## **SAFETY DATA SHEET**



Date of issue/Date of revision8 October 2021Version 8.01

# Section 1. Identification of the substance/mixture and of the company/undertaking

Product code	: 00254159
Product name	: SIGMASHIELD 460 BASE RAL 3009
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	: PPG Coatings (Thailand) Co., Ltd. 15 Rama 9 Road, Kwaeng Huamark, Khet Bangkapi, Bangkok 10240 Thailand T: 662-319-4190 #224 F: 662-319-4189		
Emergency telephone number (with hours of operation)	: CHEMTREC 001-800-13-203-9987 (CCN 17704)		

### Section 2. Hazards identification

	Classification of the substance or mixture	<ul> <li>FLAMMABLE LIQUIDS - Category 3         ACUTE TOXICITY (oral) - Category 5         ACUTE TOXICITY (dermal) - Category 5         ACUTE TOXICITY (inhalation) - Category 4         SKIN CORROSION/IRRITATION - Category 2         SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1         SKIN SENSITIZATION - Category 1B      </li> <li>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract         irritation) - Category 3         AQUATIC HAZARD (ACUTE) - Category 1     </li> </ul>
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### Section 2. Hazards identification

	Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 32.1%	
	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal	
	toxicity: 58.9% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 84.4%	
	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 66%	
GHS label elements		
Hazard pictograms		
Signal word	: Danger	
Hazard statements	Flammable liquid and vapor. May be harmful if swallowed or in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.	
Precautionary statements		
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. 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. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.	
Response	Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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	<ul> <li>Dispose of contents and container in accordance with all local, regional, national and international regulations.</li> </ul>	

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### Section 2. Hazards identification

Other hazards which do not<br/>result in classificationCauses digestive tract burns. Prolonged or repeated contact may dry skin and<br/>cause irritation.

### Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

#### CAS number/other identifiers

**CAS number** : Not applicable.

Ingredient name	%	CAS number
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	20- <25	25068-38-6
Talc, not containing asbestiform fibers	10- <20	14807-96-6
xylene	5- <10	1330-20-7
nonylphenol	1- <3	25154-52-3
ethylbenzene	1- <3	100-41-4
2-methylpropan-1-ol	1- <3	78-83-1
4-nonylphenol, branched	1- <3	84852-15-3
Phenol, 2-nonyl-, branched	<0.1	91672-41-2

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

SUB codes represent substances without registered CAS Numbers.

### Section 4. First aid measures

#### Description of necessary first aid measures

Eye contact	<ul> <li>Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical</li> </ul>
	attention.
Inhalation	<ul> <li>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.</li> </ul>
Skin contact	<ul> <li>Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.</li> </ul>
Ingestion	<ul> <li>If swallowed, seek medical advice immediately and show this container or label.</li> <li>Keep person warm and at rest. Do NOT induce vomiting.</li> </ul>

#### 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 :	May be harmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion :	May be harmful if swallowed. Corrosive to the digestive tract. Causes burns.
Over-exposure signs/sympton	n <u>s</u>
Eye contact :	Adverse symptoms may include the following: pain watering redness

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### Product name SIGMASHIELD 460 BASE RAL 3009 Section 4. First aid measures

Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
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 me	dical attention and special treatment needed, if necessary
Notes to physician	<ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</li> </ul>
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

#### See toxicological information (Section 11)

### Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is 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 halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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### Section 5. Fire-fighting measures

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

### Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.	

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

Small spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### Section 7. Handling and storage

Precautions for safe handling
 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 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,

### Section 7. Handling and storage

lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities
 Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Section 8. Exposure controls/personal protection

#### **Control parameters**

**Occupational exposure limits** 

Ingredient name		Exposure limits
ralc, not containing asbestif	orm fibers	Ministry of Labor (Thailand, 8/2017). TWA: 0.1 fibres/1 cc 8 hours. Form: Respirable dust TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable dust
xylene ethylbenzene		Ministry of Labor (Thailand, 8/2017). TWA: 100 ppm 8 hours. Ministry of Labor (Thailand, 8/2017).
2-methylpropan-1-ol		TWA: 100 ppm 8 hours. <b>ACGIH TLV (United States, 3/2020).</b> TWA: 152 mg/m <sup>3</sup> 8 hours. TWA: 50 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.	
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.	

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### Section 8. Exposure controls/personal protection

#### Individual protection measures

Hygiene measures	:	sh hands, forearms and face thoroughly after handling chemical products, before ng, smoking and using the lavatory and at the end of the working period. propriate techniques should be used to remove potentially contaminated clothing. Intaminated work clothing should not be allowed out of the workplace. Wash taminated clothing before reusing. Ensure that eyewash stations and safety wers are close to the workstation location.		
Eye protection	1	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	1	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	: Various
Odor	: Aromatic.
Odor threshold	: Not available.
рН	: insoluble in water.
Melting point	<ul> <li>May start to solidify at the following temperature: &lt;-7°C (&lt;19.4°F) This is based on data for the following ingredient: 4-nonylphenol, branched. Weighted average: -78.3°C (-108.9°F)</li> </ul>
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 25°C (77°F)
Evaporation rate	:

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### Section 9. Physical and chemical properties

		Highest known value: 0.84 (ethylbenzene) Weighted average: 0.67compared with butyl acetate
Flammability (solid, gas)	1	liquid
Lower and upper explosive (flammable) limits	:	Greatest known range: Lower: 1.7% Upper: 10.9% (2-methylpropan-1-ol)
Vapor pressure	:	Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol). Weighted average: 0.88 kPa (6.6 mm Hg) (at 20°C)
Vapor density	1	Highest known value: 7.59 (Air = 1) (nonylphenol). Weighted average: 4.34 (Air = 1)
Relative density		1.33
Solubility		Insoluble in the following materials: cold water.
Partition coefficient: n- octanol/water	1	Not applicable.
Auto-ignition temperature		Lowest known value: 370°C (698°F) (nonylphenol).
Decomposition temperature		Stable under recommended storage and handling conditions (see Section 7).
Viscosity		Kinematic (40°C): >21 mm²/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	<ul> <li>Depending on conditions, decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides</li> </ul>				
Section 11, Toxicological information					

#### ection 11. Toxicological information

Information on toxicological effects Acute toxicity

Product name SIGMASHIELD 460 BASE RAL 3009

### Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure	
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	LD50 Dermal	Rabbit	>2 g/kg	-	
	LD50 Oral	Rat	>2 g/kg	-	
xylene	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	-	
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours	
	LD50 Dermal	Rabbit	17.8 g/kg	-	
	LD50 Oral	Rat	3.5 g/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	-	
4-nonylphenol, branched	LD50 Dermal	Rabbit	2.14 g/kg	-	
	LD50 Oral	Rat	1300 mg/kg	-	

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

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	Skin - Moderate irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 Ul	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
4-nonylphenol, branched	Skin - Erythema/Eschar	Rabbit	4	- Ŭ	-

#### **Conclusion/Summary**

Skin	1	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.

Respirator	У
<b>Sensitization</b>	

Product/ingredient name	Route of exposure	Species	Result
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	skin	Mouse	Sensitizing
<u>Conclusion/Summary</u> Skin :	There are no dat	a available on the mixture itself.	

Skin Respiratory

: There are no data available on the mixture itself.

#### **Mutagenicity**

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### Section 11. Toxicological information

Conclusion/Summary	: There are no data available on the mixture itself.			
Carcinogenicity				
<b>Conclusion/Summary</b>	: There are no data available on the mixture itself.			
Reproductive toxicity				
<b>Conclusion/Summary</b>	: There are no data available on the mixture itself.			
<b>Teratogenicity</b>				
<b>Conclusion/Summary</b>	: There are no data available on the mixture itself.			
<u>Specific target organ toxicity (single exposure)</u>				

Name	Category	Route of exposure	Target organs
railed as a strain of the	Category 3 Category 3 Category 3 Category 3		Respiratory tract irritation Respiratory tract irritation Respiratory tract irritation Narcotic effects

#### Specific target organ toxicity (repeated exposure)

pain watering redness

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

#### **Aspiration hazard**

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 2

2-methylpropan-1-ol		ASPIRATION HAZARD - Category 2
Information on the likely routes of exposure	: Not available.	
Potential acute health effect	<u>cts</u>	
Eye contact	: Causes serious eye damage.	
Inhalation	: Harmful if inhaled. May cause resp	iratory irritation.
Skin contact	: May be harmful in contact with skin. May cause an allergic skin reaction.	. Causes skin irritation. Defatting to the skin.
Ingestion	: May be harmful if swallowed. Corro	osive to the digestive tract. Causes burns.
Symptoms related to the pl	hysical, chemical and toxicological cha	aracteristics
Eye contact	: Adverse symptoms may include the	e following:

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### Section 11. Toxicological information

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Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing	
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 and also chronic effects from short and long term exposure

Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Long term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health eff	ects
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	
Øral	4068.37 mg/kg	
Dermal	2419.7 mg/kg	
Inhalation (vapors)	17.36 mg/l	
Inhalation (dusts and mists)	2.23 mg/l	

#### Other information

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### Section 11. Toxicological information

Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. 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.

### Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
eaction product: bisphenol- A-(epichlorhydrin); epoxy resin	Chronic NOEC 0.3 mg/l	Daphnia	21 days
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 - Daphnia magna	21 days
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
4-nonylphenol, branched	Acute EC50 0.04 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 0.044 mg/l	Crustaceans - Moina macrocopa	48 hours
	Acute LC50 0.221 mg/l	Fish	96 hours
Phenol, 2-nonyl-, branched	Acute LC50 0.017 mg/l	Fish - Pleuronectes americanus	96 hours

**Conclusion/Summary** 

: There are no data available on the mixture itself.

#### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	OECD 301F	5 % - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-
Conclusion/Summary	: There are no o	data available on the mixture its	self.	

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
reaction product: bisphenol- A-(epichlorhydrin); epoxy resin	-	-	Not readily
xylene ethylbenzene	-	-	Readily Readily

#### **Bioaccumulative potential**

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Product name SIGMASHIELD 460 BASE RAL 3009

### Section 12. Ecological information

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low
xylene	3.12	7.4 to 18.5	low
nonylphenol	3.28	154.88	low
ethylbenzene	3.6	79.43	low
2-methylpropan-1-ol	1	-	low
4-nonylphenol, branched	5.4	251.19	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 logislation
	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	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
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.	(reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, nonylphenol)	Not applicable.

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### 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

Harmful Chemicals List Safety, health and environmental regulations specific for the product

: Listed

: No known specific national and/or regional regulations applicable to this product (including its ingredients).

#### **International regulations**

**Montreal Protocol** 

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 8 October 2021
Date of previous issue	: 5/18/2021
Version	: 8.01
Prepared by	: EHS
Key to abbreviations	<ul> <li>ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient</li> </ul>

#### Section 16. Other information

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

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