

# SAFETY DATA SHEET

AMERSHIELD YELLOW F/S 13538 RESIN



Date of issue 31 January 2024

Version 5

## 1. Product and company identification

**Product name** : AMERSHIELD YELLOW F/S 13538 RESIN  
**Product code** : 00393011  
**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 PMC Japan Co., Ltd., 8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe  
652-0803 Japan; Tel: +81-78-574-2777

**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  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract  
irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -  
Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD - Category 3  
HAZARDOUS TO THE AQUATIC ENVIRONMENT - CHRONIC HAZARD -  
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 respiratory irritation.  
May cause drowsiness or dizziness.  
May cause cancer.

## 2. Hazards identification

May cause damage to organs through prolonged or repeated exposure. (respiratory organs)  
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. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. 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 experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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 locked up. Store in a well-ventilated place. Keep container tightly closed.

#### Disposal

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

**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.

**CSCL number** : Not available.

Ingredient name	%	CAS number	CSCL
Butyl acetate	15 - <20	123-86-4	2-731
Propylene glycol monomethyl ether acetate	7 - <10	108-65-6	2-3144
titanium dioxide (excluding nanoparticle)	3 - <5	13463-67-7	1-558; 5-5225
Ethyl 3-ethoxypropanoate	1 - <2	763-69-9	2-1350; 2-1379
2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl]oxirane-quaternized, benzoates (salts).	0.5 - <1	1431957-88-8	Not available.
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	0.5 - <1	41556-26-7	5-5501
Acetone	0.2 - <0.5	67-64-1	2-542
crystalline silica (quartz)	0.2 - <0.5	14808-60-7	1-548
Solvent naphtha (petroleum), heavy arom	0.2 - <0.5	64742-94-5	Not available.
4-isocyanatosulphonyltoluene	0.1 - <0.2	4083-64-1	3-2222
2-hydroxyethyl methacrylate	0.1 - <0.2	868-77-9	2-1044
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	0.1 - <0.2	82919-37-7	5-5593

### 3. Composition/information on ingredients

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** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. 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** : Can cause central nervous system (CNS) depression.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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.

## 4. First aid measures

- 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)

## 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

- Unsuitable extinguishing media** : Do not use water jet.

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

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

- 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

## 6. Accidental release measures

- 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.
- 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). 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. 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) 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** : 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.
- Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> 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
Butyl acetate	<b>Japan Society for Occupational Health (Japan, 9/2022).</b> OEL-M: 475 mg/m <sup>3</sup> 8 hours. OEL-M: 100 ppm 8 hours. <b>Industrial Safety and Health Act (Japan, 6/2020).</b> TWA: 150 ppm 8 hours.
Acetone	<b>Japan Society for Occupational Health (Japan, 9/2022).</b> OEL-M: 475 mg/m <sup>3</sup> 8 hours. OEL-M: 200 ppm 8 hours. <b>Industrial Safety and Health Act (Japan, 6/2020).</b> TWA: 500 ppm 8 hours.
crystalline silica (quartz)	<b>Japan Society for Occupational Health (Japan, 9/2022). [Respirable crystalline silica]</b> OEL-C: 0.03 mg/m <sup>3</sup> Form: Respirable dust

**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. 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

## 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** : Use an air-fed respirator unless a site-specific assessment determines that an air-fed respirator is not necessary, in which case the results of the risk assessment should be utilized to determine whether respiratory protection is necessary and what type of protection is appropriate. 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** : Yellow.
- Odor** : Characteristic.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 43°C (109.4°F)
- Relative density** : 1.21

### Solubility(ies)

Media	Result
cold water	Not soluble

## 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** : 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** : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides halogenated compounds metal oxide/oxides

# 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butyl acetate	LC50 Inhalation Vapor	Rat	>21.1 mg/l	4 hours
	LC50 Inhalation Vapor	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
Propylene glycol monomethyl ether acetate	LC50 Inhalation Vapor	Rat	30 mg/l	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
titanium dioxide (excluding nanoparticle)	LD50 Oral	Rat	6190 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Ethyl 3-ethoxypropanoate	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol	LD50 Oral	Rat	3200 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-
2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl]oxirane-quaternized, benzoates (salts).	LD50 Oral	Rat	3.125 g/kg	-
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Oral	Rat	3.125 g/kg	-
	LC50 Inhalation Vapor	Rat	76000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	15.8 g/kg	-
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.2 mg/l	4 hours
Solvent naphtha (petroleum), heavy arom	LD50 Oral	Rat	>5 g/kg	-
	LD50 Oral	Rat	2234 mg/kg	-
4-isocyanatosulphonyltoluene	LD50 Oral	Rat	2234 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2-hydroxyethyl methacrylate	LD50 Oral	Rat	5050 mg/kg	-
	LD50 Oral	Rat	3.125 g/kg	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 Oral	Rat	3.125 g/kg	-
	LD50 Oral	Rat	3.125 g/kg	-

### Irritation/Corrosion

Not available.

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity



## 11. Toxicological information

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Butyl acetate	Category 3	-	Respiratory tract irritation
Propylene glycol monomethyl ether acetate	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Ethyl 3-ethoxypropanoate	Category 3	-	Narcotic effects
Acetone	Category 3	-	Narcotic effects Respiratory tract irritation
Solvent naphtha (petroleum), heavy arom	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
4-isocyanatosulphonyltoluene	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
titanium dioxide (excluding nanoparticle)	Category 1	-	respiratory organs
Acetone	Category 1	-	central nervous system (CNS), gastrointestinal tract, respiratory organs
crystalline silica (quartz)	Category 1	-	immune system, kidneys, respiratory organs

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. 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** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness

## 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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

- 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** : May cause 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)
Butyl acetate	10768	N/A	N/A	N/A	N/A
Propylene glycol monomethyl ether acetate	6190	N/A	N/A	30	N/A
Ethyl 3-ethoxypropanoate	3200	N/A	N/A	N/A	N/A
2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl] oxirane-quaternized, benzoates (salts).	2500	N/A	N/A	N/A	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
4-isocyanatosulphonyltoluene	2234	N/A	N/A	N/A	N/A
2-hydroxyethyl methacrylate	5050	N/A	N/A	N/A	N/A
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	3125	N/A	N/A	N/A	N/A

## 11. Toxicological information

### 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
Butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
Propylene glycol	Acute LC50 134 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
monomethyl ether acetate	Acute LC50 >100 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
titanium dioxide (excluding nanoparticle)	Acute LC50 60.9 mg/l	Fish	96 hours
Ethyl 3-ethoxypropanoate	EC50 0.25 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol			
2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl]oxirane-quaternized, benzoates (salts).			
Acetone	Acute LC50 4.42589 ml/L Marine water	Crustaceans - <i>Acartia tonsa</i> - Copepodid	48 hours
Solvent naphtha (petroleum), heavy arom	Acute LC50 5540 mg/l NOEL 0.48 mg/l Fresh water	Fish Daphnia	96 hours 21 days

### Persistence/degradability

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

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Butyl acetate	-	-	Readily
Propylene glycol	-	-	Readily
monomethyl ether acetate	-	-	
Ethyl 3-ethoxypropanoate	-	-	Readily
Acetone	-	-	Readily

### Bioaccumulative potential

## 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Butyl acetate	2.3	-	Low
Propylene glycol monomethyl ether acetate	1.2	-	Low
Ethyl 3-ethoxypropanoate	1.47	-	Low
Acetone	-0.23	3	Low
Solvent naphtha (petroleum), heavy arom	2.8 to 6.5	-	High
2-hydroxyethyl methacrylate	0.42	-	Low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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
<b>UN number</b>	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>Transport hazard class(es)</b>	3	3	3
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	No.	No.	No.
<b>Marine pollutant substances</b>	Not applicable.	Not applicable.	Not applicable.

### Additional information

## 14. Transport 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 petroleum	III	Flammable - Keep Fire Away	1000 L

### Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

### Industrial Safety and Health Act

#### Ordinance on the Prevention of the Hazard due to Specified Chemical Substances

None of the components are listed.

### Substance(s) requiring labelling

Ingredient name	%	Status	Reference number
Butyl acetate	≥10 - ≤20	Listed	181
Titanium(IV) oxide	≤10	Listed	191
Crystalline silica	≤10	Listed	165-2

### Chemicals requiring notification

Ingredient name	%	Status	Reference number
Butyl acetate	≥10 - ≤20	Listed	181
Titanium(IV) oxide	≤10	Listed	191
Crystalline silica	≤10	Listed	165-2
Acetone	≤10	Listed	17

### Carcinogens based on Article 577-2 of the Ordinance on ISH

None of the components are listed.

### Mutagen

None of the components are listed.

**Corrosive liquid** : Not listed

**Occupational Safety and Health Law** : Inflammable, Combustible

## 15. Regulatory information

**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

**ISHL Enforcement Order Appendix 1 - Dangerous Substances** : Inflammable, Combustible

**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
<input checked="" type="checkbox"/> Naphthalene	≤10	Priority assessment	76
<input type="checkbox"/> Styrene	≤10	Priority assessment	47
<input type="checkbox"/> 1-Butanol	≤10	Priority assessment	124
<input type="checkbox"/> alpha-(Nonylphenyl)-omega-hydroxypoly(oxyethylene)	≤10	Priority assessment	86
<input type="checkbox"/> 2,6-Di-tert-butyl-4-methylphenol	≤10	Priority assessment	64
<input type="checkbox"/> Cumene	≤10	Priority assessment	126
<input type="checkbox"/> 1,4-Dioxane	≤10	Priority assessment	80

**High Pressure Gas Control Law** : Not available.

### Explosives Control Law

None of the components are listed.

**Law concerning prevention of pollution of the ocean** : Not available.

### 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 1

**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 January 2024

**Date of previous issue** : 8/11/2022

**Version** : 5

**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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