SAFETY DATA SHEET

Date of issue/Date of revision 30 March 2016
Version 7

Section 1. Identification

Product name : Delstar Acrylic Enamel
Product code : DAR-3
Other means of identification : Not available.
Product type : Powder.

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
COMBUSTIBLE DUSTS
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2
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

Section 2. Hazards identification

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 100%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
May form combustible dust concentrations in air.
Harmful if inhaled.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
May cause cancer.
May damage the unborn child.
Suspected of damaging fertility.
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. 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 dust or mist. 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: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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. If eye irritation persists: Get 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.

Section 2. Hazards identification

Supplemental label elements : Keep container tightly closed. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Prevent dust accumulation. **1-component mixtures:** formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated. DANGER - RAGS, STEEL WOOL OR WASTE SOAKED WITH THIS PRODUCT MAY SPONTANEOUSLY CATCH FIRE IF IMPROPERLY DISCARDED. IMMEDIATELY AFTER EACH USE, PLACE RAGS, STEEL WOOL OR WASTE IN A SEALED WATER-FILLED METAL CONTAINER.

Hazards not otherwise classified : Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product name : Delstar Acrylic Enamel

Ingredient name	%	CAS number
xylene	100	1330-20-7
diiron trioxide	≥75 - <90	1309-37-1
titanium dioxide	≥50 - <75	13463-67-7
Mica-group minerals	≥50 - <75	12001-26-2
n-butyl acetate	≥25 - <50	123-86-4
ethylbenzene	≥25 - <37	100-41-4
heptan-2-one	≥15 - <25	110-43-0
Naphtha (petroleum), heavy alkylate	≥0.1 - <25	64741-65-7
Talc , not containing asbestiform fibres	≥2 - <25	14807-96-6
Aluminium powder (stabilized)	≥0.1 - <25	7429-90-5
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	≥0.1 - <25	25869-00-5
butanone	≥4 - <25	78-93-3
toluene	≥4 - <25	108-88-3
2-methoxy-1-methylethyl acetate	≥0.1 - <25	108-65-6
zirconium dioxide	≥0.1 - <25	1314-23-4
tin dioxide	≥0.1 - <25	18282-10-5
Stoddard solvent	≥1 - <25	8052-41-3
Isopropyl alcohol	≥2 - <10	67-63-0
Solvent naphtha (petroleum), light aromatic	≥2 - <5	64742-95-6
proprietary substituted quinacridone	≥0.1 - <25	Not available.
[1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper	≥1 - <25	14302-13-7
carbon black, respirable powder	≥0.1 - <25	1333-86-4
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	≥1 - <5	41556-26-7
Resin acids and Rosin acids, calcium salts	≥1 - <25	9007-13-0
Naphtha (petroleum), hydrotreated heavy	≥1 - <1.4	64742-48-9
aluminium hydroxide	≥0.1 - <25	21645-51-2
benzyl butyl phthalate	≥0.1 - <1	85-68-7
2-butanone oxime	≥0.1 - <1	96-29-7

Section 3. Composition/information on ingredients

Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	≥0.1 - <1	68511-62-6
Naphthenic acids, nickel salts	≥0.1 - <1	61788-71-4
crystalline silica, respirable powder (<10 microns)	≥0.1 - <1	14808-60-7
2-ethylhexanoic acid	≥0.1 - <1	149-57-5

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 : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and 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

Section 4. First aid measures

reduced fetal weight
increase in fetal deaths
skeletal malformations

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

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 powder.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Fine dust clouds may form explosive mixtures with air. 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 toxic 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.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur 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. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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 : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : 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. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. 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 dust. Do not ingest. Avoid release to the environment. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. 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. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Special precautions : 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. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. 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
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. 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.
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.
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.
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.
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.
heptan-2-one	**ACGIH TLV (United States, 3/2015).** TWA: 233 mg/m³ 8 hours. TWA: 50 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 465 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
Naphtha (petroleum), heavy alkylate	None.
Talc , not containing asbestiform fibres	**ACGIH TLV (United States, 3/2015).** TWA: 2 mg/m³ 8 hours. Form: Respirable. **OSHA PEL Z3 (United States, 2/2013).** TWA: 20 mppcf 8 hours. Form: not containing asbestos
aluminium powder (stabilised)	**ACGIH TLV (United States, 3/2015).** TWA: 1 mg/m³ 8 hours. Form: Respirable fraction

Section 8. Exposure controls/personal protection

	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
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	**ACGIH TLV (United States, 3/2015).** TWA: 1 mg/m³, (as Fe) 8 hours. C: 5 mg/m³ **OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 5 mg/m³, (as CN) 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.
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.
2-methoxy-1-methylethyl acetate	**IPEL (PPG, 4/2009).** TWA: 50 ppm
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)
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
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.
Isopropyl alcohol	**ACGIH TLV (United States, 3/2015).** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours.

Section 8. Exposure controls/personal protection

Solvent naphtha (petroleum), light aromatic	None.
proprietary substituted quinacridone	**ACGIH TLV (United States).** TWA: 10 mg/m³, (Dusts and mists) Form: Inhalable fraction TWA: 3 mg/m³, (Dusts and mists) Form: Respirable fraction
[1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H, 31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper	None.
carbon black, respirable powder	**ACGIH TLV (United States, 3/2015).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours.
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	None.
Resin acids and Rosin acids, calcium salts	None.
Naphtha (petroleum), hydrotreated heavy	None.
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
benzyl butyl phthalate	None.
2-butanone oxime	**IPEL (PPG).** TWA: 3 ppm STEL: 9 ppm
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.
Naphthenic acids, nickel salts	**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.
crystalline silica, respirable powder (<10 microns)	**OSHA PEL Z3 (United States, 2/2013).** TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable. **OSHA PEL Z3 (United States).** TWA: 30 mg/m³ Form: Total dust
2-ethylhexanoic acid	**ACGIH TLV (United States, 3/2015).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction and vapor

Section 8. Exposure controls/personal protection

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
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: -6.11°C (21°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 : 0.99

Density (lbs / gal) : 8.26

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 : 59% (v/v), 52% (w/w)

% Solid. (w/w) : 47.92

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
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	-
titanium dioxide	LD50 Oral	Rat	>11 g/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	-
ethylbenzene	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
heptan-2-one	LD50 Dermal	Rabbit	10.206 g/kg	-
	LD50 Oral	Rat	1.6 g/kg	-
butanone	LC50 Inhalation Vapor	Rat	11243 ppm	4 hours
	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/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	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
tin dioxide	LD50 Oral	Rat	>20 g/kg	-
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-

Section 11. Toxicological information

Isopropyl alcohol	LC50 Inhalation Vapor	Rat	72600 mg/m³	4 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	4.396 g/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
carbon black, respirable powder	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Oral	Rat	3.125 g/kg	-
Naphtha (petroleum), hydrotreated heavy	LC50 Inhalation Vapor	Rat	8500 mg/m³	4 hours
	LD50 Oral	Rat	>6 g/kg	-
benzyl butyl phthalate	LC50 Inhalation Vapor	Rat	>6700 mg/m³	4 hours
	LD50 Dermal	Rabbit	>10 g/kg	-
	LD50 Dermal	Rat	6700 mg/kg	-
	LD50 Oral	Rat	2.33 g/kg	-
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
2-ethylhexanoic acid	LD50 Dermal	Rabbit	1.26 g/kg	-
	LD50 Oral	Rat	1600 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

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
xylene	-	3	-
diiron trioxide	-	3	-
titanium dioxide	-	2B	-
ethylbenzene	-	2B	-
toluene	-	3	-
Isopropyl alcohol	-	3	-
carbon black, respirable powder	-	2B	-
benzyl butyl phthalate	-	3	-
Nickel, 5,5'-azobis-2,4,6(1H, 3H,5H)-pyrimidinetrione complexes	-	1	Known to be a human carcinogen.
Naphthenic acids, nickel salts	-	1	Known to be a human carcinogen.
crystalline silica, respirable powder (<10 microns)	-	1	Known 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
xylene	Category 3
n-butyl acetate	Category 3
Talc , not containing asbestiform fibres	Category 3
butanone	Category 3
toluene	Category 3
Isopropyl alcohol	Category 3
Solvent naphtha (petroleum), light aromatic	Category 3
Naphtha (petroleum), hydrotreated heavy	Category 3

Specific target organ toxicity (repeated exposure)

Name	Category
xylene	Category 2
ethylbenzene	Category 2
toluene	Category 2
Stoddard solvent	Category 1
crystalline silica, respirable powder (<10 microns)	Category 1

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, mucous membranes, heart, spleen, peripheral nervous system, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, ears, testes, thyroid.

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), heavy alkylate	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
Stoddard solvent	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and 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

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

Section 11. Toxicological information

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. **1-component mixtures:** formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. 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. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. 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. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. 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 : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	6286.5 mg/kg
Dermal	3398.1 mg/kg
Inhalation (gases)	14377.4 ppm
Inhalation (vapors)	26.15 mg/l
Inhalation (dusts and mists)	3.591 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
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish - Lepomis macrochirus - Young of the year	96 hours
2-methoxy-1-methylethyl acetate	Acute LC50 161 mg/l Fresh water	Fish	96 hours

Persistence and degradability

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

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	3.16	7.4 to 18.5	low
n-butyl acetate	1.78	-	low
ethylbenzene	3.15	79.43	low
heptan-2-one	1.98	-	low
butanone	0.29	-	low
toluene	2.73	8.32	low
2-methoxy-1-methylethyl acetate	0.56	-	low
Stoddard solvent	3.16 to 7.06	-	high
Isopropyl alcohol	0.05	-	low
benzyl butyl phthalate	4.73	16.22	low
2-butanone oxime	0.63	5.01	low
2-ethylhexanoic acid	2.64	-	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. 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.	Yes.	No.
Marine pollutant substances	Not applicable.	(benzyl butyl phthalate, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate)	Not applicable.
Product RQ (lbs)	62.04	Not applicable.	Not applicable.
RQ substances	(xylene, ethylbenzene)	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.

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

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
xylene	Yes.	No.	No.	Yes.	Yes.
titanium dioxide	No.	No.	No.	No.	Yes.
n-butyl acetate	Yes.	No.	No.	Yes.	No.
ethylbenzene	Yes.	No.	No.	Yes.	Yes.
heptan-2-one	Yes.	No.	No.	Yes.	No.
Naphtha (petroleum), heavy alkylate	Yes.	No.	No.	Yes.	No.
Talc , not containing asbestiform fibres	No.	No.	No.	Yes.	No.
aluminium powder (stabilised)	Yes.	No.	No.	No.	No.
butanone	Yes.	No.	No.	Yes.	No.
toluene	Yes.	No.	No.	Yes.	Yes.
2-methoxy-1-methylethyl acetate	Yes.	No.	No.	No.	No.
Stoddard solvent	Yes.	No.	No.	Yes.	Yes.
Isopropyl alcohol	Yes.	No.	No.	Yes.	No.
Solvent naphtha (petroleum), light aromatic	Yes.	No.	No.	Yes.	No.
proprietary substituted quinacridone	Yes.	No.	No.	No.	No.
[1,3,8,16,18,24-hexabromo-2,4,9,10, 11,15,17,22,23,25-decachloro-29H, 31H-phthalocyaninato(2-)-N29,N30, N31,N32]copper	Yes.	No.	No.	Yes.	No.
carbon black, respirable powder	Yes.	No.	No.	No.	Yes.
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	No.	No.	No.	Yes.	No.
Resin acids and Rosin acids, calcium salts	Yes.	No.	No.	Yes.	No.
Naphtha (petroleum), hydrotreated heavy	Yes.	No.	No.	Yes.	No.
benzyl butyl phthalate	No.	No.	No.	Yes.	Yes.
2-butanone oxime	Yes.	No.	No.	Yes.	Yes.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No.	No.	No.	Yes.	Yes.
Naphthenic acids, nickel salts	No.	No.	No.	Yes.	Yes.
crystalline silica, respirable powder	No.	No.	No.	No.	Yes.

Section 15. Regulatory information

(<10 microns) 2-ethylhexanoic acid	No.	No.	No.	Yes.	Yes.

SARA 313

Supplier notification :

Chemical name	CAS number	Concentration
xylene	1330-20-7	60 - 100
ethylbenzene	100-41-4	10 - 30
Aluminium powder (stabilized)	7429-90-5	7 - 13
toluene	108-88-3	5 - 10
Isopropyl alcohol	67-63-0	1 - 5
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	68511-62-6	0.1 - 1
Naphthenic acids, nickel salts	61788-71-4	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.

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

Date of previous issue : **11/7/2015**

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

Section 16. Other information

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.