SAFETY DATA SHEET

Date of issue/Date of revision 30 March 2016
Version 9.01

Section 1. Identification

Product name : BASECOAT
Product code : BC-3
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. Paints. Painting-related materials.
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)
01-800-00-21-400 (Mexico)
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 CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Unborn child) - 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) (central nervous system (CNS), hearing organs, kidneys and liver) - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 100%

Section 2. Hazards identification

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye damage.
Causes skin irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause cancer.
May damage the unborn child.
May cause respiratory irritation.
May cause drowsiness and dizziness.
Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs, kidneys, liver)

Precautionary statements

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

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Apply generous quantities of fresh calcium gluconate gel to all areas. Get immediate medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

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

Supplemental label elements : 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.

Section 2. Hazards identification

Hazards not otherwise classified : 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

Substance/mixture : Mixture
Product name : BASECOAT

Ingredient name	%	CAS number
n-butyl acetate	≥90	123-86-4
titanium dioxide	≥25 - <50	13463-67-7
butan-1-ol	≥25 - <50	71-36-3
2-methoxy-1-methylethyl acetate	≥25 - <50	108-65-6
xylene	≥25 - <50	1330-20-7
diiron trioxide	≥0.1 - <25	1309-37-1
butanone	≥2 - <25	78-93-3
glass, oxide, chemicals	≥0.1 - <25	65997-17-3
1-methoxy-2-propanol	≥1 - <25	107-98-2
2-ethoxy-1-methylethyl acetate	≥1 - <25	54839-24-6
4-methylpentan-2-one	≥3 - <25	108-10-1
aluminium oxide	≥0.1 - <25	1344-28-1
cyclohexanone	≥1 - <25	108-94-1
2-butoxyethyl acetate	≥1 - <25	112-07-2
barium sulfate	≥0.1 - <25	7727-43-7
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]	≥0.1 - <25	260544-92-1
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]	≥0.1 - <25	228863-31-8
Aluminium powder (stabilized)	≥0.1 - <25	7429-90-5
magnesium fluoride	≥2 - <25	7783-40-6
2-methylpropan-1-ol	≥2 - <24	78-83-1
ethyl acetate	≥1 - <25	141-78-6
ethylbenzene	≥1 - <15	100-41-4
Mica-group minerals	≥0.1 - <25	12001-26-2
Poly(oxy-1,2-ethanediyl), α-[2-[3,6-bis(diethylamino)xanthylium-9-yl]benzoyl]-ω-hydroxy-, [2,4-dihydro-4-[2-[2-(hydroxy-κO)-5-nitrophenyl]diazenyl-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3][2-[2-[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]diazenyl-κN1]benzoato(2-)-κO]chromate(1-) (1:1)	≥0.1 - <25	103671-34-7
Natural graphite	≥0.1 - <25	7782-42-5
C.I. Solvent Orange 54	≥1 - <25	12237-30-8
[1-[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	≥1 - <12	15680-42-9
hydrogen bis[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)]chromate(1-)	≥0.1 - <25	52256-37-8
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	≥1 - <25	68511-62-6
carbon black, respirable powder	≥0.1 - <25	1333-86-4
Naphtha (petroleum), heavy alkylate	≥0.1 - <25	64741-65-7

Section 3. Composition/information on ingredients

Confidential Blue Colorant	≥0.1 - <25	Not available.
aluminium hydroxide	≥0.1 - <25	21645-51-2
Naphtha (petroleum), hydrotreated heavy	≥1 - <12	64742-48-9
C.I. Solvent Red 91	≥1 - <10	61901-92-6
Solvent naphtha (petroleum), light aromatic	≥1 - <18	64742-95-6
hydrogen hydroxy[2-hydroxy-3-[(2-hydroxy-3-nitrobenzylidene)amino] -5-nitrobenzenesulphonato(3-)]chromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	≥0.1 - <25	85455-32-9
Naphtha (petroleum), hydrodesulfurized heavy	≥1 - <25	64742-82-1
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)]chromate (1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	≥1 - <25	72812-35-2
Ligroine	≥1 - <5	8032-32-4
zirconium dioxide	≥0.1 - <25	1314-23-4
Stoddard solvent	≥1 - <25	8052-41-3
1,2,4-trimethylbenzene	≥1 - <4	95-63-6
Azo Chromium Dye	≥1 - <25	Not available.
toluene	≥1 - <4	108-88-3
Fatty acids, C18-unsatd., dimers, reaction products with N,N-dimethyl-1, 3-propanediamine and 1,3-propanediamine	≥0.1 - <25	162627-17-0
tin dioxide	≥0.1 - <25	18282-10-5
Zinc Salt	≥1 - <4	Not available.
ethyl 3-ethoxypropionate	≥1 - <3	763-69-9
zirconium bis(hydrogen phosphate)	≥0.1 - <25	13772-29-7
calcium molybdate	≥1 - <3	7789-82-4
Naphthenic acids	≥1 - <3	1338-24-5
cumene	≥0.1 - <1	98-82-8
2-methoxypropyl acetate	≥0.1 - <1	70657-70-4

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 : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Apply generous quantities of fresh calcium gluconate gel to all areas. Get immediate medical attention.

Section 4. First aid measures

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 damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
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.

Section 4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, 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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

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

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

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

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

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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 or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. 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. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Special precautions : 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.

Advice on general occupational hygiene : 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.

Conditions for safe storage, including any incompatibilities : 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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
n-butyl acetate	**ACGIH TLV (United States, 3/2015).** STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 710 mg/m³ 8 hours. TWA: 150 ppm 8 hours.
titanium dioxide	**OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours.
butan-1-ol	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 300 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
2-methoxy-1-methylethyl acetate	**IPEL (PPG, 4/2009).** TWA: 50 ppm
xylene	**ACGIH TLV (United States, 3/2015).** STEL: 651 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 434 mg/m³ 8 hours. TWA: 100 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 435 mg/m³ 8 hours.

Section 8. Exposure controls/personal protection

	TWA: 100 ppm 8 hours.
diiron trioxide	**ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction **OSHA PEL (United States, 2/2013).** TWA: 10 mg/m³ 8 hours.
butanone	**ACGIH TLV (United States, 3/2015).** STEL: 885 mg/m³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 590 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 590 mg/m³ 8 hours. TWA: 200 ppm 8 hours.
glass, oxide, chemicals	**ACGIH TLV (United States).** TWA: 1 f/cc Form: Continuous filament glass fibers TWA: 5 mg/m³, (Inhalable) Form: Continuous filament glass fibers TWA: 3 mg/m³ Form: Respirable TWA: 10 mg/m³ Form: Total dust **OSHA PEL (United States).** TWA: 15 mg/m³ TWA: 5 mg/m³ Form: Respirable TWA: 15 mg/m³ Form: Total dust **ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction TWA: 1 f/cc 8 hours. Form: Respirable fibers: length greater than 5 uM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.
1-methoxy-2-propanol	**ACGIH TLV (United States, 3/2015).** STEL: 369 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 184 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
2-ethoxy-1-methylethyl acetate	None.
4-methylpentan-2-one	**ACGIH TLV (United States, 3/2015).** STEL: 75 ppm 15 minutes. TWA: 20 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 410 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
aluminium oxide	**ACGIH TLV (United States).** TWA: 3 mg/m³ Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 1 mg/m³ 8 hours. Form: Respirable fraction **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable

Section 8. Exposure controls/personal protection

	fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
	ACGIH TLV (United States, 1/2007). TWA: 10 mg/m³ 8 hours.
cyclohexanone	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** STEL: 50 ppm 15 minutes. TWA: 20 ppm 8 hours.
	OSHA PEL (United States, 2/2013). TWA: 200 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
2-butoxyethyl acetate	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours.
barium sulfate	**ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction
	OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
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]	**ACGIH TLV (United States).** TWA: 10 mg/m³ Form: Inhalable TWA: 5 mg/m³ Form: Respirable dust
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]	**ACGIH TLV (United States).** TWA: 10 mg/m³ Form: Inhalable TWA: 3 mg/m³ Form: Respirable TWA: 3 mg/m³ Form: Respirable dust TWA: 10 mg/m³ Form: Total dust
	OSHA PEL (United States). TWA: 15 mg/m³ TWA: 5 mg/m³ Form: Respirable TWA: 15 mg/m³ Form: Total dust
aluminium powder (stabilised)	**ACGIH TLV (United States, 3/2015).** TWA: 1 mg/m³ 8 hours. Form: Respirable fraction
	OSHA PEL (United States, 2/2013). TWA: 5 mg/m³, (as Al) 8 hours. Form: Respirable fraction TWA: 15 mg/m³, (as Al) 8 hours. Form: Total dust
magnesium fluoride	**OSHA PEL Z2 (United States, 2/2013).** TWA: 2.5 mg/m³ 8 hours. Form: Dust
	ACGIH TLV (United States, 3/2015). TWA: 2.5 mg/m³, (as F) 8 hours.
	OSHA PEL (United States, 2/2013). TWA: 2.5 mg/m³, (as F) 8 hours.
2-methylpropan-1-ol	**ACGIH TLV (United States, 3/2015).**

Section 8. Exposure controls/personal protection

	TWA: 152 mg/m³ 8 hours. TWA: 50 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 300 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
ethyl acetate	**ACGIH TLV (United States, 3/2015).** TWA: 1440 mg/m³ 8 hours. TWA: 400 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 1400 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
Mica-group minerals	**ACGIH TLV (United States, 3/2015).** TWA: 3 mg/m³ 8 hours. Form: Respirable fraction **OSHA PEL Z3 (United States, 2/2013).** TWA: 20 mppcf 8 hours.
Poly(oxy-1,2-ethanediyl), α-[2-[3,6-bis(diethylamino)xanthylium-9-yl] benzoyl]-ω-hydroxy-, [2,4-dihydro-4-[2-[2-(hydroxy-κO)-5-nitrophenyl] diazenyl-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3][2-[2-[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]diazenyl-κN1] benzoato(2-)-κO]chromate(1-) (1:1)	**OSHA PEL (United States, 2/2013).** TWA: 0.5 mg/m³, (as Cr) 8 hours.
Natural graphite	**OSHA PEL (United States).** TWA: 5 mg/m³ Form: Respirable TWA: 10 mg/m³ **ACGIH TLV (United States, 3/2015).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction **OSHA PEL Z3 (United States, 2/2013).** TWA: 15 mppcf 8 hours.
C.I. Solvent Orange 54	None.
[1-[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper hydrogen bis[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)]chromate(1-)	None. **OSHA PEL (United States).** TWA: 0.5 mg/m³ **OSHA PEL (United States, 2/2013).** TWA: 0.5 mg/m³, (as Cr) 8 hours. **ACGIH TLV (United States).** TWA: 0.5 mg/m³ Form: Total dust
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	**OSHA PEL (United States).** TWA: 1 mg/m³, (as Ni) TWA: 1 mg/m³, (as Ni) Form: Total dust **ACGIH TLV (United States).** TWA: 0.2 mg/m³ Form: Total dust **OSHA PEL (United States, 2/2013).** TWA: 1 mg/m³, (as Ni) 8 hours.
carbon black, respirable powder	**ACGIH TLV (United States, 3/2015).**

Section 8. Exposure controls/personal protection

	TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
	OSHA PEL (United States, 2/2013).
	TWA: 3.5 mg/m³ 8 hours.
Naphtha (petroleum), heavy alkylate	None.
Confidential Blue Colorant	**OSHA PEL (United States).**
	TWA: 5 mg/m³ Form: Respirable dust
	TWA: 15 mg/m³ Form: Total dust
aluminium hydroxide	**ACGIH TLV (United States, 3/2015).**
	TWA: 1 mg/m³ 8 hours. Form: Respirable fraction
	ACGIH TLV (United States).
	TWA: 1 mg/m³
Naphtha (petroleum), hydrotreated heavy	None.
C.I. Solvent Red 91	**OSHA PEL (United States).**
	TWA: 0.05 mg/m³
Solvent naphtha (petroleum), light aromatic	None.
hydrogen hydroxy[2-hydroxy-3-[(2-hydroxy-3-nitrobenzylidene)amino] -5-nitrobenzenesulphonato(3-)]chromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	**ACGIH TLV (United States, 1/2012).**
	TWA: 0.5 mg/m³, (Chromium III compounds)
	OSHA PEL (United States, 1/2012).
	TWA: 0.5 ppm, (Chromium III compounds) 8 hours.
	TWA: 0.5 mg/m³, (Chromium III compounds) 8 hours.
Naphtha (petroleum), hydrodesulfurized heavy	None.
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)] chromate(1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	**OSHA PEL (United States).**
	TWA: 0.5 mg/m³
	OSHA PEL (United States, 2/2013).
	TWA: 0.5 mg/m³, (as Cr) 8 hours.
	ACGIH TLV (United States).
	TWA: 0.5 mg/m³ Form: Total dust
Ligroine	None.
zirconium dioxide	**ACGIH TLV (United States, 3/2015).**
	STEL: 10 mg/m³, (as Zr) 15 minutes.
	TWA: 5 mg/m³, (as Zr) 8 hours.
	OSHA PEL (United States, 2/2013).
	TWA: 5 mg/m³, (as Zr) 8 hours.
	OSHA PEL (United States).
	STEL: 10 mg/m³, (as Zr)
	TWA: 5 mg/m³, (as Zr)
Stoddard solvent	**ACGIH TLV (United States, 3/2015).**
	TWA: 525 mg/m³ 8 hours.
	TWA: 100 ppm 8 hours.
	OSHA PEL (United States, 2/2013).
	TWA: 2900 mg/m³ 8 hours.
	TWA: 500 ppm 8 hours.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2015).**
	TWA: 123 mg/m³ 8 hours.
	TWA: 25 ppm 8 hours.

Section 8. Exposure controls/personal protection

Azo Chromium Dye	**ACGIH TLV (United States).** TWA: 0.5 mg/m³ Form: Total dust TWA: 0.5 mg/m³ **OSHA PEL (United States).** TWA: 0.5 mg/m³
toluene	**OSHA PEL Z2 (United States, 2/2013).** AMP: 500 ppm 10 minutes. CEIL: 300 ppm TWA: 200 ppm 8 hours. **ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours.
Fatty acids, C18-unsatd., dimers, reaction products with N,N-dimethyl-1, 3-propanediamine and 1,3-propanediamine	None.
tin dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 2 mg/m³, (as Sn) 8 hours. **OSHA PEL (United States).** TWA: 2 mg/m³ Form: Total dust TWA: 2 mg/m³
Zinc Salt	None.
ethyl 3-ethoxypropionate	**IPEL (PPG).** TWA: 50 ppm STEL: 100 ppm
zirconium bis(hydrogen phosphate)	**ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³, (as Zr) 8 hours.
calcium molybdate	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³, (as Mo) 8 hours. Form: Inhalable fraction TWA: 3 mg/m³, (as Mo) 8 hours. Form: Respirable fraction **ACGIH TLV (United States).** TWA: 3 mg/m³ Form: Respirable TWA: 10 mg/m³ Form: Total dust **OSHA PEL (United States).** TWA: 10 mg/m³ **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³, (as Mo) 8 hours. Form: Total dust
Naphthenic acids	None.
cumene	**ACGIH TLV (United States, 3/2015).** TWA: 50 ppm 8 hours. **OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 245 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
2-methoxypropyl acetate	None.

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization

Section 8. Exposure controls/personal protection

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 and face shield.

Skin protection

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

Gloves : butyl rubber

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

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

Section 8. Exposure controls/personal protection

Respiratory protection : By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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: -1.11°C (30°F)

Material supports combustion. : Yes.

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 : 1.01

Density (lbs / gal) : 8.43

Solubility : Insoluble in the following materials: cold water.

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

Viscosity : Kinematic (40°C (104°F)): >0.21 cm^2/s (>21 cSt)

Volatility : 79% (v/v), 71% (w/w)

% Solid. (w/w) : 28.99

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.

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
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	-
titanium dioxide	LD50 Oral	Rat	>11 g/kg	-
butan-1-ol	LC50 Inhalation Vapor	Rat	24000 mg/m³	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	6670 ppm	4 hours
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
diiron trioxide	LD50 Oral	Rat	10 g/kg	-
butanone	LC50 Inhalation Vapor	Rat	11243 ppm	4 hours
	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
2-ethoxy-1-methylethyl acetate	LC50 Inhalation Vapor	Rat	6990 mg/m³	4 hours
	LD50 Oral	Rat	4.705 g/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapor	Rat	32772 mg/m³	4 hours
	LD50 Oral	Rat	2.08 g/kg	-

Section 11. Toxicological information

cyclohexanone	LC50 Inhalation Gas.	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	0.948 g/kg	-
	LD50 Oral	Rat	1.54 g/kg	-
2-butoxyethyl acetate	LD50 Dermal	Rabbit	1.48 g/kg	-
	LD50 Oral	Rat	1.6 g/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	-
magnesium fluoride	LD50 Oral	Rat	2330 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapor	Rat	6500 mg/m³	4 hours
	LD50 Dermal	Rabbit	2 g/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
ethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
C.I. Solvent Orange 54	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
carbon black, respirable powder	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
Confidential Blue Colorant	LD50 Oral	Rat	>5000 mg/kg	-
Naphtha (petroleum), hydrotreated heavy	LC50 Inhalation Vapor	Rat	8500 mg/m³	4 hours
	LD50 Oral	Rat	>6 g/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
hydrogen hydroxy[2-hydroxy-3-[(2-hydroxy-3-nitrobenzylidene)amino] -5-nitrobenzenesulphonato (3-)]chromate(1-), compound with 3-[(2-ethylhexyl)oxy] propylamine (1:1)	LD50 Oral	Rat	>5000 mg/kg	-
Ligroine	LC50 Inhalation Gas.	Rat	3400 ppm	4 hours
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	636 mg/kg	-
tin dioxide	LD50 Oral	Rat	>20 g/kg	-
Zinc Salt	LD50 Oral	Rat	>0.552 g/kg	-
ethyl 3-ethoxypropionate	LD50 Dermal	Rabbit	10 g/kg	-
	LD50 Oral	Rat	3200 mg/kg	-

Section 11. Toxicological information

calcium molybdate	LD50 Oral	Rat	0.101 g/kg	-
Naphthenic acids	LD50 Oral	Rat	3 g/kg	-
cumene	LC50 Inhalation Vapor	Rat	39000 mg/m³	4 hours
	LD50 Dermal	Rabbit	12.3 g/kg	-
	LD50 Oral	Rat	1400 mg/kg	-
2-methoxypropyl acetate	LC50 Inhalation Vapor	Rat	>5320 ppm	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	8532 mg/kg	-

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

Irritation/Corrosion

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	-
xylene	-	3	-
diiron trioxide	-	3	-
glass, oxide, chemicals	-	3	-
4-methylpentan-2-one	-	2B	-
cyclohexanone	-	3	-
magnesium fluoride	-	3	-
ethylbenzene	-	2B	-
Poly(oxy-1,2-ethanediyl), α-[2-[3,6-bis(diethylamino) xanthylium-9-yl]benzoyl]-ω-hydroxy-, [2,4-dihydro-4-[2-[2-(hydroxy-κO)-5-nitrophenyl] diazenyl-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3][2-[2-[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]diazenyl-κN1] benzoato(2-)-κO]chromate(1	-	3	-

Section 11. Toxicological information

-) (1:1)			
hydrogen bis[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)]chromate(1-)	-	3	-
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	-	1	Known to be a human carcinogen.
carbon black, respirable powder	-	2B	-
C.I. Solvent Red 91	+	2B	-
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	-	3	-
toluene	-	3	-
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

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)

Name	Category
n-butyl acetate	Category 3
butan-1-ol	Category 3
xylene	Category 3
butanone	Category 3
1-methoxy-2-propanol	Category 3
2-ethoxy-1-methylethyl acetate	Category 3
4-methylpentan-2-one	Category 3
magnesium fluoride	Category 3
2-methylpropan-1-ol	Category 3
ethyl acetate	Category 3
Naphtha (petroleum), hydrotreated heavy	Category 3
Solvent naphtha (petroleum), light aromatic	Category 3
Naphtha (petroleum), hydrodesulfurized heavy	Category 3
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	Category 3
1,2,4-trimethylbenzene	Category 3
Azo Chromium Dye	Category 3
toluene	Category 3
cumene	Category 3

Section 11. Toxicological information

2-methoxypropyl acetate	Category 3

Specific target organ toxicity (repeated exposure)

Name	Category
xylene	Category 2
1-methoxy-2-propanol	Category 2
cyclohexanone	Category 1
2-butoxyethyl acetate	Category 2
magnesium fluoride	Category 2
ethylbenzene	Category 2
Naphtha (petroleum), hydrodesulfurized heavy	Category 1
Stoddard solvent	Category 1
toluene	Category 2
calcium molybdate	Category 2
cumene	Category 2

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

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
2-ethoxy-1-methylethyl acetate	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), heavy alkylate	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrodesulfurized heavy	ASPIRATION HAZARD - Category 1
Ligroine	ASPIRATION HAZARD - Category 1
Stoddard solvent	ASPIRATION HAZARD - Category 1
toluene	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 damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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
watering
redness

Section 11. Toxicological information

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
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. 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

Section 11. Toxicological information

General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	7090.9 mg/kg
Dermal	12771.1 mg/kg
Inhalation (gases)	56287.1 ppm
Inhalation (vapors)	78.14 mg/l
Inhalation (dusts and mists)	15.64 mg/l

Section 12. Ecological information

Toxicity

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
1-methoxy-2-propanol	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l Fresh water	Fish	96 hours
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish - Lepomis macrochirus - Young of the year	96 hours
hydrogen hydroxy[2-hydroxy-3-[(2-hydroxy-3-nitrobenzylidene)amino]-5-nitrobenzenesulphonato(3-)]chromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	Acute EC50 17.5 mg/l	Daphnia - Daphnia magna	48 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
n-butyl acetate	1.78	-	low
butan-1-ol	0.88	-	low
2-methoxy-1-methylethyl acetate	0.56	-	low
xylene	3.16	7.4 to 18.5	low
butanone	0.29	-	low
2-ethoxy-1-methylethyl acetate	0.76	-	low
4-methylpentan-2-one	1.31	-	low
cyclohexanone	0.81	-	low
2-butoxyethyl acetate	1.51	-	low
2-methylpropan-1-ol	0.76	-	low
ethyl acetate	0.73	-	low
ethylbenzene	3.15	79.43	low
Stoddard solvent	3.16 to 7.06	-	high
1,2,4-trimethylbenzene	3.63	120.23	low
toluene	2.73	8.32	low
cumene	3.66	35.48	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : 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	1263	1263	1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class (es)	3	3	3
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.
Product RQ (lbs)	319.18	Not applicable.	Not applicable.
RQ substances	(xylene, n-butyl acetate)	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.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b) : All components are listed or exempted.

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

2-ethoxyethyl acetate	Listed
2-ethoxyethanol	Listed

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
n-butyl acetate	Yes.	No.	No.	Yes.	No.
titanium dioxide	No.	No.	No.	No.	Yes.
butan-1-ol	Yes.	No.	No.	Yes.	No.
2-methoxy-1-methylethyl acetate	Yes.	No.	No.	No.	No.
xylene	Yes.	No.	No.	Yes.	Yes.
butanone	Yes.	No.	No.	Yes.	No.
1-methoxy-2-propanol	Yes.	No.	No.	Yes.	Yes.
2-ethoxy-1-methylethyl acetate	Yes.	No.	No.	Yes.	No.
4-methylpentan-2-one	Yes.	No.	No.	Yes.	Yes.
cyclohexanone	Yes.	No.	No.	Yes.	Yes.
2-butoxyethyl acetate	Yes.	No.	No.	Yes.	Yes.
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]	Yes.	No.	No.	No.	No.
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]	Yes.	No.	No.	No.	No.
aluminium powder (stabilised)	Yes.	No.	No.	No.	No.
magnesium fluoride	No.	No.	No.	Yes.	Yes.
2-methylpropan-1-ol	Yes.	No.	No.	Yes.	No.
ethyl acetate	Yes.	No.	No.	Yes.	No.
ethylbenzene	Yes.	No.	No.	Yes.	Yes.
Poly(oxy-1,2-ethanediyl), α-[2-[3,6-bis(diethylamino)xanthylium-9-yl]benzoyl]-ω-hydroxy-, [2,4-dihydro-4-[2-[2-(hydroxy-κO)-5-nitrophenyl]diazenyl-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3][2-[2-[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]diazenyl-κN1]benzoato(2-)-κO] chromate(1-) (1:1)	Yes.	No.	No.	No.	No.
Natural graphite	Yes.	No.	No.	No.	No.
C.I. Solvent Orange 54	No.	No.	No.	Yes.	No.
[1-[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	Yes.	No.	No.	Yes.	No.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No.	No.	No.	Yes.	Yes.
carbon black, respirable powder	Yes.	No.	No.	No.	Yes.
Naphtha (petroleum), heavy alkylate	Yes.	No.	No.	Yes.	No.
Confidential Blue Colorant	Yes.	No.	No.	No.	No.
Naphtha (petroleum), hydrotreated	Yes.	No.	No.	Yes.	No.

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heavy					
C.I. Solvent Red 91	No.	No.	No.	Yes.	Yes.
Solvent naphtha (petroleum), light aromatic	Yes.	No.	No.	Yes.	No.
hydrogen hydroxy[2-hydroxy-3-[(2-hydroxy-3-nitrobenzylidene)amino]-5-nitrobenzenesulphonato(3-)] chromate(1-), compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	No.	No.	No.	Yes.	No.
Naphtha (petroleum), hydrodesulfurized heavy	Yes.	No.	No.	Yes.	Yes.
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)] chromate(1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	Yes.	No.	No.	Yes.	No.
Ligroine	Yes.	No.	No.	Yes.	No.
Stoddard solvent	Yes.	No.	No.	Yes.	Yes.
1,2,4-trimethylbenzene	Yes.	No.	No.	Yes.	No.
Azo Chromium Dye	No.	No.	No.	Yes.	No.
toluene	Yes.	No.	No.	Yes.	Yes.
Fatty acids, C18-unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine	No.	No.	No.	Yes.	No.
Zinc Salt	No.	No.	No.	Yes.	No.
ethyl 3-ethoxypropionate	Yes.	No.	No.	Yes.	No.
calcium molybdate	No.	No.	No.	Yes.	Yes.
Naphthenic acids	Yes.	No.	No.	Yes.	No.
cumene	Yes.	No.	No.	Yes.	Yes.
2-methoxypropyl acetate	Yes.	No.	No.	Yes.	Yes.

SARA 313

Supplier notification :

Chemical name	CAS number	Concentration
butan-1-ol	71-36-3	15 - 40
xylene	1330-20-7	15 - 40
bismuth vanadium tetraoxide	14059-33-7	15 - 40
4-methylpentan-2-one	108-10-1	7 - 13
2-butoxyethyl acetate	112-07-2	7 - 13
Aluminium powder (stabilized)	7429-90-5	5 - 10
ethylbenzene	100-41-4	3 - 7
Poly(oxy-1,2-ethanediyl), α-[2-[3,6-bis(diethylamino)xanthylium-9-yl]benzoyl]-ω-hydroxy-, [2,4-dihydro-4-[2-[2-(hydroxy-κO)-5-nitrophenyl]diazenyl-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3][2-[2-[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]diazenyl-κN1]benzoato(2-)-κO] chromate(1-) (1:1)	103671-34-7	1 - 5
[1-[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	15680-42-9	1 - 5
hydrogen bis[2,4-dihydro-4-[(2-hydroxy-5-nitrophenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)]chromate(1-)	52256-37-8	1 - 5
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-	68511-62-6	1 - 5

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pyrimidinetrione complexes		
hydrogen bis[1-[(2-hydroxy-5-nitrophenyl)azo] -2-naphtholato(2-)]chromate(1-) , compound with 3-[(2-ethylhexyl)oxy]propylamine (1:1)	72812-35-2	1 - 5
1,2,4-trimethylbenzene	95-63-6	0.5 - 1.5
toluene	108-88-3	0.5 - 1.5

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.

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: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 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 Although HMIS® ratings are not required on MSDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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

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

Date of previous issue : **3/28/2016**

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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
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.