

# SAFETY DATA SHEET



AMERCOAT 137 DARK GRAY KIT

Date of issue 2 June 2020

Version 13

## 1. Product and company identification

**Product name** : AMERCOAT 137 DARK GRAY KIT  
**Product code** : 00333917  
**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  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1A  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -  
Category 3  
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

## 2. Hazards identification

**Hazard statements** : Flammable liquid and vapor.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 May cause drowsiness or dizziness.  
 May cause cancer.  
 Causes damage to organs. (respiratory system)  
 Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs, respiratory system)  
 Harmful to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear 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. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

**Response** : IF exposed or concerned: 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 container tightly closed. 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
Talc (containing no asbestos or quartz)	12.5 - <15	14807-96-6	Not available.
bis-[4-(2,3-epoxipropoxy)phenyl]propane	10 - <12.5	1675-54-3	4-209; 7-1279; 7-1283
mica [hydrous potassium aluminum silicate, mica powder, white mica]	7 - <10	12001-26-2	Not available.
Methyl n-pentyl ketone	7 - <10	110-43-0	2-542
1-Butanol	7 - <10	71-36-3	2-3049
tert-butyl acetate	5 - <7	540-88-5	2-731
titanium dioxide (nanoparticle)	5 - <7	13463-67-7	1-558; 5-5225
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	1 - <2	2530-83-8	2-2071
carbon black animal or vegetable origin	0.5 - <1	1333-86-4	5-3328; 5-5222
crystalline silica (quartz)	0.5 - <1	14808-60-7	1-548
Ethylenediamine	0.2 - <0.5	107-15-3	2-150
Cashew, nutshell liq.	0.1 - <0.2	8007-24-7	Not available.

### 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** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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  
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.

## 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. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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.

## 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

## 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Talc (containing no asbestos or quartz)	<b>Japan Society for Occupational Health (Japan, 5/2018).</b> OEL-M: 0.5 mg/m <sup>3</sup> 8 hours. Form: Respirable dust
1-Butanol	OEL-M: 2 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>Japan Society for Occupational Health (Japan, 5/2018). Absorbed through skin.</b> OEL-C: 150 mg/m <sup>3</sup> OEL-C: 50 ppm <b>ISHL (Japan, 10/2019).</b> TWA: 25 ppm 8 hours.
titanium dioxide (nanoparticle)	<b>Japan Society for Occupational Health (Japan, 5/2018).</b> OEL-M: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable dust OEL-M: 4 mg/m <sup>3</sup> 8 hours. Form: Total dust OEL-M: 0.3 mg/m <sup>3</sup> , (as Ti) 8 hours. Form: nanoparticle
carbon black animal or vegetable origin	<b>Japan Society for Occupational Health (Japan, 5/2018).</b> OEL-M: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable dust OEL-M: 4 mg/m <sup>3</sup> 8 hours. Form: Total dust
crystalline silica (quartz)	<b>Japan Society for Occupational Health (Japan, 5/2018).</b> OEL-C: 0.03 mg/m <sup>3</sup> Form: Respirable dust
Ethylenediamine	<b>Japan Society for Occupational Health (Japan, 5/2018). Absorbed through skin. Skin sensitizer. Inhalation sensitizer.</b> OEL-M: 25 mg/m <sup>3</sup> 8 hours. OEL-M: 10 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** : Chemical splash goggles and face shield.
- 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** : Dark grey.
- Odor** : Characteristic.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 32.78°C (91°F)
- Evaporation rate** : 0.44 (butyl acetate = 1)
- Vapor pressure** : 0.49 kPa (3.7 mm Hg) [room temperature]
- Relative density** : 1.33
- 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.
- 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** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	LD50 Dermal	Rabbit	23000 mg/kg	-
	LD50 Oral	Rat	15000 mg/kg	-
Methyl n-pentyl ketone	LC50 Inhalation Vapor	Rat	16.7 mg/l	4 hours
	LD50 Dermal	Rabbit	10.206 g/kg	-
1-Butanol	LD50 Oral	Rat	1.6 g/kg	-
	LC50 Inhalation Vapor	Rat	24000 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
tert-butyl acetate	LD50 Oral	Rat	790 mg/kg	-
	LD50 Oral	Rat	4100 mg/kg	-
titanium dioxide (nanoparticle)	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5300 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	4.3 g/kg	-
carbon black animal or vegetable origin	LD50 Oral	Rat	7.01 g/kg	-
	LD50 Dermal	Rabbit	>3 g/kg	-
Ethylenediamine	LD50 Oral	Rat	>15400 mg/kg	-
	LD50 Dermal	Rabbit	0.73 g/kg	-
	LD50 Oral	Rat	0.5 g/kg	-

#### Irritation/Corrosion



## 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Eyes - Redness of the conjunctivae	Rabbit	0.4	24 hours	-
	Eyes - Mild irritant	Rabbit	-	24 hours	-
	Skin - Erythema/Eschar	Rabbit	0.8	4 hours	-
	Skin - Edema	Rabbit	0.5	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Eyes - Cornea opacity	Rabbit	11.8	1 minutes	24 hours

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
bis-[4-(2,3-epoxipropoxy)phenyl]propane	skin	Mouse	Sensitizing

### 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
Talc (containing no asbestos or quartz)	Category 1	-	respiratory system
Methyl n-pentyl ketone	Category 3	-	Respiratory tract irritation
1-Butanol	Category 3	-	Narcotic effects
	Category 3		Respiratory tract irritation
tert-butyl acetate	Category 3	-	Narcotic effects
Ethylenediamine	Category 1	-	Narcotic effects respiratory system

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Talc (containing no asbestos or quartz)	Category 1	-	respiratory system
mica [hydrous potassium aluminum silicate, mica powder, white mica]	Category 1	-	respiratory system
1-Butanol	Category 1	-	central nervous system (CNS), hearing organs
titanium dioxide (nanoparticle)	Category 1	-	respiratory system
carbon black animal or vegetable origin	Category 1	-	respiratory system
crystalline silica (quartz)	Category 1	-	immune system, kidneys, respiratory system
Ethylenediamine	Category 2	-	eyes, kidneys, liver

## 11. Toxicological information

### Aspiration hazard

Not available.

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

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

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

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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** : 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.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.

## 11. Toxicological information

**Fertility effects** : 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)
AMERCOAT 137 DARK GRAY KIT	14849.7	211878.4	N/A	68.8	N/A
bis-[4-(2,3-epoxipropoxy)phenyl]propane	15000	23000	N/A	N/A	N/A
Methyl n-pentyl ketone	1600	10206	N/A	16.7	N/A
1-Butanol	N/A	3400	N/A	24	N/A
tert-butyl acetate	4100	N/A	N/A	11	N/A
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	7010	4300	N/A	N/A	N/A
carbon black animal or vegetable origin	N/A	2500	N/A	N/A	N/A
Ethylenediamine	500	730	N/A	11	N/A
Cashew, nutshell liq.	500	1100	N/A	N/A	N/A

#### Other information

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Avoid contact with skin and clothing.

## 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Acute LC50 1.8 mg/l Fresh water	Daphnia - daphnia magna	48 hours
Methyl n-pentyl ketone	Chronic NOEC 0.3 mg/l	Daphnia	21 days
1-Butanol	Acute LC50 131 mg/l	Fish	96 hours
titanium dioxide (nanoparticle)	Acute LC50 1376 mg/l	Fish	96 hours
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 324 mg/l	Daphnia	48 hours

### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Methyl n-pentyl ketone	OECD 310	69 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bis-[4-(2,3-epoxipropoxy)phenyl]propane	-	-	Not readily
Methyl n-pentyl ketone	-	-	Readily

### Bioaccumulative potential

## 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Methyl n-pentyl ketone	1.98	-	low
1-Butanol	0.88	-	low
tert-butyl acetate	1.76	-	low
Ethylenediamine	-2.04	-	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

**UN** : None identified.

**IMDG** : None identified.

## 14. Transport information

**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
Methyl n-pentyl ketone; 2-Heptanone	≤10	Listed	586
Butyl acetate	≤10	Listed	181
Titanium(IV) oxide	<10	Listed	191
Butanol	≤8.9	Listed	477
Crystalline silica	<1.0	Listed	165-2

#### Chemicals requiring notification

Ingredient name	%	Status	Reference number
Methyl n-pentyl ketone; 2-Heptanone	≤10	Listed	586
Butyl acetate	≤10	Listed	181
Titanium(IV) oxide	<10	Listed	191
Butanol	≤8.9	Listed	477
Carbon black	<1.0	Listed	130
Crystalline silica	<1.0	Listed	165-2
Ethylenediamine	≤0.30	Listed	83

#### Carcinogen

None of the components are listed.

#### Mutagen

None of the components are listed.

**Corrosive liquid** : Not listed

## 15. Regulatory information

**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
Polycondensate of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (liquid only)	12.31	Priority assessment	87
1-Butanol	7.0939	Priority assessment	124

**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.

### 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** : All components are listed or exempted.

**Road law** : Not available.

## 16. Other information

### History

<b>Date of issue/Date of revision</b>	: 2 June 2020
<b>Date of previous issue</b>	: 4/26/2020
<b>Version</b>	: 13
<b>Prepared by</b>	: EHS
<b>Key to abbreviations</b>	: 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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