SAFETY DATA SHEET

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

Date of issue/Date of revision 5 November 2026

Version 1.06

Section 1. Chemical product and company identification

Product code	:	000001204044
Product name	:	SIGMASHIELD 680 BASE REDBROWN
Product name	:	SIGMASHIELD 680 BASE REDBROWN
Other means of identification	:	00479979
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.
Brownish-red.

Hydrocarbon. [Slight]

Flammable liquid and vapor.
May be harmful in contact with skin.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Prolonged or repeated contact may dry skin and cause irritation. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C (140F).

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

Section 2. Hazards identification

See Section 12 for environmental precautions.

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
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 53%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 64.3%

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements :

Flammable liquid and vapor.
May be harmful in contact with skin.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
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. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response :

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 ON SKIN: Call a POISON CENTER or doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse. 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

Section 2. Hazards identification

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 container tightly closed. 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.

Health hazards : Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer. 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:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

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

Other means of identification : 00479979

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	%	CAS number
Talc , not containing asbestiform fibres	10 - <25	14807-96-6
Epoxy Resin (700<MW<=1100)	10 - <25	25036-25-3
xylene isomers mixture	10 - <25	1330-20-7
Solvent naphtha (petroleum), heavy arom.	1 - <10	64742-94-5
ethylbenzene	1 - <10	100-41-4
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	1 - <10	64742-48-9
2-methylpropan-1-ol	1 - <10	78-83-1
1-methoxy-2-propanol	1 - <10	107-98-2
Phenol, styrenated	1 - <10	61788-44-1
crystalline silica, respirable powder (<10 microns)	1 - <10	14808-60-7
Urea, polymer with formaldehyde, isobutylated	1 - <10	68002-18-6
Reaction products of 12-hydroxyoctadecanoic acid and octadecanoic acid and 1,3-phenylenedimethanamine	0.1 - <1	911674-82-3
naphthalene	0.1 - <1	91-20-3
toluene	0.1 - <1	108-88-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

SUB codes represent substances without registered CAS Numbers.

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 : 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 : No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

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

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

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
metal oxide/oxides
Formaldehyde.

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.

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. 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. 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)

Section 7. Handling and storage

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

Talc , not containing asbestiform fibres	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 3 mg/m³. Form: total dust. PC-TWA 8 hours: 1 mg/m³. Form: respirable dust.
xylene	**GBZ 2.1 (China, 7/2024) [Xylene]** PC-TWA 8 hours: 50 mg/m³. PC-STEL 15 minutes: 100 mg/m³.
ethylbenzene	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 100 mg/m³. PC-STEL 15 minutes: 150 mg/m³.
2-methylpropan-1-ol	**ACGIH TLV (United States, 1/2026)** TWA 8 hours: 50 ppm. TWA 8 hours: 152 mg/m³.
1-methoxy-2-propanol	**ACGIH TLV (United States, 1/2026)** TWA 8 hours: 50 ppm. TWA 8 hours: 184 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 369 mg/m³.
crystalline silica, respirable powder (<10 microns)	**GBZ 2.1 (China, 7/2024)** PC-TWA 8 hours: 0.7 mg/m³. Form: respirable dust, 10% ≤ free SiO2 ≤ 50%. PC-TWA 8 hours: 0.3 mg/m³. Form: respirable dust, 50% < free SiO2 ≤ 80%. PC-TWA 8 hours: 0.2 mg/m³. Form: respirable dust, free SiO2 > 80%.
Reaction products of 12-hydroxyoctadecanoic acid and octadecanoic acid and 1,3-phenylenedimethanamine	**ACGIH TLV (United States)** TWA: 3 mg/m³ (Respirable fraction). TWA: 10 mg/m³ (Total dust).
naphthalene	**GBZ 2.1 (China, 7/2024)** Absorbed through skin. PC-TWA 8 hours: 50 mg/m³. PC-STEL 15 minutes: 75 mg/m³.
toluene	**GBZ 2.1 (China, 7/2024)** Absorbed through

Section 8. Exposure controls/personal protection

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.
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.

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye 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 : 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 : Brownish-red.

Odor : Hydrocarbon. [Slight]

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 30°C (86°F)

Evaporation rate : Not available.

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

Vapor pressure : Not available.

Vapor density : Not available.

Section 9. Physical and chemical properties

Relative density : 1.48

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): >400 mm^2/s
Kinematic (40°C): >21 mm^2/s

Viscosity : > 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 : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides Formaldehyde. metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Dose
Epoxy Resin (700<MW<=1100)	Rat - Oral - LD50	>2000 mg/kg
-	Rat - Dermal - LD50	>2000 mg/kg
xylene isomers mixture	Rat - Oral - LD50	4.3 g/kg
-	Rabbit - Dermal - LD50	1.7 g/kg
Solvent naphtha (petroleum), heavy arom.	Rat - Oral - LD50	>5 g/kg
-	Rat - Inhalation - LC50 Dusts and mists	>5.2 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]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Rat - Oral - LD50	>6 g/kg
-	Rabbit - Dermal - LD50	>5000 mg/kg
2-methylpropan-1-ol	Rat - Oral - LD50	2830 mg/kg

Section 11. Toxicological information

-	Rabbit - Dermal - LD50	2460 mg/kg
-	Rat - Inhalation - LC50 Vapor	24.6 mg/l [4 hours]
1-methoxy-2-propanol	Rabbit - Dermal - LD50	13 g/kg
-	Rat - Oral - LD50	5.2 g/kg
-	Rat - Inhalation - LC50 Vapor	>7000 ppm [6 hours]
Phenol, styrenated	Rabbit - Dermal - LD50	>5010 mg/kg
-	Rat - Oral - LD50	3550 mg/kg
Urea, polymer with formaldehyde, isobutylated	Rabbit - Dermal - LD50	>5 g/kg
-	Rat - Oral - LD50	>5 g/kg
Reaction products of 12-hydroxyoctadecanoic acid and octadecanoic acid and 1,3-phenylenedimethanamine	Rat - Inhalation - LC50 Dusts and mists	>5.08 mg/l [4 hours]
naphthalene	Rat - Oral - LD50	490 mg/kg
-	Rabbit - Dermal - LD50	>20 g/kg
toluene	Rat - Oral - LD50	5580 mg/kg
-	Rat - Inhalation - LC50 Vapor	49 g/m³ [4 hours]

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

Product/ingredient name	Species	Result
Phenol, styrenated	Mouse - skin OECD 429	Sensitizing

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

Section 11. Toxicological information

Product/ingredient name	IARC
Talc , not containing asbestiform fibres	2A
xylene isomers mixture	3
ethylbenzene	2B
crystalline silica, respirable powder (<10 microns)	1
naphthalene	2B
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
Talc , not containing asbestiform fibres	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Solvent naphtha (petroleum), heavy arom.	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
1-methoxy-2-propanol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
toluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
ethylbenzene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
crystalline silica, respirable powder (<10 microns)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1
toluene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	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 : 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 : No known significant effects or critical hazards.

Section 11. Toxicological information

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:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

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 effects

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

General : May cause damage to organs through prolonged or repeated exposure. 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 : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

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)

Section 11. Toxicological information

SIGMASHIELD 680 BASE REDBROWN	6708.6	2926.5	N/A	44.1	5.7
Epoxy Resin (700<MW<=1100)	2500	2500	N/A	N/A	N/A
xylene isomers mixture	4300	1700	N/A	11	1.5
ethylbenzene	3500	17800	N/A	17.8	1.5
2-methylpropan-1-ol	2830	2460	N/A	24.6	N/A
1-methoxy-2-propanol	5200	13000	N/A	N/A	N/A
Phenol, styrenated	3550	N/A	N/A	N/A	N/A
naphthalene	490	N/A	N/A	N/A	N/A
toluene	5580	N/A	N/A	49	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. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C (140F). Avoid contact with skin and clothing.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Dose / Exposure
Solvent naphtha (petroleum), heavy arom.	NOEL - Fresh water	Daphnia	0.48 mg/l [21 days]
ethylbenzene	Acute - EC50 - Fresh water	Daphnia	1.8 mg/l [48 hours]
	Chronic - NOEC - Fresh water	Daphnia - *Ceriodaphnia dubia*	1 mg/l
2-methylpropan-1-ol	Acute - EC50	Daphnia	1100 mg/l [48 hours]
1-methoxypropan-2-ol	Acute - LC50 - Fresh water	Fish - Goldfish	>4500 mg/l [96 hours]
	Acute - LC50	Daphnia - Daphnia	23300 mg/l [48 hours]
Phenol, styrenated	Acute - EC50	Daphnia	3.8 mg/l [48 hours]
Reaction products of 12-hydroxyoctadecanoic acid and octadecanoic acid and 1,3-phenylenedimethanamine	Acute - LC50	Fish	>100 mg/l [96 hours]
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
ethylbenzene	-	79% [10 days] - Readily	
Phenol, styrenated	OECD 301F	7% [28 days] - Not readily	

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene isomers mixture	-	-	Readily
ethylbenzene	-	-	Readily
Phenol, styrenated	-	-	Not readily
toluene	-	-	Readily

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene isomers mixture	3.12	7.4 to 18.5	Low
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	-	High
ethylbenzene	3.6	79.43	Low
2-methylpropan-1-ol	1	-	Low
1-methoxy-2-propanol	<1	-	Low
naphthalene	3.4	85.11 [OECD 305]	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.

Section 14. Transport information

Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

CN : This class 3 material is not subject to regulation in packagings up to 450 L. Exempted according to 2.3.2.5 (Viscous liquid exception)

UN : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.1.

IMDG : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.

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

Date of issue/Date of revision : 5 November 2026

Version : 1.06

Date of previous issue : 10/28/2026

First issue date : 11/1/2024

Prepared by : EHS

Section 16. Other information

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

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.