

**45200 Milori Blue, Prussian Blue**

Edition: 30.05.2006

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**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**

Product Information:

Product Name: Milori Blue, Prussian Blue  
Article No.: 45200  
Application: Artists' and Restauration Material

Company: Kremer Pigmente GmbH & Co. KG  
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Tel. +49 7565 91120 Fax. +49 7565 1606  
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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature: Iron blue  
C.I. Pigment Blue 27

$\text{Fe}(\text{CN})_6 \cdot \text{Fe} \cdot \text{NH}_4$   
CAS No.: 25869-00-5; 14035-43-8  
EINECS: 247-304-1; 237-875-5

**3. HAZARDS IDENTIFICATION**

Advice on critical hazards to man and environment: none

**4. FIRST AID MEASURES**

After inhalation: Keep patient calm, remove to fresh air. In case of complaints  
summon medical help.  
After skin contact: No special measures required.  
After eye contact: Wash affected eyes for at least 15 minutes under running water with  
eyelids held open.  
After ingestion: Rinse mouth with plenty of water. In case of swallowing larger  
amounts of product: consult physician.  
Note to physician: In case of swallowing larger amounts of product: give active coal to  
accelerate the gastro-intestinal passage.

The following information are based on the decomposition products:

General information: The fire gases can contain hydrogen cyanide. Follow self-protection  
and remove concerned persons from hazardous area.

After inhalation of fumes: Possible signs of intoxication: headache, dizziness, drowsiness,  
nausea, convulsions, unconsciousness, breathing problems, apnea,  
cardiac arrest.

Note to physician or

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other first-aiders: In case of signs of intoxication: immediately alarm emergency physician (keyword: Intoxication by hydrogen cyanide). Remove concerned person to fresh air. Keep warm and calm. Give oxygen in case of labored breathing. Give artificial respiration in case of apnea using an anesthesia bag or an oxygen resuscitation apparatus. Do not give mouth-to-mouth or mouth-to-nose breathing. Place in recovery position in case of unconsciousness.

Note to physician: Treat like intoxication with hydrogen cyanide.

**5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media: Water spray or mist, foam.

Special exposure hazards: Combustion produces harmful and toxic fumes. In case of fire: release of hydrogen cyanide, ammonium, nitrogen oxide, dicyanogen, carbon monoxide and dioxide.

Special protective equipment: In case of fire, wear a self-contained breathing apparatus.

Further information: Dispose of fire debris and contaminated extinguishing water in accordance with local regulations. Do not let water enter sewage system, waterways or drains.

**6. ACCIDENTAL RELEASE MEASURES**

Person-related safety measures: Avoid dust formation. Wear protective clothing.

Environmental protective measures: Prevent contamination of soil, drains and surface waters. Collect contaminated water and water used to extinguish fire.

Methods of cleaning/absorption: Clean up mechanically and dispose of accordingly.

**7. HANDLING AND STORAGE**

*Handling:*

Advice on safe handling: Breathing must be protected when large quantities are decanted without local exhaust ventilation. Avoid dust formation.

Protection against fire and explosion: Keep away from sources of ignition. Dust explosion hazard: containers should be earthed during decanting operations. Do not work with open fire. Dust deposits must be avoided.

Dust explosion class: St1

*Storage:*

Storage conditions: Keep tightly closed in a dry and cool place.

Storage class: 11

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design

of technical systems: No further data; see item 7.

Components with workplace control parameters:

TRGS 900: 3 mg/m<sup>3</sup> (air-borne fraction)  
10 mg/m<sup>3</sup> (inhalable fraction)

Personal protective equipment:

General protective measures: The usual precautions for handling chemicals must be observed. Hands and/or face must be washed before breaks and at the end of the shift.

Respiratory protection: If breathable dust is formed: filter P1.

Hand protection: Chemical resistant protective gloves (EN 374) recommended.

Eye protection: Safety glasses recommended (EN 166).

Body protection: No special measures required. Avoid contamination of clothes. Wash contaminated clothes before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Form: powder

Color: blue

Odor: none

Ignition temperature: > 600°C (DIN 51794)

Ignitable gases/vapors: 260°C (DIN 51758)

Combustion temperature: > 300°C (VDI 2263)

Thermal decomposition: > 140°C

Explosion limits:

- lower 250 g/m<sup>3</sup>

- upper no data available

Vapor pressure: n.a.

Density: approx. 1.9 g/cm<sup>3</sup> (20°C)

Bulk density: 450 - 550 kg/cm<sup>3</sup> (20°C)

Solubility in water: insoluble

Solubility in solvents: miscible in organic solvents

pH-value: > 5 (50 g/l, 20°C, as suspension)

**10. STABILITY AND REACTIVITY**

Thermal decomposition: > 140°C

Ignitable gases/vapors: > 260°C

Substances to be avoided: Incompatible with alkalis: formation of hexacyanoferrates. Incompatible with strong acids, oxidants or strong alkalis: liberation of hydrogen cyanide and ammonia.

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Hazardous reactions:	Dust explosion hazard: containers should be earthed during decanting operations.
Hazardous decomposition products:	Hydrogen cyanide, oxalonitrile, ammonia, carbon monoxide, carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity:  
LD50, oral (rat): > 5110 mg/kg (OECD TG 401)

Primary irritation (eyes, rabbit): non-irritant (OECD TG 404)  
Primary mucous membrane irritation (rabbit): non irritant (OECD TG 405)

Sensitization: no sensitizing effects

Genetic toxicity (in vitro): Salmonella typhimurium, negative (Ames test)

Further information: No hazardous effects known when using this product.

## 12. ECOLOGICAL INFORMATION

Elimination information: Test cannot be carried out, not sufficiently soluble in water. The product is not very soluble in water and can thus be virtually removed from water mechanically in suitable effluent treatment plants.

Ecotoxicological effects:  
- Acute fish toxicity: Leuciscus idus LC50: > 1000 mg/l (96h; OECD 203)  
- Acute bacteria toxicity: EC50 (3h): 2290 mg/l (DEV L3 (TTC Test))

Water hazard classification (WGK): 1 - slightly hazardous

## 13. DISPOSAL CONSIDERATIONS

Product: Must be disposed of by special means, e.g. suitable dumping after chemical/physical pre-treatment (consolidation). Contact waste center regarding recycling.

Contaminated packaging: Uncleaned packaging should be disposed of in the same manner as the product. Uncontaminated packaging can be recycled.

## 14. TRANSPORT INFORMATION

Not classified as hazardous under transport regulations.

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**15. REGULATORY INFORMATION**

Labelling according to EEC Directives: Not subject to labelling.

Water hazard class: 1, slightly hazardous.

**16. OTHER INFORMATION**

This information, which describes our product with regard to possible safety requirements, is based on the present state of our knowledge and experience. It is given in good faith but no warranty expressed or implied with respect to the quality and properties of our product is made.