

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



**45205 Paris Blue, historic stock**

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Revised edition: 25.11.2022

Version: 1

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## 1. Identification of the Substance/Mixture and of the Company/Undertaking

### 1.1. Product Identifier

*Product Name:* Paris Blue, historic stock

*Article No.:* 45205

*UFI:* --

### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

*Identified uses:*  
Pigment

*Uses advised against:*

### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

*Company:* Kremer Pigmente GmbH & Co. KG

*Address:* Hauptstr. 41-47, 88317 Aichstetten, Germany

*Tel./Fax.:* Tel +49 7565 914480, Fax +49 7565 1606

*Internet:* www.kremer-pigmente.com

*E-Mail:* info@kremer-pigmente.com

*Importer:* --

### 1.4. Emergency No.

*Emergency No.:* +49 7565 914480 (Mon-Fri 8:00 - 17:00)

#### 1.4.2 Poison Center:

## 2. Hazards Identification

### 2.1. Classification of the Substance or Mixture

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

H413  
Cat.: 4  
Chronic aquatic toxicity, hazard category 4  
May cause long lasting harmful effects to aquatic life.

*Possible Environmental Effects:*

### 2.2. Label Elements

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

*This product is classified and labelled according to CLP/GHS regulations.*

*Hazard designation:*

*Not applicable.*

*Signal word:*

*Hazard designation:*

H413  
EUH032  
May cause long lasting harmful effects to aquatic life.  
Contact with acids liberates very toxic gas.

*Safety designation:*

Avoid release to the environment.

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Dispose of contents/ container according to regional, national and international regulations.

*Hazardous components for labelling:*

### 2.3. Other Hazards

## 3. Composition/Information on Ingredients

### 3.1. Substance

### 3.2. Mixture

*Chemical Characterization:* Inorganic pigment

*Information on Components / Hazardous Ingredients:*

Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1) (Aqu.Chr.4, H413-EUH032); REACH Reg.No. 01-2119555296-32-xxxx 100 %

CAS-Nr: 25869-00-5

EINECS-Nr: 247-304-1

EC-Nr:

*Additional information:*

*Particle characteristics:*

*This product/this mixture does not contain nanoforms.*

## 4. First Aid Measures

### 4.1. Description of the First Aid Measures

*General information:*

*Combustion gases can contain hydrocyanic acid. Observe self-protection.*

*Remove affected person from danger area and lay down.*

*Alert an emergency physician immediately (Keyword: hydrocyanic acid intoxication).*

*Possible signs of intoxication: headache, dizziness, drowsiness, nausea, seizures, unconsciousness, respiratory disorders, apnea, cardiac arrest.*

*Take affected persons out into the fresh air.*

*Do not leave affected persons unattended.*

*Keep affected person warm in a calm area.*

*After inhalation:*

*Take affected person to fresh air.*

*Consult physician if symptoms persist.*

*Oxygen therapy in case of impaired breathing.*

*If breathing stops: immediately apply artificial respiration, if necessary also oxygen.*

*Do not give mouth-to-mouth or mouth-to-nose resuscitation.*

*In case of unconsciousness place patient stable in side position for transportation.*

*After skin contact:*

*Remove contaminated clothing immediately.*

*Wash with soap and rinse with plenty of water.*

*After eye contact:*

*Rinse open eyes with plenty of water for at least 15 minutes.*

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*Seek medical attention if irritation persists.*

*After ingestion:*

*If symptoms persist consult physician.*

*Rinse mouth with plenty of water and consult physician.*

### 4.2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*No further information available.*

*Effects:*

### 4.3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*After swallowing larger amounts of product: acceleration of the gastrointestinal tract*

*Therapy as in the case of a hydrocyanic acid intoxication.*

*Treat symptomatically.*

*Artificial respiration and/or oxygen may be required.*

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## 5. Fire-Fighting Measures

### 5.1. Extinguishing Media

*Suitable extinguishing media:*

*Foam, water mist.*

*Unsuitable extinguishing media:*

*Water with full jet.*

### 5.2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*In case of fire: formation of carbon oxides, ammonium, hydrocyanic acid cyanides, nitrogen oxides.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device and protective clothing.*

*Further information:*

*Collect contaminated extinguishing water and debris separately; avoid contamination of sewage system.*

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## 6. Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Wear protective clothing.*

*Avoid formation of dust.*

*Provide adequate ventilation. Keep away from sources of ignition.*

*Avoid formation of dust.*

### 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.*

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### 6.3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Take up mechanically and collect in suitable containers for disposal.*

*Avoid dust formation.*

### 6.4. Reference to other Sections

*Dispose of contaminated material according to Section 13.*

*Protective clothing, see Section 8.*

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## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*The usual precautionary measures are to be adhered to when handling chemicals.*

*Provide adequate ventilation.*

*Hygienic measures:*

*Avoid contact with skin, eyes and clothing. Do not inhale dust.*

### 7.2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store in tightly sealed containers in a cool and well ventilated location.*

*Store in a cool and dry place.*

*Avoid long-term storage of preparations made of Prussian Blue and drying oils due to its' self-heating effects.*

*Requirements for storage areas and containers:*

*No special measures necessary.*

*Information on fire and explosion protection:*

*Do not store together with: oxidants.*

*Do not store together with: acids and bases.*

*Keep away from sources of heat and ignition - do not smoke.*

*Dust may form an explosive mixture with air.*

*Take measures to prevent electrostatic discharge.*

*Product smoulders but is not combustible. Ground all equipment.*

*For on site repair work, especially when burning or welding, the plant must be completely free of Prussian Blue. Shrink wrapping should not be carried out using open flames. Risk of dust explosion.*

*Dust explosion class 1 (Kst-value > 0 - 200 bar m/s).*

*Storage class:*

*13; Non combustible solids (TRGS 510)*

*Further Information:*

*Shelf-life: > 12 months*

### 7.3. Specific End Use(s)

*Further information:*

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### 8. Exposure Controls/Personal Protection

#### 8.1. Parameters to be Controlled

*Parameters to be controlled (DE):*

*none known*

*Parameters to be controlled:*

*Derived No-Effect Level (DNEL):*

*176.3 mg/m<sup>3</sup> (worker, inhalation)*

*250 mg/m<sup>3</sup> (worker, skin contact)*

*Predicted No-Effect Concentration (PNEC):*

*Fresh water: 1.42 µg/l*

*Sea water: 0.142 µg/l*

*Sewage treatment system (STP): 10 mg/l*

*Additional Information:*

#### 8.2. Exposure Controls

*Technical protective measures:*

*Provide adequate ventilation.*

*Personal Protection*

*General protective measures:*

*The usual precautionary measures are to be adhered to when handling chemicals.*

*Avoid contact with skin, eyes and clothing.*

*Do not inhale gas/fumes/vapor/aerosol.*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

*Respiratory protection:*

*Required in case of insufficient ventilation.*

*In case of higher concentration or long-term exposure of dust: particle filter type P1 or FFP1, EN 143 or 149 (for solid particles).*

*Hand protection:*

*Protective gloves (EN 374)*

*Protective glove material:*

*Cotton, PVC-coated or rubber*

*Eye protection:*

*Safety glasses with protective shields (EN 166).*

*Body protection:*

*Protective clothing, chemical resistant.*

*Environmental precautions:*

*Suppress dust with a water spray jet.*

### 9. Physical and Chemical Properties

#### 9.1. Information on Basic Physical and Chemical Properties

*Form: powder*

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<i>Color:</i>	<i>blue</i>
<i>Odor:</i>	<i>odorless</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>3 - 6 (20 g/l, 20°C)</i>
<i>Melting temperature:</i>	<i>not applicable</i>
<i>Boiling temperature:</i>	<i>not available</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>not available</i>
<i>Upper explosion limit:</i>	<i>not determined</i>
<i>Lower explosion limit:</i>	<i>250 g/m<sup>3</sup></i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>1.9 g/cm<sup>3</sup></i>
<i>Solubility in water:</i>	<i>insoluble</i>
<i>Auto-ignition temperature:</i>	<i>&gt; 140°C</i>
<i>Decomposition temperature:</i>	<i>&gt; 140°C</i>
<i>Viscosity, dynamic:</i>	<i>not applicable</i>
<i>Explosive properties:</i>	<i>Product is not explosive; however, an explosive dust/air mixture can be formed.</i>
<i>Oxidizing properties:</i>	<i>no information available</i>
<i>Bulk density:</i>	<i>150 kg/m<sup>3</sup></i>

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:*

*Solvent content:*

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*Solid content:*

*Particle size:*

*Other information:*

*Impact sensitivity: no impact sensitive*

*Minimal explosive dust concentration: 1 m3 standard container, ignition energy 10 kJ*

*Dust explosion class: ST1*

*Minimal ignition temperature: >600°C*

### 10. Stability and Reactivity

#### 10.1. Reactivity

*Stable if used according to specifications.*

#### 10.2. Chemical Stability

*Stable at room temperature.*

#### 10.3. Possibility of Hazardous Reactions

*Reacts with acids, bases and oxidizing agents.*

#### 10.4. Conditions to Avoid

*Conditions to avoid:*

*Avoid ignition sources.*

*Avoid contact with heat, sparks and open fire.*

*Thermal decomposition:*

#### 10.5. Incompatible Materials

*Alkalies, strong acids, oxidizing agents.*

#### 10.6. Hazardous Decomposition Products

*Carbon monoxide, nitrogen oxides, ammonia, hydrocyanic acid.  
Cynide compouds.*

#### 10.7. Further Information

### 11. Toxicological Information

#### 11.1. Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008

*Acute Toxicity*

*LD50, oral:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1): LD50: 5110 mg/kg (rat; OECD 401)*

*LD50, dermal:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1): 2000 mg/kg (rat)*

*LC50, inhalation:*

*No information available.*

*Primary effects*

*Irritant effect on skin:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1): non irritating (24-72h, rabbit; OECD 404)*

*Irritant effect on eyes:*

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*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1): no irritating effect (rabbit; OECD 405)*

*Inhalation:*

*No information available.*

*Ingestion:*

*No information available*

*Sensitization:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1): non sensitizing (mouse; OECD 429)*

*Mutagenicity:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1):  
In vitro genetic-toxicity: Ames-Test negative (Salmonella typhimurium; OECD 471)  
In vitro genetic-toxicity: negative (OECD 476, mouse lymphoma cells)*

*Reproductive toxicity:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1):  
No information available.*

*Carcinogenicity:*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1):  
No relevant data found.*

*Teratogenicity:*

*No information available.*

*Specific target organ toxicity (STOT):*

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1):  
Single exposure: no information available.  
Repeated exposure:  
NOAEL: 428.6 mg/kg (11 days, oral, dog)*

*Aspiration hazard:*

*No risk of aspiration.*

### 11.2. Information on other Hazards

*Endocrine Disrupting Properties:  
This substance/mixture does not contain any components with endocrine disrupting properties in a percentage of 0.1 or greater, according to Article 57(f) of the REACH Regulation (EC) No. 1907/2006 or the Delegated Regulation (EC) 2017/2100 or the Delegated Regulation (EC) 2018/605.*

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## 12. Ecological Information

### 12.1. Aquatic Toxicity

*Ferrate(4-), hexakis(cyano-C), ammonium iron(3+) (1:1:1):*

*Fish toxicity:*

*NOEC: > 1000 mg/l (96h, Leuciscus idus; OECD 203)*

*Daphnia toxicity:*

*EC50: > 500 mg/l (24h, Daphnia magna; OECD 202)*

*Bacteria toxicity:*

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*EC50: 2290 mg/l (3h, active sludge)*

*EC10: 100 mg/l (3h, active sludge; OECD 209)*

*Algae toxicity:*

*9.7 mg/l (72h, Selenastrum capricornutum; OECD 201)*

### 12.2. Persistency and Degradability

*Inorganic substance. Biological degradability is not affected.*

### 12.3. Bioaccumulation

*No information available.*

### 12.4. Mobility

*No information available.*

### 12.5. Results of PBT- und vPvP Assessment

*This product is neither a PBT or vPvB substance nor does it contain a PBT or vPvB substance.*

### 12.6. Endocrine Disrupting Properties

*This substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) No. 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 % or higher.*

### 12.7. Other Adverse Effects

*Water hazard class:*

*1, slightly hazardous*

*Behaviour in sewage systems:*

*Further ecological effects:*

*Do not let product enter waterways or sewage system.*

*AOX Value:*

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## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

*Product:*

*Dispose of according to official national and local regulations.*

*European Waste Code (EWC):*

*Uncleaned packaging:*

*Non-contaminated packaging may be recycled.*

*Contaminated packaging must be disposed like the substance.*

*Waste Code No.:*

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## 14. Transport Information

### 14.1. UN Number

*ADR, IMDG, IATA*

### 14.2. UN Proper Shipping Name

*ADR/RID:*

*No hazardous goods according to ADR / DOT (US) (land transportation).*

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*IMDG/IATA:*

*Not hazardous goods*

### 14.3. Transport Hazard Classes

*ADR Class:*

*not applicable*

*Hazard no.:*

*Classification code:*

*Tunnel restriction code:*

*IMDG Class (sea):*

*not applicable*

*Hazard no.:*

*EmS No.:*

*IATA Class:*

*not applicable*

*Hazard no.:*

### 14.4. Packaging Group

*ADR/RID:*

*not applicable*

*IMDG:*

*IATA:*

### 14.5. Environmental Hazards

*None*

### 14.6. Special Precautions for User

*Not classified as a dangerous good under transport regulations.*

### 14.7. Maritime Transport in Bulk according to IMO Instruments

*not applicable*

### 14.8. Further Information

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## 15. Regulatory Information

### 15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*1, slightly hazardous for water (German Regulation)*

*Local regulations on chemical accidents:*

*Employment restrictions:*

*Restriction and prohibition of application:*

*Technical instructions on air quality:*

### 15.2. Chemical Safety Assessment

*A Chemical Safety Assessment has been carried out for this product.*

### 15.3. Further Information

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## 16. Other Information

*This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*