

# Safety Data Sheet

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



## 23291 Permanent Red FRL

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Version: 4

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

#### 1.1. Product Identifier

*Product Name:* Permanent Red FRL

*Article No.:* 23291

*UFI:* --

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

*Identified uses:*

*Chemical-technical industry  
Paint and varnish industry  
Colored printing inks  
Plastics industry.*

*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](http://www.kremer-pigmente.com)

*E-Mail:* [info@kremer-pigmente.com](mailto: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)*

*This product does not require classification and labelling as hazardous according to CLP/GHS.*

*Possible Environmental Effects:*

#### 2.2. Label Elements

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

*No classification required according to the CLP/GHS guidelines.*

*Hazard designation:*

*Not applicable.*

*Signal word:*

*Hazard designation:*

*Safety designation:*

*Hazardous components for labelling:*

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### 2.3. Other Hazards

*Risk of dust explosion.*

## 3. Composition/Information on Ingredients

### 3.1. Substance

### 3.2. Mixture

*Chemical Characterization: Pigment Red 9, C.I. 12460*

*Information on Components / Hazardous Ingredients:*

*Additional information:*

*This product/this mixture contains nanoforms.*

*Nano C.I. Pigment Red 122:*

*Total content of nanomaterials: 80 - 100 %*

*Particle characteristics:*

*Particle size distribution:  $d_{10} = 0.045 \mu\text{m} \pm 0.035 \mu\text{m}$ ;  $d_{50} = 0.070 \mu\text{m} \pm 0.030 \mu\text{m}$ ;  $d_{90} = 0.125 \mu\text{m} \pm 0.035 \mu\text{m}$*

*Level of dustiness: Index: 34.319 1/mg (SMPS; DIN EN 17199-3); 1.078 1/ml (OPS; DIN EN 17199-3)*

*Specific surface area:  $12 \text{ m}^2/\text{g} \pm 4 \text{ m}^2/\text{g}$  (BET); Surface treatment: no*

*Form: Cubes: 98 % (TEM); Spheres: 1 % (TEM); Rods: 1 % (TEM)*

*Crystallinity: crystalline (method XRD)*

## 4. First Aid Measures

### 4.1. Description of the First Aid Measures

*General information:*

*Seek medical attention in case of complaints.*

*After inhalation:*

*Supply fresh air and keep patient calm.*

*After skin contact:*

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

*After eye contact:*

*Rinse eyes with water.*

*After ingestion:*

*Do not induce vomiting. Consult physician immediately.*

*Show product label to person applying first aid.*

### 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:*

*Treat symptomatically.*

## 5. Fire-Fighting Measures

### 5.1. Extinguishing Media

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*Suitable extinguishing media:*

*Foam, water jet.*

*Unsuitable extinguishing media:*

*Carbon dioxide, water jet, dry extinguishing powder.*

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

*Special hazards:*

*In case of fire: formation of carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride (HCl).*

*Dust can form explosive mixtures with air.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device.*

*Further information:*

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## 6. Accidental Release Measures

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

*Personal precautions:*

*Avoid formation of dust.*

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

*Keep away from sources of ignition. No smoking.*

### 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soil, drains and surface waters.*

### 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.*

*Take precautionary measures against static discharges; risk of dust explosion.*

*Moisten the spillage with water before mechanically removing it.*

### 6.4. Reference to other Sections

*Dispose of contaminated material according to Section 13.*

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## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*Avoid formation of dust.*

*Hygienic measures:*

*Wash hands before breaks and after work.*

*Take off contaminated clothing immediately and reuse only after thoroughly cleaning these.*

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

*Storage conditions:*

*Do not store above 50°C.*

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*Store in a cool and dry place.*

*Requirements for storage areas and containers:*

*No special measures necessary.*

*Information on fire and explosion protection:*

*Keep away from sources of ignition - do not smoke. Take measures to prevent electrostatic discharge.*

*Dust explosion class 2 (Kst-value 200 - 300 bar m/s).*

*Dust may form an explosive mixture with air.*

*Storage class:*

*11; Combustible solids (TRGS 510)*

*Further Information:*

### 7.3. Specific End Use(s)

*Further information:*

*No further information available.*

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## 8. Exposure Controls/Personal Protection

### 8.1. Parameters to be Controlled

*Parameters to be controlled (DE):*

*TLV: 10 mg/m<sup>3</sup> inhalable fraction (general dust limit)*

*TLV: 1.25 mg/m<sup>3</sup> air-borne fraction (general dust limit)*

*Parameters to be controlled:*

*Derived No-Effect Level (DNEL):*

*PNEC (Predicted No-Effect Concentration):*

*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.*

*Remove contaminated clothing immediately.*

*Wash hands before breaks and after work.*

*Respiratory protection:*

*Dust mask recommended when very dusty.*

*Hand protection:*

*Suitable protective gloves recommended, e.g. glove material: nitrile rubber (NBR).*

*Protective glove material:*

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*Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time.*

*Eye protection:*

*Safety glasses (EN 166)*

*Body protection:*

*Protective clothing.*

*Environmental precautions:*

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### 9. Physical and Chemical Properties

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

<i>Form:</i>	<i>powder</i>
<i>Color:</i>	<i>bright red</i>
<i>Odor:</i>	<i>none</i>
<i>Odor threshold:</i>	<i>no information available</i>
<i>pH-Value:</i>	<i>not determined</i>
<i>Melting temperature:</i>	<i>&gt; 280°C</i>
<i>Boiling temperature:</i>	<i>not applicable</i>
<i>Flash point:</i>	<i>not applicable</i>
<i>Evaporation rate:</i>	<i>not applicable</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</i>
<i>Upper explosion limit:</i>	<i>not determined</i>
<i>Lower explosion limit:</i>	<i>not determined</i>
<i>Vapor pressure:</i>	<i>not applicable</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>1.52 g/cm<sup>3</sup></i>
<i>Solubility in water:</i>	<i>insoluble (20°C)</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	<i>not determined</i>
<i>Auto-ignition temperature:</i>	<i>&gt; 260°C</i>

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*Decomposition temperature:* > 280°C

*Viscosity, dynamic:*  
not determined

*Explosive properties:*  
Risk of dust explosion.

*Oxidizing properties:*  
no information available

*Bulk density:* 165 kg/m<sup>3</sup>

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:* BZ2  
Combustion factor 2: short flare-up without spreading (20°C)

*Solvent content:*

*Solid content:*

*Particle size:*  
*Partikel characteristics: This substance/ mixture contains nanoforms (see Section 3).*

*Other information:*  
*Metal corrosion: non-corrosive to metal.*

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## 10. Stability and Reactivity

10.1. **Reactivity**  
*Stable if used according to specifications.*

10.2. **Chemical Stability**  
*Stable if used according to specifications.*

10.3. **Possibility of Hazardous Reactions**  
*Unknown.*

10.4. **Conditions to Avoid**  
*Conditions to avoid:*  
*Avoid dusting near sources of ignition.*

*Thermal decomposition:*

10.5. **Incompatible Materials**  
*None known.*

10.6. **Hazardous Decomposition Products**  
*None if stored and handled according to specifications.*

10.7. **Further Information**

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## 11. Toxicological Information

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

*Acute Toxicity*

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*LD50, oral:*

*No information available*

*LD50, dermal:*

*No information available.*

*LC50, inhalation:*

*No information available.*

*Primary effects*

*Irritant effect on skin:*

*No information available*

*Irritant effect on eyes:*

*No information available.*

*Inhalation:*

*No information available.*

*Ingestion:*

*No information available*

*Sensitization:*

*No sensitizing effects known.*

*Mutagenicity:*

*In vitro genetic-toxicity:  
Bacterial test for the detection of back mutation: Metabolic activation: with and without metabolic activation. Result: Positive only in the test with metabolic activation.*

*Reproductive toxicity:*

*No relevant data found.*

*Carcinogenicity:*

*No relevant data found.*

*Teratogenicity:*

*No information available.*

*Specific target organ toxicity (STOT):*

*No relevant data found.*

*Aspiration hazard:*

*No information available.*

### 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.*

## 12. Ecological Information

### 12. 1. Aquatic Toxicity

*Fish toxicity:*

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*No data available.*

*Daphnia toxicity:*

*No information available.*

*Bacteria toxicity:*

*No data available.*

*Algae toxicity:*

*No information available.*

### 12. 2. Persistency and Degradability

*No information available.*

### 12. 3. Bioaccumulation

*No information available.*

### 12. 4. Mobility

*No information available.*

### 12. 5. Results of PBT- und vPvP Assessment

*This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.*

### 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 (German Regulation) (Assessment by list): slightly hazardous.*

*Behaviour in sewage systems:*

*Further ecological effects:*

*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:*

*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

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*ADR/RID:*

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

*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

*Not classified as environmentally hazardous.*

### 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, Assessment by list)*

*Local regulations on chemical accidents:*

*Employment restrictions:*

*Restriction and prohibition of application:*

*EC. REACH, Section XVII, Restrictions on the Manufacture,*

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*Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable*

*Technical instructions on air quality:*

### 15.2. Chemical Safety Assessment

*No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.*

### 15.3. Further Information

*EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): not regulated / not applicable*

*Regulation (EC) 1005/2009 - Substances that Deplete the Ozone Layer: not regulated / not applicable*

*Regulation (EU) 2019/1021 - Persistent organic pollutants: not regulated / not applicable*

*Regulation (EC) No. 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors: not forbidden and/or not restricted*

*Regulation (EC) 649/2012 concerning the export and import of dangerous chemicals: Not applicable*

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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.*