingestion : Corrosive to the digestive tract. Causes burns. Can cause central nervous system

(CNS) depression.

### 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

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

Singapore English (GB) Page: 10/14

Product name SIGMACOVER 256/435/456/522 HARDENER

# **Section 11. Toxicological information**

**Skin contact**: Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Short term exposure** 

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

**Long term exposure** 

Potential immediate : Not available.

effects

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 : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

#### **Numerical measures of toxicity**

#### **Acute toxicity estimates**

Route	ATE value
<b>⊘</b> ral	18922.85 mg/kg
Dermal	5060.89 mg/kg
Inhalation (vapours)	21.06 mg/l
Inhalation (dusts and mists)	2.71 mg/l

#### Other 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 vapour/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.

Singapore English (GB) Page: 11/14

Product name SIGMACOVER 256/435/456/522 HARDENER

# **Section 12. Ecological information**

### **Toxicity**

Product/ingredient name	Result	Species	Exposure
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	Acute LC50 >100 mg/l	Daphnia	48 hours
(dimethylaminomethyl)phenol	_	·	
	Acute LC50 >100 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia Daphnia - <i>Ceriodaphnia dubia</i>	48 hours
	Chilonic NOEC 1 mg/l Fresh water	Daprinia - Ceriodaprinia dubia	-

Version 2

Conclusion/Summary

: There are no data available on the mixture itself.

### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2,4,6-tris (dimethylaminomethyl)phenol		4 % - Not readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

### Conclusion/Summary

: There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>x</b> ylene	-	-	Readily
Fatty acids, C18-unsatd.,	-	-	Not readily
dimers, oligomeric reaction			
products with tall-oil fatty			
acids and			
triethylenetetramine			
2,4,6-tris	-	-	Not readily
(dimethylaminomethyl)phenol			
ethylbenzene	-	-	Readily
toluene	-	-	Readily

### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
kylene	3.12	7.4 to 18.5	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

Singapore	English (GB)	Page: 12/14
-----------	--------------	-------------

Product code 00445181

Date of issue 22 May 2024

Version 2

Product name SIGMACOVER 256/435/456/522 HARDENER

# **Section 12. Ecological information**

**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 minimised 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. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

# **Section 14. Transport information**

	UN	IMDG	IATA
UN number	UN3469	UN3469	UN3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
Transport hazard class(es)	3 (8)	3 (8)	3 (8)
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

#### **Additional information**

UN : None identified.IMDG : None identified.IATA : None identified.

Singapore English (GB) Page: 13/14

Product name SIGMACOVER 256/435/456/522 HARDENER

### **Section 14. Transport information**

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

Singapore - hazardous chemicals under government control

None.

**International regulations** 

**Montreal Protocol** 

Not listed.

**Stockholm Convention on Persistent Organic Pollutants** 

Not listed.

### Section 16. Other information

**History** 

Date of issue/Date of : 22 May 2024

revision

Date of previous issue : 10/6/2021

Version : 2
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.

Singapore English (GB) Page: 14/14