


Date of issue 2/28/2017 (month/day/year)

Version 3

Section 1. Chemical product and company identification

- A. Product name** : PSX 700 BASE BLACK
Product code : 00376332
- B. Relevant identified uses of the substance or mixture and uses advised against**
- Product use** : Professional applications, Used by spraying.
Use of the substance/ mixture : Coating. Paint. Painting-related materials.
Uses advised against : None identified.
- C. Supplier's information** : PPG SSC
(680-090)
19, Yeocheon-ro 217beon-gil, Nam-gu,
Ulsan, Korea
Tel: +82-52-210-8222
- Email Address** : PMC.Safety@PPG.com
- Emergency telephone number:** : +82-52-210-8222

Section 2. Hazards identification

- A. Hazard classification** : SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3
- B. GHS label elements, including precautionary statements**
- Symbol** : 
- Signal word** : Warning
- Hazard statements** : May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : Wear protective gloves. Avoid release to the environment. Avoid breathing vapor.
Contaminated work clothing should not be allowed out of the workplace.
- Response** : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing
before reuse. If skin irritation or rash occurs: Get medical attention.
- Storage** : Not applicable.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and
international regulations.

Section 2. Hazards identification

C. Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

CAS number/other identifiers

CAS number : Not applicable.

| Chemical name | Common name | CAS # | % |
|--|--|------------|----------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | cyclohexanol, 4,4'-(1-methylethylidene) bis-, polymer with (chloromethyl)oxirane | 30583-72-3 | 25 - <35 |
| bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate | BIS(PENTAMETHYLPIPERIDYL) SEBACATE | 41556-26-7 | 1 - <5 |
| carbon black, respirable powder | CARBON BLACK | 1333-86-4 | 0.1 - <1 |
| methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | METHYL-(1,2,2,6,6-PENTAMETHYL-4-PIPERIDIYL) SEBACATE | 82919-37-7 | 0.1 - <1 |
| Toluene | Toluene | 108-88-3 | 0.1 - <1 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

Section 4. First aid measures

- A. 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.
- B. 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.
- C. 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.
- D. Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- E. 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. 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.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

A. Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

B. Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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

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

Fire-fighting procedures : 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.

Section 6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

B. 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.

C. Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. 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.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. 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

- A. Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- B. Conditions for safe storage, including any incompatibilities** : Storage temperature: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. 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. 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

A. Occupational exposure limits

| Ingredient name | Exposure limits |
|---------------------------------|--|
| carbon black, respirable powder | Ministry of Labor (Republic of Korea, 8/2013). TWA: 3.5 mg/m ³ 8 hours. Form: Respirable fraction |
| Toluene | Ministry of Labor (Republic of Korea, 8/2013). STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 188 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. |

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Section 8. Exposure controls/personal protection

- B. Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.
- C. Personal protective equipment**
- 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.
- Eye protection** : Safety glasses with side shields.
- 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.
- 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.

Section 9. Physical and chemical properties

- A. Appearance**
- Physical state** : Liquid.
- Color** : Black.
- B. Odor** : Characteristic.
- C. Odor threshold** : Not available.
- D. pH** : Not available.
- E. Melting/freezing point** : Not available.
- F. Boiling point/boiling range** : >37.78°C (>100°F)
- G. Flash point** : Closed cup: Not applicable.
- H. Evaporation rate** : Not available.
- I. Flammability (solid, gas)** : Not available.

Section 9. Physical and chemical properties

- J. Lower and upper explosive (flammable) limits** : Lower: 1.29%
Upper: 8.53%
- K. Vapor pressure** : Not available.
- L. Solubility** : Insoluble in the following materials: cold water.
- M. Vapor density** : Not available.
- N. Relative density** : 1.28
- O. Partition coefficient: n-octanol/water** : Not available.
- P. Auto-ignition temperature** : Not available.
- Q. Decomposition temperature** : Not available.
- R. Viscosity** : Kinematic (40°C (104°F)): >0.21 cm²/s (>21 cSt)
- S. Molecular weight** : Not applicable.

Section 10. Stability and reactivity

- A. Chemical stability** : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- B. Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- C. Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
- D. Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

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

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Eye contact** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness

Section 11. Toxicological information

Eye contact : No specific data.

B. Health hazards

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------------------|---------|---------------------|----------|
| bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate carbon black, respirable powder | LD50 Oral | Rat | 3.125 g/kg | - |
| | LD50 Dermal | Rabbit | >3 g/kg | - |
| methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | LD50 Oral | Rat | >15400 mg/kg | - |
| | LD50 Oral | Rat | 3.125 g/kg | - |
| Toluene | LC50 Inhalation Vapor | Rat | 49 g/m ³ | 4 hours |
| | LC50 Inhalation Vapor | Rat | 8000 ppm | 4 hours |
| | LD50 Dermal | Rabbit | 8.39 g/kg | - |
| | LD50 Oral | Rat | 636 mg/kg | - |

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

Irritation/Corrosion

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.

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 | Classification | Route of exposure | Target organs |
|---------|----------------|-------------------|------------------|
| Toluene | Category 3 | Not applicable. | Narcotic effects |

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

| Name | Classification | Route of exposure | Target organs |
|---------|----------------|-------------------|----------------|
| Toluene | Category 2 | Not determined | Not determined |

Aspiration hazard

| Name | Result |
|---------|--------------------------------|
| Toluene | ASPIRATION HAZARD - Category 1 |

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Additional information

Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Emits toxic fumes when heated.

| Chemical name | Common name | CAS # | GHS Classification |
|--|--|------------|--|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl) oxirane | 30583-72-3 | SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3 |
| bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate | BIS (PENTAMETHYLPIPERIDYL) SEBACATE | 41556-26-7 | SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 |
| carbon black, respirable powder | CARBON BLACK | 1333-86-4 | CARCINOGENICITY - Category 2 |
| methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate | METHYL-(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL) SEBACATE | 82919-37-7 | SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Toluene | Toluene | 108-88-3 | FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) |

Section 11. Toxicological information

| | | | |
|--|--|--|--|
| | | | - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 |
|--|--|--|--|

Section 12. Ecological information

A. Ecotoxicity

| Product/ingredient name | Result | Species | Exposure |
|--|----------------|---------|----------|
| 4,4'- Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane | LC50 11.5 mg/l | Fish | 96 hours |

B. Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Toluene | - | - | Readily |

C. Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|------|-----------|
| Toluene | 2.73 | 8.32 | low |

D. Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

E. Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

A. 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.

B. Disposal precautions : 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.

Section 13. Disposal considerations

Section 14. Transport information

| | UN | IMDG | IATA |
|-------------------------------|-----------------|-----------------|-----------------|
| A. UN number | Not regulated. | Not regulated. | Not regulated. |
| B. UN proper shipping name | - | - | - |
| C. Transport hazard class(es) | - | - | - |
| D. Packing group | - | - | - |
| E. Environmental hazards | No. | No. | No. |
| Marine pollutant substances | Not applicable. | Not applicable. | Not applicable. |

F. Additional information

UN : None identified.

IMDG : None identified.

IATA : None identified.

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

Section 15. Regulatory information

A. Regulation according to ISHA

ISHA article 37 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 38 (Harmful substances requiring permission) : None of the components are listed.

Article 2 of Youth Protection Act on Substances Hazardous to Youth : It is not allowed to sell to persons under the age of 19.

Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:

carbon black, respirable powder

Toluene

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : None of the components are listed.

Section 15. Regulatory information

ISHA Enforcement Regs : None of the components are listed.

Annex 11-4 (Harmful factors subject to Work Environment Measurement)

ISHA Enforcement Regs : None of the components are listed.

Annex 12-2 (Harmful Factors Subject to Special Health Check-up)

Standard of Industrial Safety and Health Annex : None of the components are listed.

12 (Hazardous substances subject to control)

B. Regulation according to Chemicals Control Act

K-Reach Article 20 (Toxic chemicals) : Not applicable

K-Reach Article 27 (Prohibited) : None of the components are listed.

K-Reach Article 27 (Restricted) : The following components are listed: Nonylphenols and Nonylphenol ethoxylates

CSCA Article 11 (TRI) : None of the components are listed.

Korea inventory : All components are listed or exempted.

CSCA Article 39 (Accident Precaution Chemicals) : None of the components are listed.

C. Dangerous Materials Safety Management Act :

Not available.

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

E. Regulation according to other foreign laws

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

A. References : Korean Ministry of Environment; Toxic Chemicals Control Act (TCCA)
Korean Ministry of Labor; Industrial Safety and Health Act
NIER Notice
Registry of Toxic Effects of Chemical Substances (RTECS)
U.S. Environmental Protection Agency, AQUIRE (Aquatic toxicity Information Retrieval) ECOTOX Database System.

B. Date of issue/Date of revision : 2/28/2017

C. Version : 3

Prepared by : EHS

Section 16. Other information

D. Other

Procedure used to derive the classification

| Classification | Justification |
|---|--|
| Skin Sens. 1, H317 Aquatic Chronic 3, H412 | Calculation method Calculation method |

✔ 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.