

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date: March 2018

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY:

Trade Name:	Application:	Manufacturer/Supplier:
Brodie&Middleton General Pigments (excludes pigments with cobalt, chrome, lead, etc.) Includes: Prussian Blue, Ultramarine Blue Dark, Drop Black, Mars Black, Titanium White.	Theatrical and Artists' Pigment.	Brodie&Middleton Ltd 30-31 Store Street London WC1E 7QE Telephone: 020-7836 3289 Fax: 020-7636 8733

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS:

General Non-Harmful Pigments.

Contains: CLASSIFICATION ACCORDING TO REGULATION (EC) NO 1272/2008 [CLP]: NOT APPLICABLE

Pigment Name: .	Pigment Code:	Chemical Name:	CAS No:
Prussian Blue	PB27	Ferroprousside	CAS No: 25869-00-5
Ultramarine Blue Dark	PB29	Sodium Alumino Sulphosilicate	CAS No: 57455-37-5
		Silicic Acid Aluminium Sodium Salt Sulphurised	CAS No: 101357-30-6
Titanium White	PW6	Titanium Dioxide	CAS No: 1317-80-2
Drop Black	PBk9	Calcium Phosphate >70-90%	CAS No: 7790-076-3
		Carbon 10-30 %	CAS No: 1333-086-4
		Calcium Carbonate 1-10 %	CAS No: 1317-65-3
Mars Black	PBk11	triiron tetraoxide	CAS No: 1317-61-9

SECTION 3: HAZARDS IDENTIFICATION:

Classification of the substance or mixture.

Classification according to Regulation (EC) No 1272/2008 [CLP]

This product is classified as not hazardous according to Regulation (EC) No 1272/2008 [CLP].

Label elements: Not applicable

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Other hazards. No information available.



SECTION 4: FIRST AID MEASURES

Description of first aid measures

In all cases of doubt, or when symptoms persist, seek medical advice.

Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
Skin contact:	Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. IF ON SKIN: Wash with plenty of soap and water.
Inhalation:	Remove casualty to fresh air and keep warm and at rest.
Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately.

Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

Potential acute health effects:

Eye contact:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact:	No known significant effects or critical hazards.
Ingestion:	No known significant effects or critical hazards.

Over-exposure signs/symptoms:

Eye contact:	Adverse symptoms may include the following: - irritation - redness
Inhalation:	Adverse symptoms may include the following: - respiratory tract irritation - coughing
Skin contact:	No specific data.
Ingestion:	No specific data.

Indication of any immediate medical attention and special treatment needed

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 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable Alcohol resistant foam, carbon dioxide fire blanket, spray mist, (water)

Extinguishing media:

**Unsuitable
Extinguishing
Media**

Inert gas under high pressure (e.g. carbon dioxide), strong water jet

Special hazards arising from the substance or mixture

**Hazards from
the substance or
mixture:**

Fine dust clouds may form explosive mixtures with air.

**Hazardous thermal
decomposition
products:**

Decomposition products may include the following materials:

- carbon dioxide
- carbon monoxide
- nitrogen oxides
- halogenated compounds
- smoke
- oxides of nitrogen

Advice for firefighters:

**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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6:

ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area.

**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. 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

Do not allow to enter into surface water or drains.

Methods and materials for containment and cleaning up

Remove leaked material dry using explosion-proof vacuum cleaner or moistened with a broom and collect it for disposal in appropriate containers in accordance with the local regulations.

Small spill:

Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.



Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Use sparkproof tools and explosion-proof equipment. 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

Persons suffering from respiration problems or allergic reactions should not be exposed to coating powders!

Precautions for safe handling. Avoid dust formation.

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust. 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. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. 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.

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

Requirements for storage rooms and vessels.

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Specific end use(s)

Observe technical data sheet. Observe instructions for use.

Recommendations: Not available.

Recommendations: Not available.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: not applicable

Exposure controls Do not breathe dust. This can be achieved with local or room suction.

General Pigments: No exposure limit value known. Observe OEL limits for inhalable and respirable nuisance dust.

Drop Black:

Calcium Phosphate:	4 mg/m ³ 8 hours TWA.
Carbon:	3.5 mg/m ³ 8 hours TWA. 7 mg/m ³ 15 min STEL.
Calcium Carbonate:	4 mg/m ³ 8 hours TWA.

Mars Black: Triiron tetraoxide

EH40/2005 WELs (United Kingdom (UK), 12/2011).

STEL: 10 mg/m³, (as Fe) 15 minutes. Form: Fume

TWA: 5 mg/m³, (as Fe) 8 hours. Form: Fume

DNEL: Dust Inhalable 10 mg/m³, Respirable dust 3 mg/m³

Exposure controls:



SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION(Cont.):

Appropriate engineering controls: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, 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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection:

- hand protection: For prolonged or repeated handling the following glove material must be used:
 Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

- body protection: Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.
 Protective measures: After contact clean skin thoroughly with water and soap or use appropriate cleanser.

- 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.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls: Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Powder	
Physical State	Solid	
Colour	Refer to label	
Odour	Characteristic	
Odour threshold	Not applicable	
Boiling point:	N/A	
Melting point:	General Products:	>1000°C
	Prussian Blue	>140°C
	Mars Black	>1597°C
Decomposition temperature:	Mars Black	>80 °C
Flash point:	Not applicable	
pH at 20 °C:	Not determined	
Flammability:	Not determined	
Upper/lower flammability or explosive limits:	Not applicable	
Vapour pressure at 20 °C:	Not applicable	
Vapour density:	Not applicable	
Relative density:	2,66 g/cm ³	
Density at 20 °C:		
Solubility:	Not determined	
Water solubility (g/L) at 20 °C:		
Partition coefficient: n-octanol/water:	See section 12	
Auto-ignition temperature:	Not applicable	
Decomposition temperature:	Not determined	
Viscosity at °C:	Solid	
Explosive properties:	Not applicable	
Oxidising properties:	Not applicable	
Solid content (%):	100,00 Wt %	
Solvent content:	0 Wt %	

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No information available.

Chemical stability: Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

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

Conditions to avoid: Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures..

Incompatible materials: Not applicable

Hazardous decomposition products:

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

Prussian blue: ammonia, hydrogen cyanide, dicyanogen and nitrous oxides given off during combustion/decomposition.

Ultramarine Products: React with acids releasing hydrogen sulphide gas.

Drop Black: In combustion emits toxic fumes of carbon dioxide/carbon monoxide.

Mars Black; At temperatures above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, may result in the combustion of flammable materials. The product should therefore not be stored near heat sources.



SECTION 11: TOXICOLOGICAL INFORMATION

Classification according to Regulation (EC) No 1272/2008 [CLP]

No data on preparation itself available.

Information on toxicological effects:

Acute toxicity:	Based on available data, the classification criteria are not met.
Irritation/ Corrosion:	Based on available data, the classification criteria are not met.
Sensitization:	Based on available data, the classification criteria are not met.
Mutagenicity (CMR):	Based on available data, the classification criteria are not met.
Carcinogenicity (CMR):	Based on available data, the classification criteria are not met.
Reproductive toxicity (CMR):	Based on available data, the classification criteria are not met.
Teratogenicity (CMR):	Based on available data, the classification criteria are not met.
Specific target organ toxicity:	Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.
Overall Assessment on CMR properties:	The ingredients in this mixture do not meet the criteria for classification as CMR category IA or IB according to CLP.
Remark	There is no information available on the preparation itself . The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified according to the toxicological dangers. See chapters 2 and 15 for details.

SECTION 12: ECOLOGICAL INFORMATION

Classification according to Regulation (EC) No 1272/2008 [CLP]

There is no information available on the preparation itself .

Coating powders should not be allowed to enter drains or waterways or to be disposed of, because they can influence ground or surface water..

Toxicity:	Based on available data, the classification criteria are not met.
Long-term Ecotoxicity:	Toxicological data are not available.
Persistence and degradability:	Toxicological data are not available.
Bioaccumulative potential:	Toxicological data are not available.
Bioconcentration factor (BCF)	Toxicological data are not available.
Mobility in soil	Toxicological data are not available.

Results of PBT and vPvB assessment **The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.**

Other adverse effects: Not available.

SECTION 13: DISPOSAL INFORMATION

Waste treatment methods:

Product:

Appropriate disposal / Product Recommendation: Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC 040217 dyestuffs and pigments other than those mentioned in 04 02 16

Appropriate disposal / Package Recommendation: Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: TRANSPORT INFORMATION

No dangerous good in sense of this transport regulation.

UN number/ UN proper shipping name: Not applicable

Transport hazard class(es): Not applicable

Packing group: Not applicable

Environmental hazards Not applicable

Land transport (ADR/RID)

Marine pollutant Not applicable

Special precautions for user: Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Land transport (ADR/RID)/ Sea transport (IMDG) Not applicable

EmS-No.



Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture.

EU legislation VOC-value (in g/L): 0,000

Directive 2010/75/EU on industrial emissions

National regulations Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Restrictions of occupation: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Chemical Safety Assessment: Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	DIN German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization

SECTION 16: OTHER INFORMATION (CONT.)

ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
IMDG Code	International Maritime Code for Dangerous Goods
VOC	Volatile Organic Compounds
vPvB	Very persistent and very bioaccumulative
Further information	The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section
Classification according to Regulation (EC) No 1272/2008 [CLP]	1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.