

SAFETY DATA SHEET

AMERCOAT 450H WHITE RESIN



Date of issue 31 July 2020

Version 11

1. Product and company identification

Product name : AMERCOAT 450H WHITE RESIN
Product code : 00334497
Product type : Liquid.

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

Product use : Industrial applications, Used by spraying.

**Use of the substance/
mixture** : Coating.

Uses advised against : Not applicable.

Supplier's details : PPG PMC Japan Co., Ltd.
8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe 652-0803
Tel : +81 78 574 2777
Fax : +81 78 576 0035

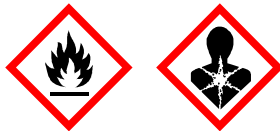
**Emergency telephone
number** : 078 574 2777

2. Hazards identification

GHS Classification : FLAMMABLE LIQUIDS - Category 3
EYE IRRITATION - Category 2B
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Flammable liquid and vapor.
May cause an allergic skin reaction.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure. (respiratory system)
Harmful to aquatic life with long lasting effects.

2. Hazards identification

Precautionary statements

- Prevention** : Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory 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. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product.
- Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

CAS number : Not applicable.

ENCS number : Not available.

Ingredient name	%	CAS number	ENCS
titanium dioxide (nanoparticle)	25 - <50	13463-67-7	1-558; 5-5225
barium sulfate	15 - <20	7727-43-7	1-89
Butyl acetate	10 - <12.5	123-86-4	2-731
Propylene glycol methyl ether acetate	2 - <3	108-65-6	2-3144
Solvent naphtha (petroleum), light aromatic	1 - <2	64742-95-6	Not available.
Xylene	0.2 - <0.5	1330-20-7	3-3; 3-60
Silica silicon dioxide containing crystalline and amorphous	0.2 - <0.5	7631-86-9	1-548
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	0.2 - <0.5	41556-26-7	5-5501
Acetone	0.2 - <0.5	67-64-1	2-542
2-hydroxyethyl methacrylate	0.1 - <0.2	868-77-9	2-1044
4-isocyanatosulphonyltoluene	0.1 - <0.2	4083-64-1	3-2222
Zirconium oxide	0.1 - <0.2	1314-23-4	1-563
ethyl benzene	0.1 - <0.2	100-41-4	3-28; 3-60

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.

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 eye irritation.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
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

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)

4. First aid measures

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 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
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.

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 or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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.

6. Accidental release measures

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.

Special provisions

: 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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

7. Handling and storage

Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage

: Do not store above the following temperature: 50°C (122°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.

Precautions should be taken to minimize exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurization.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide (nanoparticle)	Japan Society for Occupational Health (Japan, 5/2019). OEL-M: 1 mg/m ³ 8 hours. Form: Respirable dust OEL-M: 4 mg/m ³ 8 hours. Form: Total dust OEL-M: 0.3 mg/m ³ , (as Ti) 8 hours. Form: nanoparticle
Butyl acetate	Japan Society for Occupational Health (Japan, 5/2019). OEL-M: 475 mg/m ³ 8 hours. OEL-M: 100 ppm 8 hours.
Xylene	ISHL (Japan, 10/2019). TWA: 150 ppm 8 hours. ISHL (Japan, 10/2019). TWA: 50 ppm 8 hours.
Acetone	Japan Society for Occupational Health (Japan, 5/2019). OEL-M: 50 ppm 8 hours. OEL-M: 217 mg/m ³ 8 hours.
ethyl benzene	Japan Society for Occupational Health (Japan, 5/2019). OEL-M: 470 mg/m ³ 8 hours. OEL-M: 200 ppm 8 hours.
	ISHL (Japan, 10/2019). TWA: 500 ppm 8 hours.
	Japan Society for Occupational Health (Japan, 5/2019). OEL-M: 217 mg/m ³ 8 hours. OEL-M: 50 ppm 8 hours. ISHL (Japan, 10/2019). TWA: 20 ppm 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

Individual protection measures

8. Exposure controls/personal protection

- 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** : Safety glasses with side shields.
- 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** : By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. 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.

9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : White.
- Odor** : Characteristic.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 32.22°C (90°F)
- Evaporation rate** : 0.87 (butyl acetate = 1)
- Vapor pressure** : 2 kPa (14.7 mm Hg) [room temperature]
- Relative density** : 1.57
- Solubility** : Insoluble in the following materials: cold water.
- Viscosity** : Not Applicable

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.

10. Stability and reactivity

- Conditions to avoid** : In a fire, hazardous decomposition products may be produced.
- Incompatible materials** : Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
- Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide (nanoparticle)	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
barium sulfate	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
Butyl acetate	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	>21.1 mg/l	4 hours
Propylene glycol methyl ether acetate	LC50 Inhalation Vapor	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Xylene	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Silica silicon dioxide containing crystalline and amorphous	LD50 Oral	Rabbit	1.7 g/kg	-
	LD50 Dermal	Rat	4.3 g/kg	-
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
Acetone	LD50 Oral	Rat	3.125 g/kg	-
	LC50 Inhalation Vapor	Rat	76000 mg/m ³	4 hours
2-hydroxyethyl methacrylate	LD50 Dermal	Rabbit	15.8 g/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
4-isocyanatosulphonyltoluene ethyl benzene	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	5050 mg/kg	-
ethyl benzene	LD50 Oral	Rat	2234 mg/kg	-
	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-

Irritation/Corrosion

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

Sensitization

11. Toxicological information

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Butyl acetate	Category 3	-	Respiratory tract irritation
Propylene glycol methyl ether acetate	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Solvent naphtha (petroleum), light aromatic	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Xylene	Category 3 Category 1	-	Narcotic effects central nervous system (CNS), kidneys, liver, respiratory system
Silica silicon dioxide containing crystalline and amorphous	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Acetone	Category 3	-	Respiratory tract irritation
4-isocyanatosulphonyltoluene	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
ethyl benzene	Category 3 Category 3	-	Respiratory tract irritation Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
titanium dioxide (nanoparticle)	Category 1	-	respiratory system
barium sulfate	Category 1	-	respiratory system
Xylene	Category 1	-	nervous system, respiratory system
Silica silicon dioxide containing crystalline and amorphous	Category 1	-	immune system, kidneys, respiratory system
Acetone	Category 1	-	central nervous system (CNS), gastrointestinal tract, respiratory system
ethyl benzene	Category 2	-	hearing organs

11. Toxicological information

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
ethyl benzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- 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:
irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
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.

Potential chronic health effects

11. Toxicological information

- 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. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
AMERCOAT 450H WHITE RESIN	N/A	8252.2	N/A	N/A	N/A
barium sulfate	N/A	2500	N/A	N/A	N/A
Butyl acetate	10768	N/A	N/A	N/A	N/A
Propylene glycol methyl ether acetate	8532	N/A	N/A	N/A	N/A
Solvent naphtha (petroleum), light aromatic	8400	3480	N/A	N/A	N/A
Xylene	4300	1700	N/A	11	N/A
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	3125	N/A	N/A	N/A	N/A
Acetone	5800	15800	N/A	76	N/A
2-hydroxyethyl methacrylate	5050	N/A	N/A	N/A	N/A
4-isocyanatosulphonyltoluene	2234	N/A	N/A	N/A	N/A
ethyl benzene	3500	17800	N/A	17.8	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. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Repeated exposure may lead to permanent respiratory disability. Moisture-sensitive material. Avoid contact with skin and clothing.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide (nanoparticle)	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
Propylene glycol methyl ether acetate	Acute LC50 161 mg/l Fresh water	Fish	96 hours
Solvent naphtha (petroleum), light aromatic	Acute LC50 8.2 mg/l	Fish	96 hours
Silica silicon dioxide containing crystalline and amorphous	Acute LC50 >10000 mg/l	Fish	96 hours
Acetone	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Acartia tonsa - Copepodid	48 hours
	Acute LC50 5540 mg/l	Fish	96 hours

12. Ecological information

ethyl benzene	Acute LC50 150 to 200 mg/l Fresh water	Fish	96 hours
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Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Butyl acetate	TEPA and OECD 301D	83 % - Readily - 28 days	-	-
Acetone	-	90.9 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Butyl acetate	-	-	Readily
Xylene	-	-	Readily
Acetone	-	-	Readily
ethyl benzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Butyl acetate	1.78	-	low
Propylene glycol methyl ether acetate	0.56	-	low
Xylene	3.16	7.4 to 18.5	low
Acetone	-0.24	3	low
2-hydroxyethyl methacrylate	0.47	-	low
ethyl benzene	3.15	79.43	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

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

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.

14. Transport information

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

Additional information

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.

15. Regulatory information

Fire Service Law

Category	Substance name/Type	Danger category	Signal word	Designated quantity
Category IV	Class II petroleums	III	Flammable - Keep Fire Away	1000 L

Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

ISHL

Use of specified chemical substances

None of the components are listed.

Substances requiring labelling

Ingredient name	%	Status	Reference number
Butyl acetate	≤14	Listed	181
Titanium(IV) oxide	≥25 - ≤50	Listed	191
Crystalline silica	≤0.30	Listed	165-2
Petroleum naphtha	≤1.9	Listed	330
Xylene	<1.0	Listed	136
Ethylbenzene	<0.30	Listed	70

Chemicals requiring notification

15. Regulatory information

Ingredient name	%	Status	Reference number
Butyl acetate	≤14	Listed	181
Acetone	≤0.30	Listed	17
Titanium(IV) oxide	≥25 - ≤50	Listed	191
Crystalline silica	≤0.30	Listed	165-2
Petroleum naphtha	≤1.9	Listed	330
Xylene	<1.0	Listed	136
Ethylbenzene	<0.30	Listed	70

Carcinogen

None of the components are listed.

Mutagen

None of the components are listed.

Corrosive liquid	: Not listed
Occupational Safety and Health Law	: Flammable liquid Class 4
Regulations on the Prevention of Tetraalkyl Lead Poisoning	: Not listed
Harmful Substances Subject to Obtaining Permission for Manufacturing	: Not listed
Harmful Substances, Prohibited for Manufacturing	: Not listed
Dangerous Substances	: Not listed
Lead regulation	: Not listed
Organic solvents poisoning prevention	: Class 2

Poisonous and Deleterious Substances

None of the components are listed.

Chemical Substances Control Law (CSCL)

Ingredient name	%	Status	Reference number
Acetone	0.20834	Priority assessment	114
1,2,4-Trimethylbenzene	0.8061	Priority assessment	49
1,3,5-Trimethylbenzene	0.13435	Priority assessment	201
Xylene	0.36325	Priority assessment	125
Ethylbenzene	0.12972	Priority assessment	50

High Pressure Gas Control Law : Not available.

Explosives Control Law

None of the components are listed.

Law Concerning Prevention of Pollution of the Ocean and Maritime Disaster : Not available.

15. Regulatory information

Maritime Safety Law

Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

Container class

None of the components are listed.

JSOH Carcinogen : Group 2B

List of Specially Controlled Industrial Waste : Not listed

Japan inventory : At least one component is not listed.

Road law : Not available.

16. Other information

History

Date of issue/Date of revision : 31 July 2020

Date of previous issue : 5/18/2020

Version : 11

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.

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