

SAFETY DATA SHEET



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Version 15.02

Section 1. Chemical identification and supplier information

Product code : 00261594
Product name : SIGMARINE 48 RAL 5019
CAS number : Mixture
EC number : Mixture.
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 Yungchi Coatings Co. Ltd
No. 176, Road 6, Ho Nai IZ, Phuoc Tan Ward,
Dong Nai City, Vietnam
Tel : +84 61 3936121/22

Emergency telephone number (with hours of operation) : CHEMTREC +(84)-444581938 (CCN 17704)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1
TOXIC TO REPRODUCTION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC TOXICITY (ACUTE) - Category 2
AQUATIC TOXICITY (CHRONIC) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 49.3%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
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 only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response : Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. If skin irritation 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. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Routes of entry : Not available.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

CAS number : Mixture

EC number : Mixture.

Ingredient name	CAS number	Chemical formula	%
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	CH	≥10 - ≤25
titanium dioxide	13463-67-7	O2-Ti	≥10 - ≤25
Naphtha (petroleum), hydrotreated heavy	64742-48-9	-	≤12
nonane	111-84-2	C9H20	≤3
Talc , not containing asbestiform fibres	14807-96-6	H2-03-Si.3/4Mg	≤3
1,2,4-trimethylbenzene	95-63-6	C9H12	≤2.7
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	64742-48-9	-	≤3
xylene	1330-20-7	C8-H10	≤1.5
2-ethylhexanoic acid, zirconium salt	22464-99-9	C8-H15-O2.xZr	≤3
aluminium hydroxide	21645-51-2	-	≤1
mesitylene	108-67-8	C9H12	<1
(2-methoxymethylethoxy)propanol	34590-94-8	C7-H16-O3	≤0.3
ethylbenzene	100-41-4	C8H10	≤0.3
calcium bis(2-ethylhexanoate)	136-51-6	C16H30CaO4	<0.3
2-butanone oxime	96-29-7	C4H9NO	≤0.3

Section 3. Composition/information on ingredients

zirconium propionate	84057-80-7	C ₁₂ H ₂₀ O ₈ Zr	≤0.3
cumene	98-82-8	C ₉ H ₁₂	≤0.3
zirconium dioxide	1314-23-4	O ₂ Zr	≤0.3

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 necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- 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 irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is 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
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor. Put on appropriate personal protective equipment. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

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 containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). 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.

Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

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, 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
Titanium dioxide	Ministry of Health (Viet Nam, 4/2025) TWA 8 hours: 4 mg/m ³ . Form: total dust concentration. TWA 8 hours: 2 mg/m ³ . Form: respirable dust.
nonane	Ministry of Health (Viet Nam, 4/2025) [hydrocarbons (1-10 C)] STEL 15 minutes: 300 mg/m ³ .
Talc , not containing asbestiform fibres	Ministry of Health (Viet Nam, 4/2025) [soapstone (total dust)/(respirable dust)] TWA 8 hours: 1 mg/m ³ . Form: respirable dust. TWA 8 hours: 2 mg/m ³ . Form: total dust concentration. Ministry of Health (Viet Nam, 4/2025) [soapstone (contains 1% quartz)] TWA 8 hours: 6 mg/m ³ .
1,2,4-trimethylbenzene	ACGIH TLV (United States, 1/2025) TWA 8 hours: 10 ppm.
xylene	Ministry of Health (Viet Nam, 4/2025) [xylene] TWA 8 hours: 100 mg/m ³ . STEL 15 minutes: 300 mg/m ³ .
2-ethylhexanoic acid, zirconium salt	ACGIH TLV (United States, 1/2025) [Zirconium and compounds] TWA 8 hours: 5 mg/m ³ (as Zr). STEL 15 minutes: 10 mg/m ³ (as Zr).
aluminium hydroxide	Ministry of Health (Viet Nam, 4/2025) [aluminum and compounds] TWA 8 hours: 2 mg/m ³ .
mesitylene	ACGIH TLV (United States, 1/2025) [trimethyl benzene, isomers] TWA 8 hours: 10 ppm.
(2-methoxymethylethoxy)propanol	ACGIH TLV (United States, 1/2025) [(2-Methoxymethylethoxy)propanol] Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 606 mg/m ³ . STEL 15 minutes: 150 ppm. STEL 15 minutes: 909 mg/m ³ .

Section 8. Exposure controls/personal protection

ethylbenzene	<p>ACGIH TLV (United States, 1/2025) [dipropylene glycol methyl ether] TWA 8 hours: 50 ppm.</p> <p>ACGIH TLV (United States, 1/2025) Ototoxicant. TWA 8 hours: 20 ppm.</p>
zirconium propionate	<p>ACGIH TLV (United States, 1/2025) [Zirconium and compounds] TWA 8 hours: 5 mg/m³ (as Zr). STEL 15 minutes: 10 mg/m³ (as Zr).</p>
cumene	<p>Ministry of Health (Viet Nam, 4/2025) TWA 8 hours: 245 mg/m³.</p>
zirconium dioxide	<p>ACGIH TLV (United States, 1/2025) [Zirconium and compounds] TWA 8 hours: 5 mg/m³ (as Zr). STEL 15 minutes: 10 mg/m³ (as Zr).</p>

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.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Chemical splash goggles.

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 : For prolonged or repeated handling, use the following type of gloves:

Recommended: neoprene, polyvinyl alcohol (PVA), Viton®
May be used: nitrile rubber

Section 8. Exposure controls/personal protection

- 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.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 38.5°C (101.3°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.09

Media	Result
cold water	Not soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : 210°C (410°F)
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >21 mm²/s
- Viscosity** : 60 - 100 s (ISO 6mm)

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 : Evolves hydrogen on contact with water. Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrodesulfurized heavy	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
titanium dioxide	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
nonane	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation Gas.	Rat	3200 ppm	4 hours
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	16790 mg/m ³	4 hours
	LD50 Oral	Rat	5 g/kg	-
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>6 g/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
2-ethylhexanoic acid, zirconium salt	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
aluminium hydroxide	LC50 Inhalation Dusts and mists	Rat	>5.09 mg/l	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
mesitylene	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Oral	Rat	5000 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
2-butanone oxime	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	1100 mg/kg	-
cumene	LD50 Oral	Rat	100 mg/kg	-
	LC50 Inhalation Vapor	Rat	39000 mg/m ³	4 hours

Section 11. Toxicological information

	LD50 Dermal	Rabbit	12.3 g/kg	-
	LD50 Oral	Rat	2260 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

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

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

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

Sensitization

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

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

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy	Category 3	-	Narcotic effects
Naphtha (petroleum), hydrotreated heavy	Category 3	-	Respiratory tract irritation
nonane	Category 3	-	Narcotic effects
Talc , not containing asbestiform fibres	Category 3	-	Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3	-	Respiratory tract irritation
xylene	Category 3	-	Respiratory tract irritation
mesitylene	Category 3	-	Respiratory tract irritation
2-butanone oxime	Category 1	-	upper respiratory tract
-	Category 3	-	Narcotic effects
cumene	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
<input checked="" type="checkbox"/> Naphtha (petroleum), hydrodesulfurized heavy ethylbenzene 2-butanone oxime cumene	Category 1 Category 2 Category 2 Category 2	- - - -	- hearing organs blood system -

Aspiration hazard

Name	Result
<input checked="" type="checkbox"/> Naphtha (petroleum), hydrodesulfurized heavy Naphtha (petroleum), hydrotreated heavy nonane Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics xylene ethylbenzene cumene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : 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 or irritation
 watering
 redness
- Inhalation** : Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 dryness
 cracking
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long 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.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	84961.06 mg/kg
Dermal	6276.02 mg/kg
Inhalation (gases)	31092.84 ppm
Inhalation (vapors)	70.05 mg/l
Inhalation (dusts and mists)	12.57 mg/l

Other information :

Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide 2-ethylhexanoic acid, zirconium salt ethylbenzene	Acute LC50 >100 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-

Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	79 % - Readily - 10 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Naphtha (petroleum), hydrodesulfurized heavy nonane	-	10 to 2500	High
1,2,4-trimethylbenzene	5.65	-	High
xylene	3.63	120.23	Low
mesitylene	3.12	7.4 to 18.5	Low
(2-methoxymethylethoxy) propanol	3.42	186.21	Low
ethylbenzene	0.004	-	Low
2-butanone oxime	3.6	79.43	Low
cumene	0.63	5.01 [OECD 305 C]	Low
	3.55	35.48	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	Not determined.	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.	(Naphtha (petroleum), hydrodesulfurized heavy)	Not applicable.

Additional information

UN : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

- : - Law on Chemicals No. 69/2025/QH15
- Decree No. 24/2026/NĐ-CP regulating the lists of chemicals under the scope of the Law on Chemicals.
- Decree No. 25/2026/NĐ-CP detailing and providing measures for organizing and guiding the implementation of certain provisions of the Law on Chemicals related to the development of a safe chemical industry and chemical security.
- Decree No. 26/2026/NĐ-CP detailing and guiding the implementation of certain provisions of the Law on Chemicals related to the management of chemical activities and hazardous chemicals in products and goods.
- Circular No. 01/2026/TT-BCT detailing and guiding the implementation of certain provisions of the Law on Chemicals and Decree No. 26/2026/NĐ-CP of the Government on the management of chemical activities and hazardous chemicals in products and goods.
- Circular No. 02/2026/TT-BCT regulating several measures for implementing the Law on Chemicals and Decree No. 25/2026/NĐ-CP of the Government, which provides detailed regulations and measures for organizing and guiding the implementation of certain provisions of the Law on Chemicals related to the development of a safe chemical industry and chemical security.

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

History

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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

References : Not available.

✔ 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.