

# SAFETY DATA SHEET



Date of issue/Date of revision 1 August 2020

Version 22

## Section 1. Identification

**Product name** : SINGLE STAGE HIGH SOLIDS POLYURETHANE ENAMEL  
**Product code** : FDGH-1  
**Other means of identification** : Not available.  
**Product type** : Liquid.

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

**Product use** : Industrial applications.

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

**Uses advised against** : Not applicable.

**Manufacturer** : PPG Industries, Inc.  
One PPG Place,  
Pittsburgh, PA 15272

**Emergency telephone  
number** : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
SETIQ Interior de la República: 800-00-214-00 (México)  
SETIQ Ciudad de México: (55) 5559-1588 (México)

**Technical Phone Number** : (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the  
substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 1B  
TOXIC TO REPRODUCTION - Category 1B  
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 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 100% (Oral), 100% (Dermal), 100% (Inhalation)

## Section 2. Hazards identification

This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. For many PPG products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8).

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Highly flammable liquid and vapor.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause cancer.  
May damage fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS))

### Precautionary statements

#### Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### Response

: If exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing 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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

#### Disposal

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

## Section 2. Hazards identification

<b>Supplemental label elements</b>	: Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.
<b>Hazards not otherwise classified</b>	: May form explosive peroxides. Hazardous reactions or instability may occur under certain conditions of storage or use. Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Product name</b>	: SINGLE STAGE HIGH SOLIDS POLYURETHANE ENAMEL

Ingredient name	%	CAS number
heptan-2-one	≥20 - ≤50	110-43-0
titanium dioxide	≥20 - ≤50	13463-67-7
n-butyl acetate	≥20 - ≤50	123-86-4
4-chloro-α,α,α-trifluorotoluene	≥20 - ≤50	98-56-6
chrome antimony titanium buff rutile	≥20 - ≤50	68186-90-3
diiron trioxide	≥10 - ≤20	1309-37-1
acetone	≥10 - ≤20	67-64-1
2-methoxy-1-methylethyl acetate	≥10 - ≤20	108-65-6
Aluminium powder (stabilized)	≥10 - ≤20	7429-90-5
Solvent naphtha (petroleum), heavy arom.	≥5.0 - ≤10	64742-94-5
Ketones, C11	≥5.0 - ≤10	71808-49-6
Solvent naphtha (petroleum), light aromatic	≥5.0 - ≤10	64742-95-6
Talc, not containing asbestiform fibres	≥5.0 - ≤10	14807-96-6
Naphtha (petroleum), hydrotreated heavy	≥1.0 - ≤5.0	64742-48-9
ethyl 3-ethoxypropionate	≥1.0 - ≤5.0	763-69-9
1,2,4-trimethylbenzene	≥1.0 - ≤5.0	95-63-6
butanone	≥1.0 - ≤5.0	78-93-3
pentyl propionate	≥1.0 - ≤5.0	624-54-4
carbon black, respirable powder	≥1.0 - ≤5.0	1333-86-4
Ligroine	≥1.0 - ≤5.0	8032-32-4
Stoddard solvent	≥1.0 - ≤5.0	8052-41-3
5-methylhexan-2-one	≥1.0 - ≤5.0	110-12-3
[1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	≥1.0 - ≤5.0	15680-42-9
Naphtha (petroleum), hydrodesulfurized heavy	≥1.0 - ≤5.0	64742-82-1
2-ethylhexyl acetate	≥1.0 - ≤5.0	103-09-3
toluene	≥1.0 - ≤5.0	108-88-3
isobutyl acetate	≥1.0 - ≤5.0	110-19-0
xylene	≥1.0 - ≤4.9	1330-20-7
Cashew, nutshell liq., 2-hydroxyethyl ethers	≥1.0 - ≤5.0	232268-65-4
ethyl acetate	≥1.0 - ≤5.0	141-78-6
Isopropyl alcohol	≥1.0 - ≤5.0	67-63-0
Acidic Polyester	≥1.0 - ≤5.0	Not available.
2-butoxyethyl acetate	≥0.10 - ≤2.5	112-07-2
aluminium hydroxide	≥1.0 - ≤5.0	21645-51-2
Salts From Unsaturated Polyamides and Lower Mw Acidic	≥1.0 - ≤5.0	Not available.
naphthalene	<1.0	91-20-3

### Section 3. Composition/information on ingredients

ethylbenzene	<1.0	100-41-4
n-hexane	<1.0	110-54-3
dibutyltin di(acetate)	<1.0	1067-33-0
cumene	<1.0	98-82-8

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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.**

### Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

#### Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

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

##### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin. 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:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight

## Section 4. First aid measures

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

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
phosphorus oxides  
halogenated compounds  
carbonyl halides  
metal oxide/oxides

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 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).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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

## Section 7. Handling and storage

Special precautions	<p>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.</p> <p>: Ingestion of product or cured coating may be harmful. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. May form explosive peroxides. Keep away from combustible materials. Avoid shock and friction. Avoid all possible sources of ignition (spark or flame). If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.</p>
Advice on general occupational hygiene	<p>: 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. See also Section 8 for additional information on hygiene measures.</p>
Conditions for safe storage, including any incompatibilities	<p>: 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.</p>

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
heptan-2-one	<p><b>ACGIH TLV (United States, 3/2019).</b> TWA: 233 mg/m<sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 465 mg/m<sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p> <p><b>ACGIH TLV (United States, 3/2019).</b> TWA: 10 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 710 mg/m<sup>3</sup> 8 hours. TWA: 150 ppm 8 hours.</p> <p><b>ACGIH TLV (United States, 3/2019).</b> STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p><b>IPEL (PPG).</b> TWA: 0.57 ppm STEL: 1.71 ppm</p> <p><b>OSHA PEL (United States).</b></p>
titanium dioxide	
n-butyl acetate	
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	
chrome antimony titanium buff rutile	



## Section 8. Exposure controls/personal protection

diiron trioxide	<p>TWA: 0.5 mg/m<sup>3</sup>  TWA: 0.5 mg/m<sup>3</sup>, (as Sb) Form: Total dust  <b>ACGIH TLV (United States, 3/2019).</b>  TWA: 0.5 mg/m<sup>3</sup>, (as Sb) 8 hours.  <b>ACGIH TLV (United States).</b>  TWA: 0.5 mg/m<sup>3</sup> Form: Total dust  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 0.5 mg/m<sup>3</sup>, (as Sb) 8 hours.  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Fume  TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction  TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust  <b>ACGIH TLV (United States, 3/2019).</b>  TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction</p>
acetone	<p><b>ACGIH TLV (United States, 3/2019).</b>  STEL: 500 ppm 15 minutes.  TWA: 250 ppm 8 hours.  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 2400 mg/m<sup>3</sup> 8 hours.  TWA: 1000 ppm 8 hours.  <b>IPEL (PPG, 10/2017). Absorbed through skin.</b>  TWA: 30 ppm  STEL: 90 ppm</p>
2-methoxy-1-methylethyl acetate	<p><b>ACGIH TLV (United States, 3/2019).</b>  TWA: 1 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 5 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Respirable fraction  TWA: 15 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Total dust</p>
aluminium powder (stabilised)	<p>None.  None.  None.  <b>ACGIH TLV (United States, 3/2019).</b>  TWA: 2 mg/m<sup>3</sup> 8 hours. Form: Respirable  <b>OSHA PEL Z3 (United States).</b>  TWA: 2 mg/m<sup>3</sup></p>
Solvent naphtha (petroleum), heavy arom. Ketones, C11 Solvent naphtha (petroleum), light aromatic Talc , not containing asbestiform fibres	<p>None.  None.  None.  <b>ACGIH TLV (United States, 3/2019).</b>  TWA: 2 mg/m<sup>3</sup> 8 hours. Form: Respirable  <b>OSHA PEL Z3 (United States).</b>  TWA: 2 mg/m<sup>3</sup></p>
Naphtha (petroleum), hydrotreated heavy ethyl 3-ethoxypropionate	<p>None.  <b>IPEL (PPG).</b>  TWA: 50 ppm  STEL: 100 ppm  <b>ACGIH TLV (United States, 3/2019).</b>  TWA: 123 mg/m<sup>3</sup> 8 hours.  TWA: 25 ppm 8 hours.  <b>ACGIH TLV (United States, 3/2019).</b>  STEL: 885 mg/m<sup>3</sup> 15 minutes.  STEL: 300 ppm 15 minutes.  TWA: 590 mg/m<sup>3</sup> 8 hours.</p>
1,2,4-trimethylbenzene	
butanone	



## Section 8. Exposure controls/personal protection

pentyl propionate  
carbon black, respirable powder

Ligroine  
Stoddard solvent

5-methylhexan-2-one

[1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper  
Naphtha (petroleum), hydrodesulfurized heavy  
2-ethylhexyl acetate  
toluene

isobutyl acetate

xylene

Cashew, nutshell liq., 2-hydroxyethyl ethers  
ethyl acetate

TWA: 200 ppm 8 hours.

**OSHA PEL (United States, 5/2018).**

TWA: 590 mg/m<sup>3</sup> 8 hours.

TWA: 200 ppm 8 hours.

None.

**ACGIH TLV (United States, 3/2019).**

TWA: 3 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction

**OSHA PEL (United States, 5/2018).**

TWA: 3.5 mg/m<sup>3</sup> 8 hours.

None.

**ACGIH TLV (United States, 3/2019).**

TWA: 525 mg/m<sup>3</sup> 8 hours.

TWA: 100 ppm 8 hours.

**OSHA PEL (United States, 5/2018).**

TWA: 2900 mg/m<sup>3</sup> 8 hours.

TWA: 500 ppm 8 hours.

**ACGIH TLV (United States, 3/2019).**

TWA: 93 mg/m<sup>3</sup> 8 hours.

TWA: 20 ppm 8 hours.

STEL: 50 ppm 15 minutes.

STEL: 234 mg/m<sup>3</sup> 15 minutes.

**OSHA PEL (United States, 5/2018).**

TWA: 475 mg/m<sup>3</sup> 8 hours.

TWA: 100 ppm 8 hours.

None.

None.

None.

**OSHA PEL Z2 (United States, 2/2013).**

AMP: 500 ppm 10 minutes.

CEIL: 300 ppm

TWA: 200 ppm 8 hours.

**ACGIH TLV (United States, 3/2019).**

TWA: 20 ppm 8 hours.

**OSHA PEL (United States, 5/2018).**

TWA: 700 mg/m<sup>3</sup> 8 hours.

TWA: 150 ppm 8 hours.

**ACGIH TLV (United States, 3/2019).**

STEL: 150 ppm 15 minutes.

TWA: 50 ppm 8 hours.

**ACGIH TLV (United States, 3/2019).**

STEL: 651 mg/m<sup>3</sup> 15 minutes.

STEL: 150 ppm 15 minutes.

TWA: 434 mg/m<sup>3</sup> 8 hours.

TWA: 100 ppm 8 hours.

**OSHA PEL (United States, 5/2018).**

TWA: 435 mg/m<sup>3</sup> 8 hours.

TWA: 100 ppm 8 hours.

None.

**ACGIH TLV (United States, 3/2019).**

TWA: 1440 mg/m<sup>3</sup> 8 hours.

TWA: 400 ppm 8 hours.

## Section 8. Exposure controls/personal protection

Isopropyl alcohol	<p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1400 mg/m<sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.</p> <p><b>ACGIH TLV (United States, 3/2019).</b> STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 980 mg/m<sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.</p>
Acidic Polyester	None.
2-butoxyethyl acetate	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 20 ppm 8 hours.
aluminium hydroxide	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction
Salts From Unsaturated Polyamides and Lower Mw Acidic naphthalene	<b>ACGIH TLV (United States).</b> TWA: 1 mg/m <sup>3</sup> None.
	<b>ACGIH TLV (United States, 3/2019).</b> <b>Absorbed through skin.</b> TWA: 52 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
	<b>OSHA PEL (United States, 5/2018).</b> TWA: 50 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.
ethylbenzene	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 20 ppm 8 hours.
	<b>OSHA PEL (United States, 5/2018).</b> TWA: 435 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
n-hexane	<b>ACGIH TLV (United States, 3/2019).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours.
	<b>OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m <sup>3</sup> 8 hours. TWA: 500 ppm 8 hours.
dibutyltin di(acetate)	<b>ACGIH TLV (United States, 3/2019).</b> <b>Absorbed through skin.</b> STEL: 0.2 mg/m <sup>3</sup> , (as Sn) 15 minutes. TWA: 0.1 mg/m <sup>3</sup> , (as Sn) 8 hours.
	<b>OSHA PEL (United States, 5/2018).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Sn) 8 hours.
	<b>OSHA PEL (United States).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Sn)
cumene	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 50 ppm 8 hours.
	<b>OSHA PEL (United States, 5/2018).</b> <b>Absorbed through skin.</b> TWA: 245 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.

## Key to abbreviations

A = Acceptable Maximum Peak

S = Potential skin absorption

## Section 8. Exposure controls/personal protection

ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

### Consult local authorities for acceptable exposure limits.

**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

**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/face protection** : Chemical splash goggles.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Gloves** : butyl rubber

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

**Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.  
**Color** : Not available.  
**Odor** : Not available.  
**Odor threshold** : Not available.  
**pH** : Not available.  
**Melting point** : Not available.  
**Boiling point** : >37.78°C (>100°F)  
**Flash point** : Closed cup: -13.89°C (7°F)  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not available.  
**Flammability (solid, gas)** : Not available.  
**Lower and upper explosive (flammable) limits** : Not available.  
**Evaporation rate** : Not available.  
**Vapor pressure** : Not available.  
**Vapor density** : Not available.  
**Relative density** : 1.13  
**Density ( lbs / gal )** : 9.43  
**Solubility** : Insoluble in the following materials: cold water.  
**Partition coefficient: n-octanol/water** : Not available.  
**Viscosity** : Kinematic (40°C (104°F)): >0.21 cm<sup>2</sup>/s (>21 cSt)  
**Volatility** : 58% (v/v), 50% (w/w)  
**% Solid. (w/w)** : 50.2

Physical property values shown in this section are calculated averages. For specific product information, contact your PPG Sales Representative.

## Section 10. Stability and reactivity

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

**Chemical stability** : The product is stable.

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

## Section 10. Stability and reactivity

**Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.

**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.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
heptan-2-one	LC50 Inhalation Vapor	Rat	16.7 mg/l	4 hours
	LD50 Dermal	Rabbit	10.206 g/kg	-
	LD50 Oral	Rat	1.6 g/kg	-
titanium dioxide	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
n-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	-
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	LC50 Inhalation Vapor	Rat	33080 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2.7 g/kg	-
	LD50 Oral	Rat	13 g/kg	-
chrome antimony titanium buff rutile	LD50 Oral	Rat	10 g/kg	-
diiron trioxide	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	10 g/kg	-
acetone	LC50 Inhalation Vapor	Rat	76000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	15.8 g/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
aluminium powder (stabilised)	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	>15900 mg/kg	-
Solvent naphtha (petroleum), heavy arom.	LC50 Inhalation Dusts and mists	Rat	>5.2 mg/l	4 hours
	LD50 Oral	Rat	>5 g/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>6 g/kg	-
ethyl 3-ethoxypropionate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	3200 mg/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m <sup>3</sup>	4 hours

## Section 11. Toxicological information

butanone	LD50 Oral	Rat	5 g/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
pentyl propionate	LD50 Oral	Rat	2737 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	10.07 mg/l	4 hours
	LD50 Dermal	Rabbit	>14 g/kg	-
carbon black, respirable powder	LD50 Oral	Rat	>14 g/kg	-
	LD50 Dermal	Rabbit	>3 g/kg	-
Ligroine	LD50 Oral	Rat	>15400 mg/kg	-
Stoddard solvent	LC50 Inhalation Gas.	Rat	3400 ppm	4 hours
5-methylhexan-2-one	LD50 Oral	Rat	>5 g/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	8.14 g/kg	-
	LD50 Oral	Rat	5657 mg/kg	-
[1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N, O,O']copper	LC50 Inhalation Dusts and mists	Rat	>1000 mg/m <sup>3</sup>	4 hours
Naphtha (petroleum), hydrodesulfurized heavy	LD50 Oral	Rat	>5000 mg/kg	-
2-ethylhexyl acetate	LD50 Oral	Rat	3 g/kg	-
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	5580 mg/kg	-
isobutyl acetate	LD50 Dermal	Rabbit	>17400 mg/kg	-
	LD50 Oral	Rat	13400 mg/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
Isopropyl alcohol	LC50 Inhalation Vapor	Rat	72600 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5045 mg/kg	-
2-butoxyethyl acetate	LD50 Dermal	Rabbit	1500 mg/kg	-
	LD50 Oral	Rat	1880 mg/kg	-
aluminium hydroxide	LC50 Inhalation Dusts and mists	Rat	>5.09 mg/l	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
Salts From Unsaturated Polyamides and Lower Mw Acidic	LD50 Oral	Rat	>5 g/kg	-
naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	490 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
dibutyltin di(acetate)	LD50 Dermal	Rabbit	2318 mg/kg	-
cumene	LC50 Inhalation Vapor	Rat	39000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	12.3 g/kg	-
	LD50 Oral	Rat	1400 mg/kg	-

## Conclusion/Summary

: There are no data available on the mixture itself.

## Irritation/Corrosion

## Section 11. Toxicological information

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

### Conclusion/Summary

- Skin** : There are no data available on the mixture itself.  
**Eyes** : There are no data available on the mixture itself.  
**Respiratory** : There are no data available on the mixture itself.

### Sensitization

#### Conclusion/Summary

- Skin** : There are no data available on the mixture itself.  
**Respiratory** : There are no data available on the mixture itself.

### Mutagenicity

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

### Carcinogenicity

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

### Classification

Product/ingredient name	OSHA	IARC	NTP
titanium dioxide	-	2B	-
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	-	2B	-
diron trioxide	-	3	-
carbon black, respirable powder	-	2B	-
toluene	-	3	-
xylene	-	3	-
Isopropyl alcohol	-	3	-
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.
ethylbenzene	-	2B	-
cumene	-	2B	Reasonably anticipated to be a human carcinogen.

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
5-methylhexan-2-one	-	-	Equivocal	Rabbit	Inhalation: 1250 ppm	-

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

### Teratogenicity

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

### Specific target organ toxicity (single exposure)



## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
heptan-2-one	Category 3	-	Narcotic effects
n-butyl acetate	Category 3	-	Narcotic effects
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	Category 3	-	Respiratory tract irritation
acetone	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), heavy arom.	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), light aromatic	Category 3	-	Respiratory tract irritation
Talc , not containing asbestiform fibres	Category 3	-	Narcotic effects
Naphtha (petroleum), hydrotreated heavy	Category 3	-	Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3	-	Respiratory tract irritation
butanone	Category 3	-	Narcotic effects
Naphtha (petroleum), hydrodesulfurized heavy	Category 3	-	Narcotic effects
toluene	Category 3	-	Narcotic effects
isobutyl acetate	Category 3	-	Respiratory tract irritation
xylene	Category 3	-	Respiratory tract irritation
ethyl acetate	Category 3	-	Narcotic effects
Isopropyl alcohol	Category 3	-	Narcotic effects
n-hexane	Category 3	-	Narcotic effects
dibutyltin di(acetate)	Category 1	oral	thymus
cumene	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Stoddard solvent	Category 1	-	central nervous system (CNS)
Naphtha (petroleum), hydrodesulfurized heavy	Category 1	-	central nervous system (CNS)
toluene	Category 2	-	-
2-butoxyethyl acetate	Category 2	-	-
naphthalene	Category 2	-	-
ethylbenzene	Category 2	-	hearing organs
n-hexane	Category 2	-	-
dibutyltin di(acetate)	Category 1	oral	thymus
cumene	Category 2	-	-

## Section 11. Toxicological information

### Target organs

- : Contains material which causes damage to the following organs: brain, central nervous system (CNS), eye, lens or cornea.
- Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, the reproductive system, liver, heart, spleen, lymphatic system, peripheral nervous system, gastrointestinal tract, cardiovascular system, upper respiratory tract, immune system, skin, adrenal, bone marrow, testes.

### Aspiration hazard

Name	Result
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD - Category 1
Ligroine	ASPIRATION HAZARD - Category 1
Stoddard solvent	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrodesulfurized heavy	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
n-hexane	ASPIRATION HAZARD - Category 1
cumene	ASPIRATION HAZARD - Category 1

### Information on the likely routes of exposure

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin. 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:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 11. Toxicological information

**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

**Conclusion/Summary** : There are no data available on the mixture itself. This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. For many PPG products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8). Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### 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.

**Reproductive toxicity** :  May damage fertility or the unborn child.

## Section 11. Toxicological information

### 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)
SINGLE STAGE HIGH SOLIDS POLYURETHANE ENAMEL	17330.9	14761.7	271421	110.1	10.7
heptan-2-one	1600	10206	N/A	16.7	1.5
n-butyl acetate	10768	N/A	N/A	N/A	N/A
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	13000	2500	N/A	33.08	N/A
chrome antimony titanium buff rutile	10000	N/A	N/A	N/A	N/A
diiron trioxide	10000	N/A	N/A	N/A	N/A
acetone	5800	15800	N/A	76	N/A
2-methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	N/A
Solvent naphtha (petroleum), light aromatic	8400	3480	N/A	N/A	N/A
ethyl 3-ethoxypropionate	3200	N/A	N/A	N/A	N/A
1,2,4-trimethylbenzene	5000	N/A	N/A	18	1.5
butanone	2737	6480	N/A	N/A	N/A
pentyl propionate	N/A	N/A	N/A	N/A	10.07
carbon black, respirable powder	N/A	2500	N/A	N/A	N/A
Ligroine	N/A	N/A	3400	N/A	N/A
5-methylhexan-2-one	5657	8140	5000	11	1.5
[1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	N/A	N/A	N/A	11	1.5
2-ethylhexyl acetate	3000	N/A	N/A	N/A	N/A
toluene	5580	8390	N/A	49	N/A
isobutyl acetate	13400	N/A	N/A	N/A	N/A
xylene	4300	1700	N/A	11	1.5
Cashew, nutshell liq., 2-hydroxyethyl ethers	N/A	1100	N/A	N/A	N/A
ethyl acetate	5620	N/A	N/A	N/A	N/A
Isopropyl alcohol	5045	12800	N/A	72.6	N/A
2-butoxyethyl acetate	1880	1500	N/A	11	1.5
naphthalene	490	N/A	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
n-hexane	15840	N/A	48000	N/A	N/A
dibutyltin di(acetate)	N/A	2318	N/A	N/A	N/A
cumene	1400	12300	N/A	39	N/A

## Section 12. Ecological information

### Toxicity

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
heptan-2-one	Acute LC50 131 mg/l	Fish	96 hours
titanium dioxide	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
n-butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
diiron trioxide	Acute EC50 >100 mg/l	Daphnia	48 hours
acetone	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Acartia tonsa - Copepodid	48 hours
2-methoxy-1-methylethyl acetate	Acute LC50 5540 mg/l	Fish	96 hours
Solvent naphtha (petroleum), heavy arom.	Acute LC50 161 mg/l Fresh water	Fish	96 hours
Solvent naphtha (petroleum), light aromatic	NOEL 0.48 mg/l Fresh water	Daphnia	21 days
ethyl 3-ethoxypropionate	Acute LC50 8.2 mg/l	Fish	96 hours
pentyl propionate	Acute LC50 60.9 mg/l	Fish	96 hours
5-methylhexan-2-one	Acute LC50 56 mg/l	Fish	96 hours
Isopropyl alcohol	Acute LC50 159 mg/l	Fish	96 hours
2-butoxyethyl acetate	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
ethylbenzene	Acute LC50 28 mg/l	Fish	96 hours
dibutyltin di(acetate)	Acute LC50 150 to 200 mg/l Fresh water	Fish	96 hours
	Acute EC10 3.1 mg/l	Fish	72 hours
	Acute EC50 0.5 mg/l	Algae	72 hours

## Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
heptan-2-one	OECD 310	69 % - Readily - 28 days	-	-
n-butyl acetate	TEPA and OECD 301D	83 % - Readily - 28 days	-	-
acetone	-	90.9 % - Readily - 28 days	-	-
pentyl propionate	OECD 301F	90.1 % - Readily - 28 days	-	-
5-methylhexan-2-one	OECD 301D	67 % - Readily - 28 days	-	-
2-butoxyethyl acetate	OECD 301A	97 % - Readily - 7 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
heptan-2-one	-	-	Readily
n-butyl acetate	-	-	Readily
acetone	-	-	Readily
ethyl 3-ethoxypropionate	-	-	Readily
pentyl propionate	-	-	Readily
5-methylhexan-2-one	-	-	Readily
toluene	-	-	Readily
xylene	-	-	Readily
2-butoxyethyl acetate	-	-	Readily
ethylbenzene	-	-	Readily
dibutyltin di(acetate)	-	-	Not readily

## Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
heptan-2-one	1.98	-	low
n-butyl acetate	1.78	-	low
acetone	-0.24	3	low
2-methoxy-1-methylethyl acetate	0.56	-	low
1,2,4-trimethylbenzene	3.63	120.23	low
butanone	0.29	-	low
Stoddard solvent	3.16 to 7.06	-	high
5-methylhexan-2-one	1.88	-	low
toluene	2.73	8.32	low
isobutyl acetate	1.78	-	low
xylene	3.16	7.4 to 18.5	low
ethyl acetate	0.73	-	low
Isopropyl alcohol	0.05	-	low
2-butoxyethyl acetate	1.51	-	low
naphthalene	3.3	85.11	low
ethylbenzene	3.15	79.43	low
n-hexane	3.9	-	low
cumene	3.66	35.48	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

## 14. Transport information

	DOT	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class (es)	3	3	3
Packing group	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	(Solvent naphtha (petroleum), heavy aromatic, Solvent naphtha (petroleum), light aromatic)	Not applicable.
Product RQ (lbs)	4307.4	Not applicable.	Not applicable.
RQ substances	(xylene, naphthalene)	Not applicable.	Not applicable.

### Additional information

- DOT** : Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not applicable.

## Section 15. Regulatory information

### United States

**United States inventory (TSCA 8b)** : Not determined.

#### United States - TSCA 12(b) - Chemical export notification:

4-chloro-α,α,α-trifluorotoluene

One time notification

#### United States - TSCA 5(a)2 - Final significant new use rules:

4-chloro-α,α,α-trifluorotoluene

Listed

40 CFR 799.5089

2-ethoxyethanol

Listed

40 CFR 721.10001

2-ethoxyethyl acetate

Listed

### SARA 302/304

**SARA 304 RQ** : Not applicable.

### Composition/information on ingredients



## Section 15. Regulatory information

No products were found.

### SARA 311/312

#### Classification

: FLAMMABLE LIQUIDS - Category 2  
 SKIN IRRITATION - Category 2  
 EYE IRRITATION - Category 2A  
 SKIN SENSITIZATION - Category 1  
 CARCINOGENICITY - Category 1B  
 TOXIC TO REPRODUCTION - Category 1B  
 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 1  
 HNOC - Defatting irritant  
 HNOC - May form explosive peroxides.

### Composition/information on ingredients

Name	%	Classification
heptan-2-one	≥20 - ≤50	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
titanium dioxide	≥20 - ≤50	CARCINOGENICITY - Category 2
n-butyl acetate	≥20 - ≤50	FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
4-chloro-α,α,α-trifluorotoluene	≥20 - ≤50	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
acetone	≥10 - ≤20	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
Solvent naphtha (petroleum), heavy arom.	≥5.0 - ≤10	FLAMMABLE LIQUIDS - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
Ketones, C11	≥5.0 - ≤10	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A HNOC - Defatting irritant
Solvent naphtha (petroleum), light aromatic	≥5.0 - ≤10	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

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Talc , not containing asbestiform fibres	≥5.0 - ≤10	(Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
Naphtha (petroleum), hydrotreated heavy	≥1.0 - ≤5.0	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
ethyl 3-ethoxypropionate	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 3 HNOC - May form explosive peroxides. HNOC - Defatting irritant
1,2,4-trimethylbenzene	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
butanone	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
pentyl propionate	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 3 HNOC - Defatting irritant
carbon black, respirable powder	≥1.0 - ≤5.0	COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2
Ligroine	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
Stoddard solvent	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 3 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
5-methylhexan-2-one	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 TOXIC TO REPRODUCTION - Category 2 HNOC - Defatting irritant
[1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	≥1.0 - ≤5.0	COMBUSTIBLE DUSTS ACUTE TOXICITY (inhalation) - Category 4
Naphtha (petroleum), hydrodesulfurized heavy	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

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2-ethylhexyl acetate toluene	≥1.0 - ≤5.0 ≥1.0 - ≤5.0	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant SKIN IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
isobutyl acetate	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
xylene	≥1.0 - ≤4.9	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1
Cashew, nutshell liq., 2-hydroxyethyl ethers	≥1.0 - ≤5.0	ACUTE TOXICITY (dermal) - Category 4 EYE IRRITATION - Category 2A
ethyl acetate	≥1.0 - ≤5.0	SKIN SENSITIZATION - Category 1B FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
Isopropyl alcohol	≥1.0 - ≤5.0	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Acidic Polyester 2-butoxyethyl acetate	≥1.0 - ≤5.0 ≥0.10 - ≤2.5	EYE IRRITATION - Category 2A FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Salts From Unsaturated Polyamides and Lower Mw Acidic naphthalene	≥1.0 - ≤5.0          ≤1.0	SKIN IRRITATION - Category 2          FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

## Section 15. Regulatory information

ethylbenzene	<1.0	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
n-hexane	<1.0	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
dibutyltin di(acetate)	<1.0	SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
cumene	<1.0	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant

## SARA 313


Supplier notification	Chemical name	CAS number	Concentration
	bismuth vanadium tetraoxide	14059-33-7	10 - 30
	chrome antimony titanium buff rutile	68186-90-3	10 - 30
	Aluminium powder (stabilized)	7429-90-5	7 - 13
	1,2,4-trimethylbenzene	95-63-6	1 - 5
	[1-[(2-hydroxyphenyl)imino]methyl]-2-naphtholato (2-)-N,O,O']copper	15680-42-9	1 - 5
	toluene	108-88-3	1 - 5
	xylene	1330-20-7	1 - 5
	Zinc Phosphate Compound	Not available.	0.5 - 1.5
	2-butoxyethyl acetate	112-07-2	0.5 - 1.5
	naphthalene	91-20-3	0.1 - 1
	ethylbenzene	100-41-4	0.1 - 1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

## Section 15. Regulatory information

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

### California Prop. 65

 **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

**Health :** 2 \* **Flammability :** 3 **Physical hazards :** 1

(\*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)

**Health :** 2 **Flammability :** 3 **Instability :** 1

**Date of previous issue :** 6/22/2020

**Organization that prepared the MSDS :** EHS

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
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)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

 Indicates information that has changed from previously issued version.

### Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.