SAFETY DATA SHEET

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

Date of issue/Date of revision 20 August 2026

Version 5.05

Section 1. Chemical product and company identification

Product code : 00359451

Product name : SIGMADUR 540 BASE RAL 5011

Product name : SIGMADUR 540 BASE RAL 5011

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Professional applications, Used by spraying.

Use of the substance/ mixture : Coating.

Uses advised against : Not applicable.

Supplier's details : PPG Coatings (Kunshan) Co., Ltd
53 Jinyang Road, Lujia Town,
215331 Kunshan City, Jiangsu Province, P.R. China
Tel: 86 512 57678859 Fax: 86 512 57678857

Emergency telephone number (with hours of operation) : 00 86 532 83889090

Section 2. Hazards identification

Classification of the substance or mixture according to GB 30000.1-30

Emergency overview

Liquid.
Blue.

Characteristic.

Flammable liquid and vapor.
May be harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Prolonged or repeated contact may dry skin and cause irritation.

IF exposed or concerned: Get medical advice or attention. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. If skin irritation occurs: Get medical advice or attention. If eye irritation persists: Get medical advice or attention.

See Section 12 for environmental precautions.

Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (dermal) - Category 5
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 32.2%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 61%

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Flammable liquid and vapor.
May be harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May damage fertility or the unborn child.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Ground and bond container and receiving equipment. Keep container tightly closed. Avoid release to the environment. Wash thoroughly after handling.

Response : IF exposed or concerned: Get medical advice or attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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.

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

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

Physical and chemical hazards : Flammable liquid and vapor.

Section 2. Hazards identification

Health hazards : Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May damage fertility or the unborn child. Prolonged or repeated contact may dry skin and cause irritation.

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:
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

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 : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Environmental hazards : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

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 : Not applicable.

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
barium sulfate	25 - <40	7727-43-7
n-butyl acetate	10 - <25	123-86-4
xylene isomers mixture	1 - <10	1330-20-7
2-methylpropan-1-ol	1 - <10	78-83-1
Solvent naphtha (petroleum), light aromatic	1 - <10	64742-95-6
dimethyl glutarate	1 - <10	1119-40-0
ethylbenzene	1 - <10	100-41-4
1,2,4-trimethylbenzene	1 - <10	95-63-6
3-ethyltoluene	1 - <10	620-14-4
Hexanoic acid, 2-ethyl-, zinc salt, basic	0.1 - <1	85203-81-2
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	0.1 - <1	41556-26-7
n-butyl acrylate [stable]	0.1 - <1	141-32-2
toluene	0.1 - <1	108-88-3
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	0.1 - <1	82919-37-7

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.

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 : No known significant effects or critical hazards.

Skin contact : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

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

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

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

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 : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

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

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, 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 harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur 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 5. Fire-fighting measures

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. Avoid breathing vapor. Put on appropriate personal protective equipment. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

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.

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). 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 ingest. Avoid breathing vapor or mist. 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.

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
barium sulfate	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 10 mg/m³ (as Ba).
n-butyl acetate	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 200 mg/m³. PC-STEL 15 minutes: 300 mg/m³.
xylene	**GBZ 2.1 (China, 7/2024) [Xylene]** PC-TWA 8 hours: 50 mg/m³. PC-STEL 15 minutes: 100 mg/m³.
2-methylpropan-1-ol	**ACGIH TLV (United States, 1/2025)** TWA 8 hours: 50 ppm. TWA 8 hours: 152 mg/m³.
ethylbenzene	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 100 mg/m³. PC-STEL 15 minutes: 150 mg/m³.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 1/2025)** TWA 8 hours: 10 ppm.
n-butyl acrylate	**GBZ 2.1 (China, 7/2024)** Sensitizer. PC-TWA 8 hours: 25 mg/m³.
toluene	**GBZ 2.1 (China, 7/2024)** Absorbed through skin. PC-TWA 8 hours: 50 mg/m³. PC-STEL 15 minutes: 100 mg/m³.

Biological exposure indices

Ingredient name	Exposure indices
xylene isomers mixture	**GBZ 2.1 (China, 11/2022)** BEI: 0.4 g/L, methylhippuric acids [in urine]. Sampling time: end of work shift. BEI: 0.3 g/g Cr, methylhippuric acids [in urine]. Sampling time: end of work shift.
ethylbenzene	**GBZ 2.1 (China, 11/2022)** BEI: 0.8 g/g Cr, mandelic acid and phenylglyoxylic acid (MA and PGA) [in urine]. Sampling time: end of work shift.

Section 8. Exposure controls/personal protection

toluene	**GBZ 2.1 (China, 11/2022)** BEI: 1.5 g/g Cr, hippuric acid [in urine]. Sampling time: end of the work shift (15 minutes to 30 minutes after the contact is stopped). BEI: 1 mmol/mol Cr, hippuric acid [in urine]. Sampling time: end of the work shift (15 minutes to 30 minutes after the contact is stopped). BEI: 5 mg/m3, toluene [in end-exhaled air]. Sampling time: before work shift. BEI: 20 mg/m3, toluene [in end-exhaled air]. Sampling time: end of work shift (after the contact is stopped). BEI: 2 g/L, hippuric acid [in urine]. Sampling time: end of the work shift (15 minutes to 30 minutes after the contact is stopped). BEI: 11 mmol/L, hippuric acid [in urine]. Sampling time: end of the work shift (15 minutes to 30 minutes after the contact is stopped).

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 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.

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 : Blue.

Odor : Characteristic.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 26°C (78.8°F)

Evaporation rate : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.33

Solubility(ies) :

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >21 mm^2/s

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Dose
barium sulfate	Rat - Oral - LD50	>5000 mg/kg
-	Rat - Dermal - LD50	>2000 mg/kg
n-butyl acetate	Rabbit - Dermal - LD50	>17600 mg/kg
-	Rat - Oral - LD50	10.768 g/kg
-	Rat - Inhalation - LC50 Vapor	2000 ppm [4 hours]
-	Rat - Inhalation - LC50 Vapor	>21.1 mg/l [4 hours]
xylene isomers mixture	Rat - Oral - LD50	4.3 g/kg
-	Rabbit - Dermal - LD50	1.7 g/kg
2-methylpropan-1-ol	Rat - Oral - LD50	2830 mg/kg
-	Rabbit - Dermal - LD50	2460 mg/kg
-	Rat - Inhalation - LC50 Vapor	24.6 mg/l [4 hours]
Solvent naphtha (petroleum), light aromatic	Rat - Oral - LD50	8400 mg/kg
-	Rabbit - Dermal - LD50	3.48 g/kg
dimethyl glutarate	Rabbit - Dermal - LD50	>5000 mg/kg
-	Rat - Oral - LD50	>5000 mg/kg
-	Rat - Inhalation - LC50 Dusts and mists	>11 mg/l [4 hours]
ethylbenzene	Rat - Oral - LD50	3.5 g/kg
-	Rabbit - Dermal - LD50	17.8 g/kg
-	Rat - Inhalation - LC50 Vapor	17.8 mg/l [4 hours]
1,2,4-trimethylbenzene	Rat - Oral - LD50	5 g/kg
-	Rat - Inhalation - LC50 Vapor	18000 mg/m³ [4 hours]
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Rat - Oral - LD50	3.125 g/kg
n-butyl acrylate [stable]	Rat - Oral - LD50	900 mg/kg
-	Rabbit - Dermal - LD50	2 g/kg
-	Rat - Inhalation - LC50 Gas.	2730 ppm [4 hours]
-	Rat - Inhalation - LC50 Vapor	1970 ppm [4 hours]
toluene	Rat - Oral - LD50	5580 mg/kg
-	Rat - Inhalation - LC50 Vapor	49 g/m³ [4 hours]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl	Rat - Oral - LD50	3.125 g/kg

Section 11. Toxicological information

sebacate		

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

Skin corrosion/irritation

Product/ingredient name	Species	Dose	Score
xylene isomers mixture	Rabbit - Skin - Moderate irritant	Amount/concentration applied: 500 mg Duration of treatment/exposure: 24 hours	-

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

Serious eye damage/eye irritation

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

Respiratory corrosion/irritation

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

Sensitization

Skin

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

Respiratory

Conclusion/Summary : 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.

Classification

Product/ingredient name	IARC
xylene isomers mixture	3
ethylbenzene	2B
n-butyl acrylate [stable]	3
toluene	3

Reproductive toxicity

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

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
n-butyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
2-methylpropan-1-ol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
-	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light aromatic	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
1,2,4-trimethylbenzene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
n-butyl acrylate [stable]	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
toluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Product/ingredient name	Result
ethylbenzene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
toluene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
3-ethyltoluene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Ingestion : No known significant effects or critical hazards.

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:
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

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 : Not available.

Potential delayed effects : Not available.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

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

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMADUR 540 BASE RAL 5011	19955.3	3636.0	N/A	77.8	9.3
barium sulfate	N/A	2500	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A
xylene isomers mixture	4300	1700	N/A	11	1.5
2-methylpropan-1-ol	2830	2460	N/A	24.6	N/A
Solvent naphtha (petroleum), light aromatic	8400	3480	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
1,2,4-trimethylbenzene	5000	N/A	N/A	18	1.5
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	3125	N/A	N/A	N/A	N/A
n-butyl acrylate [stable]	900	2000	2730	N/A	N/A
toluene	5580	N/A	N/A	49	N/A
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	3125	N/A	N/A	N/A	N/A

Other information :

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

Section 12. Ecological information

Product/ingredient name	Result	Species	Dose / Exposure
n-butyl acetate	Acute - LC50	Fish	18 mg/l [96 hours]
2-methylpropan-1-ol	Acute - EC50	Daphnia	1100 mg/l [48 hours]
Solvent naphtha (petroleum), light arom.	Acute - LC50	Fish	8.2 mg/l [96 hours]
ethylbenzene	Acute - EC50 - Fresh water	Daphnia	1.8 mg/l [48 hours]
	Chronic - NOEC - Fresh water	Daphnia - *Ceriodaphnia dubia*	1 mg/l
toluene	EC50	Daphnia	3.78 mg/l [48 hours]
	LC50	Fish	5.5 mg/l [96 hours]

Conclusion/Summary : Not available.

Persistence/degradability

Product/ingredient name	Test	Result	Dose / Inoculum
n-butyl acetate	TEPA and OECD 301D	83% [28 days] - Readily	
ethylbenzene	-	79% [10 days] - Readily	

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
xylene isomers mixture	-	-	Readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
n-butyl acetate	2.3	-	Low
xylene isomers mixture	3.12	7.4 to 18.5	Low
2-methylpropan-1-ol	1	-	Low
dimethyl glutarate	0.49	-	Low
ethylbenzene	3.6	79.43	Low
1,2,4-trimethylbenzene	3.63	120.23	Low
3-ethyltoluene	3.98	-	Low
n-butyl acrylate [stable]	2.38	-	Low
toluene	2.73	90	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

	China	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

CN : None identified.

UN : None identified.

IMDG : None identified.

IATA : 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

China inventory (IECSC) : All components are listed or exempted.

References : Production Safety Law of the People's Republic of China
Code of Occupational Disease Prevention of the People's Republic of China
Ecological Environment Code of the People's Republic of China
Fire Control Law of the People's Republic of China
Hazardous Chemicals Safety Law of the People's Republic of China
Occupational exposure limits for hazardous agents in the workplace chemical hazardous agents (GBZ2.1)
Specification for classification and labelling of chemicals according to Part 1: General rules (GB 30000.1-2024)
Safety data sheet for chemical products - Content and order of sections (GB/T16483)
Guidance on the compilation of safety data sheet for chemical products (GB/T17519)
General rule for preparation of precautionary label for chemicals (GB15258)
Safety rules for classification, precautionary labeling and precautionary statements of chemicals (GB30000.2-30)

Section 16. Other information

History

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Prepared by : EHS

Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

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.