Material Safety Data Sheet

Date of issue 17 July 2018
Version 18

1 . Product and company identification

Product name : 5.0 BASECOAT

Code : FBC-1

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

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 or + 52 55 5559 1588 (Mexico)

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

2 . Hazards identification

Emergency overview : DANGER!

FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : Harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : Harmful in contact with skin. Severely irritating to the skin.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Over-exposure signs/symptoms

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. 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. For many PPG products, TiO2 is utilized as a raw material in a liquid coating formulation. In this case, the TiO2 particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO2 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).

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

2 . Hazards identification

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS). (1988 Version)

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	% (w/w)
n-butyl acetate	123-86-4	60 - 100
titanium dioxide	13463-67-7	60 - 100
chrome antimony titanium buff rutile	68186-90-3	15 - 40
heptan-2-one	110-43-0	15 - 40
diiron trioxide	1309-37-1	15 - 40
2-methoxy-1-methylethyl acetate	108-65-6	15 - 40
5-methylhexan-2-one	110-12-3	10 - 30
Aluminium powder (stabilized)	7429-90-5	10 - 30
silicon dioxide	7631-86-9	10 - 30
butanone	78-93-3	10 - 30
D-Glucitol, 1,4:3,6-dianhydro-, 2-(4-methoxybenzoate) 5-[4-[(1-oxo-2-propen-1-yl)oxy] benzoate], polymer with 1,4:3,6-dianhydro-D-glucitol 5-(4-methoxybenzoate) 2-[4-[(1-oxo-2-propen-1-yl)oxy]benzoate] and 1,1'-(1,4-phenylene) bis[4-[4-[(1-oxo-2-propen-1-yl)oxy]butoxy]benzoate]	228863-31-8	7 - 13
D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[(1- oxo-2-propenyl)oxy]benzoate], polymer with 1, 4-phenylene bis[4-[4-[(1-oxo-2- propenyl)oxy]butoxy]benzoate]	260544-92-1	7 - 13
Solvent naphtha (petroleum), light aromatic	64742-95-6	7 - 13
xylene	1330-20-7	7 - 13
glass, oxide, chemicals	65997-17-3	7 - 13
Silica gel, pptd., cryst.-free	112926-00-8	7 - 13
Solvent naphtha (petroleum), heavy arom.	64742-94-5	5 - 10
Mica-group minerals	12001-26-2	5 - 10
aluminium oxide	1344-28-1	5 - 10
1,2,4-trimethylbenzene	95-63-6	3 - 7
carbon black, respirable powder	1333-86-4	1 - 5
Silicic acid	1343-98-2	1 - 5
Naphtha (petroleum), hydrotreated heavy	64742-48-9	1 - 5
Stoddard solvent	8052-41-3	1 - 5
[1-[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	15680-42-9	1 - 5
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	1 - 5
Copper Compound	Not available.	1 - 5
ethylbenzene	100-41-4	1 - 5
butan-1-ol	71-36-3	1 - 5
aluminium hydroxide	21645-51-2	1 - 5
Silica, amorphous, fumed, cryst.-free	112945-52-5	1 - 5
barium sulfate	7727-43-7	1 - 5
chromium (III) oxide	1308-38-9	0.5 - 1.5
Ligroine	8032-32-4	0.5 - 1.5
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	0.5 - 1.5
Resin acids and Rosin acids, calcium salts	9007-13-0	0.5 - 1.5
Naphtha (petroleum), heavy alkylate	64741-65-7	0.5 - 1.5
Copper Compound	Not available.	0.5 - 1.5
Polyamine Polyester Polymer	Not available.	0.5 - 1.5
Naphthenic acids	1338-24-5	0.5 - 1.5
toluene	108-88-3	0.1 - 1
naphthalene	91-20-3	0.1 - 1
2-methoxypropyl acetate	70657-70-4	0.1 - 1
benzyl butyl phthalate	85-68-7	0.1 - 1
cumene	98-82-8	0.1 - 1
methyl methacrylate	80-62-6	0.1 - 1
manganese	7439-96-5	0.1 - 1

3 . Composition/information on ingredients

dibutyltin oxide	818-08-6	0.1 - 1

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.

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 Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

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.

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.

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.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

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.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid. 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.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : 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.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

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 : 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 (see Section 8).

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).

6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. 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.

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 or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

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. Do not breathe vapor or mist. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. 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. Vapors are heavier than air and may spread along floors. 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. If this material is part of a multiple component system, read the Material 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.

Storage : Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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.

8 . Exposure controls/personal protection

Name	Result	ACGIH	Ontario	Mexico	PPG
n-butyl acetate	TWA STEL	50 ppm 150 ppm	150 ppm 200 ppm	150 ppm 200 ppm	Not established Not established
titanium dioxide	TWA	10 mg/m³	10 mg/m³ TD	10 mg/m³	Not established
chrome antimony titanium buff rutile	TWA	0.5 MG/M3 TD 0.5 mg/m³ (as Sb)	0.5 mg/m³ (as Sb)	0.5 mg/m³ (as Sb)	Not established
heptan-2-one	TWA	50 ppm	25 ppm	50 ppm	Not established
diiron trioxide	TWA	5 mg/m³ R	5 mg/m³ R	5 mg/m³ R	Not established

8 . Exposure controls/personal protection

2-methoxy-1-methylethyl acetate	TWA STEL	Not established Not established	50 ppm Not established	Not established Not established	30 ppm S 90 ppm S
5-methylhexan-2-one	TWA STEL	20 ppm 50 ppm	20 ppm 50 ppm	20 ppm Not established	Not established Not established
Aluminium powder (stabilized)	TWA	1 mg/m³ R	1 mg/m³ R	1 mg/m³ R	Not established
butanone	TWA STEL	200 ppm 300 ppm	200 ppm 300 ppm	200 ppm 300 ppm	Not established Not established
D-Glucitol, 1,4:3,6-dianhydro-, 2-(4-methoxybenzoate) 5-[4-[(1-oxo-2-propen-1-yl)oxy]benzoate], polymer with 1,4:3,6-dianhydro-D-glucitol 5-(4-methoxybenzoate) 2-[4-[(1-oxo-2-propen-1-yl)oxy]benzoate] and 1,1'-(1,4-phenylene) bis[4-[4-[(1-oxo-2-propen-1-yl)oxy]butoxy]benzoate]	TWA	10 MG/M3 TD 3 MG/M3 R 10 mg/m³ 3 mg/m³ R TD	Not established	Not established	Not established
D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[(1- oxo-2-propenyl)oxy]benzoate], polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2- propenyl)oxy]butoxy]benzoate]	TWA	10 mg/m³ 5 mg/m³ R TD	Not established	Not established	Not established
xylene	TWA STEL	100 ppm 150 ppm	100 ppm 150 ppm	100 ppm 150 ppm	Not established Not established
glass, oxide, chemicals	TWA	10 mg/m³ TD 3 mg/m³ R 1 f/cc 5 mg/m³ (Inhalable) 1 f/cc R 5 mg/m³	5 mg/m³	5 mg/m³ 1 fibers/cm³ 1 fibers/cm³	Not established
Mica-group minerals	TWA	3 mg/m³ R	3 mg/m³ R	3 mg/m³ R	Not established
aluminium oxide	TWA	3 mg/m³ R 10 mg/m³ 1 mg/m³ R	10 mg/m3 10 mg/m3 TD 10 mg/m3 R 1 mg/m³ R	10 mg/m³	Not established
1,2,4-trimethylbenzene	TWA	25 ppm	25 ppm	25 ppm	Not established
carbon black, respirable powder	TWA	3 mg/m³	3 mg/m³	3 mg/m³	Not established
Silicic acid	TWA	Not established	10 mg/m³ TD	Not established	Not established
Stoddard solvent	TWA	100 ppm	100 ppm	100 ppm	Not established
ethylbenzene	TWA	20 ppm	20 ppm	20 ppm	Not established

8 . Exposure controls/personal protection

butan-1-ol	TWA	20 ppm	20 ppm	20 ppm S	Not established
aluminium hydroxide	TWA	1 mg/m³ 1 mg/m³ R	1 mg/m³ R	1 mg/m³ R	Not established
barium sulfate	TWA	5 mg/m³	10 mg/m³ TD	10 mg/m³	Not established
chromium (III) oxide	TWA	0.5 mg/m³ (measured as Cr) 0.1 MG/M3 () TD	0.5 mg/m³ (as Cr)	0.5 mg/m³ ()	Not established
Copper Compound	TWA	0.2 mg/m³ (as Cu) F 1 mg/m³ (as Cu) TD	Not established	Not established	Not established
toluene	TWA STEL	20 ppm Not established	20 ppm Not established	20 ppm Not established	Not established Not established
naphthalene	TWA STEL	10 ppm S Not established	10 ppm S 15 ppm S	10 ppm 15 ppm	Not established Not established
cumene	TWA	50 ppm	50 ppm S	50 ppm	Not established
methyl methacrylate	TWA STEL	50 ppm SS 100 ppm SS	50 ppm SS 100 ppm SS	50 ppm SS 100 ppm SS	Not established Not established
manganese	TWA STEL	0.02 mg/m³ (as Mn) R 0.1 mg/m³ (as Mn) Not established	0.2 mg/m³ (as Mn) Not established	0.2 mg/m³ (as Mn) Not established	Not established Not established
dibutyltin oxide	TWA STEL	0.1 mg/m³ (as Sn) S 0.2 mg/m³ (as Sn) S	0.1 mg/m³ (as Sn) S Not established	0.1 mg/m³ (as Sn) S 0.2 mg/m³ (as Sn) S	Not established Not established

Key to abbreviations

A	=	Acceptable Maximum Peak
ACGIH	=	American Conference of Governmental Industrial Hygienists.
C	=	Ceiling Limit
F	=	Fume
IPEL	=	Internal Permissible Exposure Limit
R	=	Respirable
S	=	Potential skin absorption
SR	=	Respiratory sensitization
SS	=	Skin sensitization
STEL	=	Short term Exposure limit values
TD	=	Total dust
TLV	=	Threshold Limit Value
TWA	=	Time Weighted Average

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.

8 . Exposure controls/personal protection

Engineering measures : 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.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Chemical splash goggles.

Hands : 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 : nitrile, neoprene

Respiratory : 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. 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.

Skin : 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.

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.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 26.11°C (79°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.66

Density (lbs / gal) : 13.85

Vapor pressure : Not available.

Vapor density : Not available.

Volatility : 40% (v/v), 28% (w/w)

Evaporation rate : Not available.

Solubility : Insoluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

9 . Physical and chemical properties

% Solid. (w/w) : 72.02

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

10 . Stability and reactivity

Stability : The product may not be stable under certain conditions of storage or use.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid increased storage temperature. Pressure hazard

Materials to avoid : Reactive or incompatible with the following materials:,water,acids,oxidizing materials, strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LC50 Inhalation	Rat	>21.1 mg/l	4 hours
titanium dioxide	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
chrome antimony titanium buff rutile	LD50 Oral	Rat	10 g/kg	-
heptan-2-one	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	10.206 g/kg	-
	LC50 Inhalation Vapor	Rat	>16.7 mg/l	4 hours
diiron trioxide	LD50 Oral	Rat	10 g/kg	-
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
5-methylhexan-2-one	LD50 Oral	Rat	3200 mg/kg	-
	LD50 Dermal	Rabbit	8.14 g/kg	-
butanone	LD50 Oral	Rat	2737 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[(1-oxo-2-propenyl)oxy]benzoate], polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate]	LD50 Oral	Rat	>2 g/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
Solvent naphtha (petroleum), heavy arom.	LD50 Oral	Rat	3.2 g/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
carbon black, respirable powder	LD50 Oral	Rat	>15400 mg/kg	-
	LD50 Dermal	Rabbit	>3 g/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>6 g/kg	-
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
[1-[[(2-hydroxyphenyl)imino]methyl] -2-naphtholato(2-)-N,O,O']copper	LC50 Inhalation Dusts and mists	Rat	>1000 mg/m³	4 hours
ethylbenzene	LD50 Oral	Rat	3.5 g/kg	-

11 . Toxicological information

	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
butan-1-ol	LD50 Oral	Rat	0.79 g/kg	-
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
aluminium hydroxide	LD50 Oral	Rat	>5000 mg/kg	-
Ligroine	LC50 Inhalation	Rat	3400 ppm	4 hours
Naphthenic acids	LD50 Oral	Rat	3 g/kg	-
toluene	LD50 Oral	Rat	5580 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m3	4 hours
naphthalene	LD50 Oral	Rat	490 mg/kg	-
	LD50 Dermal	Rabbit	>20 g/kg	-
2-methoxypropyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LC50 Inhalation Vapor	Rat	>5320 ppm	4 hours
benzyl butyl phthalate	LD50 Oral	Rat	2.33 g/kg	-
	LD50 Dermal	Rabbit	>10 g/kg	-
	LC50 Inhalation Vapor	Rat	>6700 mg/m3	4 hours
cumene	LD50 Oral	Rat	1.4 g/kg	-
	LD50 Dermal	Rabbit	12.3 g/kg	-
	LC50 Inhalation	Rat	39000 mg/m3	4 hours
methyl methacrylate	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
	LC50 Inhalation Vapor	Rat	78000 mg/m3	4 hours
manganese	LD50 Oral	Rat	9 g/kg	-
dibutyltin oxide	LD50 Oral	Rat - Male, Female	172 mg/kg	-
	LD50 Dermal	Rabbit	>2 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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, liver, peripheral nervous system, cardiovascular system, upper respiratory tract, immune system, skin, ears, testes.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

11 . Toxicological information

Product/ingredient name	ACGIH	IARC	NTP
titanium dioxide	A4	2B	-
diiron trioxide	A4	3	-
Aluminium powder (stabilized)	A4	-	-
silicon dioxide	-	3	-
xylene	A4	3	-
glass, oxide, chemicals	A4	3	-
Silica gel, pptd., cryst.-free	-	3	-
aluminium oxide	A4	-	-
carbon black, respirable powder	A3	2B	-
ethylbenzene	A3	2B	-
aluminium hydroxide	A4	-	-
Silica, amorphous, fumed, cryst.-free	-	3	-
chromium (III) oxide	A4	3	-
toluene	A4	3	-
naphthalene	A3	2B	Reasonably anticipated to be a human carcinogen.
benzyl butyl phthalate	-	3	-
cumene	-	2B	Reasonably anticipated to be a human carcinogen.
methyl methacrylate	A4	3	-
manganese	A4	-	-
dibutyltin oxide	A4	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
Not listed or regulated as a carcinogen: -

Teratogenicity

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : Contains material which may impair male fertility, based on animal data. Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
2-methoxy-1-methylethyl acetate	Acute LC50 161 mg/l Fresh water	Fish	96 hours
Solvent naphtha (petroleum), heavy arom.	NOEL 0.48 mg/l Fresh water	Daphnia	21 days
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish - Bluegill - Lepomis macrochirus - Young of the year	96 hours
benzyl butyl phthalate	LC50 0.51 mg/l	Fish	96 hours
	Chronic EC10 0.57 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
dibutyltin oxide	Acute EC50 >1.6 mg/l	Algae	72 hours
	Acute EC50 2 mg/l	Daphnia	48 hours

13 . Disposal considerations

Waste disposal : 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

	TDG	Mexico	IMDG
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.
Marine pollutant substances	(Solvent naphtha (petroleum), light aromatic, Solvent naphtha (petroleum), heavy aromatic)	Not applicable.	(Solvent naphtha (petroleum), light aromatic, Solvent naphtha (petroleum), heavy aromatic)

Additional information

TDG : The marine pollutant mark is not required when transported by road or rail.

Mexico : None identified.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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.

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).

15 . Regulatory information

Canada inventory (DSL) : At least one component is not listed. Unlisted component(s) have been notified and volumes are being tracked.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 3 **Health** : 3 **Reactivity** : 1

16 . Other information

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

Health : 3 * **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. 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 : 3 **Flammability** : 3 **Instability** : 1

Date of previous issue : **11/4/2017**

Organization that prepared the MSDS : EHS

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.