

Safety Data Sheet

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



23260 Perylene Red, PR 178

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Revised edition: 29.07.2024

Version: 2.04

Printed: 08.01.2025

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

1.1. Product Identifier

Product Name: Perylene Red, PR 178

Article No.: 23260

UFI: WV2W-61JW-U00P-VNJ4

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

Identified uses:
Coloring agent for dye and varnish 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

EMail: 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)

H373

Cat.: 2

Specific target organ toxicity (repeated exposure), hazard category 2

May cause damage to organs through prolonged or repeated exposure.

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:



GHS08-1

Signal word:

Warning

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Hazard designation:

H373

May cause damage to organs through prolonged or repeated exposure.

Safety designation:

P260ad

Do not breathe dust or mist.

P314

Get medical advice/attention if you feel unwell.

Hazardous components for labelling:

2.3. Other Hazards

*Can cause combustible dust concentrations in the air.
Dust may be produced when working with this material, which can cause a mechanical irritation of eyes, nose and respiratory tract.*

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization:

Pigment Red 178. Preparation based on perylene pigment.

Information on Components / Hazardous Ingredients:

2,9-Bis[4-(phenylazo) phenyl]anthra[2,1,9-def:6,5,10-d e f]diisochinolin-1,3,8,10(2H,9H)-tetrone (H373); REACH Reg. No. 01-2119969284-27

80 - 100 %

CAS-Nr: 3049-71-6

EINECS-Nr: 221-264-5

EC-Nr:

Additional information:

Particle characteristics:

2,9-Bis[4-(phenylazo) phenyl]anthra[2,1,9-def:6,5,10-d e f]diisochinolin-1,3,8,10(2H,9H)-tetrone:

Form: Spheres (Aspect ratio (x) = 1 - 3 [TEM]); crystalline;

Agent(s): no specific treatment; Specific surface area: 15 - 100 m²/m³ (BET)

Particle size distribution: d₁₀ = 5 - 50 nm; d₅₀ = 10 - 100 nm; d₉₀ = 100 - 200 nm

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 seek medical advice in case of complaints.

After skin contact:

Wash with soap and rinse with plenty of water.

After eye contact:

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

After ingestion:

Rinse mouth with water and drink plenty of water.

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

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Symptoms:

Exposure to high concentrations of dust may result in upper respiratory tract (nose and throat) and pulmonary irritation.

Effects:

4. 3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

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.

5. Fire-Fighting Measures

5. 1. Extinguishing Media

Suitable extinguishing media:

Foam, carbon dioxide (CO₂), extinguishing powder, water spray.

Unsuitable extinguishing media:

Water with full jet.

5. 2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: hazardous vapors may be released. Development of fumes/aerosol.

5. 3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Further information:

Contaminated extinguishing water and debris should be disposed of according to local regulations.

Cool exposed containers with water spray.

6. Accidental Release Measures

6. 1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Avoid inhalation of dust.

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.

6. 4. Reference to other Sections

Protective clothing, see Section 8.

See Section 13 for information on disposal.

7. Handling and Storage

7. 1. Precautions for Safe Handling

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Instructions on safe handling:

*Avoid formation of dust. Do not inhale dust.
Provide adequate ventilation.*

Hygienic measures:

Keep away from foodstuffs and drinks.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a dry and cool room.

Requirements for storage areas and containers:

No special measures necessary.

Information on fire and explosion protection:

Take measures to prevent electrostatic discharge.

Storage class:

11; Combustible solids (TRGS 510)

Further Information:

Store in a dry place.

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TRGS 900

Barium sulfate: TWA: Average value (8h): 1.25 mg/m³ (airborne fraction); 10 mg/m³ (inhalable fraction); Short-term value (15 min): 2.5 mg/m³ (airborne fraction); 20 mg/m³ (inhalable fraction)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

2,9-Bis[4-(phenylazo) phenyl]anthra[2,1,9-def: 6,5,10-d e f] diisochinolin-1,3,8,10(2H,9H)-tetron:

0.02 mg/m³ (worker, inhalation, long-term exposition - local effects)

3 mg/m³ (worker, inhalation, long-term exposure - systemic effects)

3 mg/m³ (worker, inhalation, short-term exposition - systemic effects)

33.3 mg/kg bw/d (worker, skin contact, long-term exposition - systemic effects)

16.7 mg/kg bw/d (consumer, skin contact, long-term exposition - systemic effects)

10 mg/kg bw/d (consumer, swallowing, long-term exposition - systemic effects)

PNEC (Predicted No-Effect Concentration):

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No values available.

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation/exhaust system.

Personal Protection

General protective measures:

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:

Suitable respiratory protection for lower concentration or short-term effect: particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, type P2 or FFP2).

Hand protection:

Chemical protective gloves (EN 374 (Europe), F739 (US)).

Protective glove material:

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

Eye protection:

Safety glasses with protective shields (EN 166).

Body protection:

Protective clothing, antistatic.

Environmental precautions:

Prevent from getting into the soil, surface water and sewage system.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Form: powder

Color: red

Odor: odorless

Odor threshold:
not determined

pH-Value: 5 - 8

Melting temperature: > 500°C

Boiling temperature:
not applicable

Flash point:
not applicable

Evaporation rate:
This product is a non-volatile solid.

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Flammability (solid, gas):

not highly flammable

Upper explosion limit:

no information available

Lower explosion limit:

no information available

Vapor pressure:

not applicable

Vapor density:

This product is a non-volatile solid.

Density:

1.47 g/cm³ (20°C)

Solubility in water:

insoluble

Coefficient of variation (n-Octanol/Water):

no information available

Auto-ignition temperature:

> 350°C (> 662°F)

Decomposition temperature:

Viscosity, dynamic:

not applicable

Explosive properties:

Product does not present an explosion hazard.

Oxidizing properties:

no information available

Bulk density:

250 kg/m³

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content:

Particle size:

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

Other information:

Self-heating ability: This product is not a self-heating substance according to the UN class 4.2 (UN Test N.4)

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

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10.2.	Chemical Stability	<i>No decomposition if used according to specifications.</i>
10.3.	Possibility of Hazardous Reactions	<i>Risk of dust explosion.</i>
10.4.	Conditions to Avoid	<i>Conditions to avoid:</i> <i>Avoid humidity.</i> <i>Thermal decomposition:</i> <i>Avoid heat.</i>
10.5.	Incompatible Materials	<i>Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.</i>
10.6.	Hazardous Decomposition Products	<i>None if stored and handled according to specifications.</i>
10.7.	Further Information	

11. Toxicological Information

11.1.	Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008	<i>Product shows practically no toxicity after a single oral, dermal or inhalative exposure.</i>
	<i>Acute Toxicity</i>	
	<i>LD50, oral:</i>	<i>> 5000 mg/kg (rat)</i>
	<i>LD50, dermal:</i>	<i>> 2500 mg/kg (rat)</i>
	<i>LC50, inhalation:</i>	<i>> 5.2 mg/l (rat)</i>
	<i>Primary effects</i>	
	<i>Irritant effect on skin:</i>	<i>Non irritating (rabbit)</i>
	<i>Irritant effect on eyes:</i>	<i>Non-irritating to eyes (rabbit)</i> <i>Tetradecanol: Moderately irritant.</i>
	<i>Inhalation:</i>	<i>No information available.</i>
	<i>Ingestion:</i>	<i>No information available</i>
	<i>Sensitization:</i>	<i>Non sensitizing (mouse).</i>
	<i>Mutagenicity:</i>	<i>In vitro genetic-toxicity: micronucleus negative (OECD 487)</i>
	<i>Reproductive toxicity:</i>	<i>The product has not been tested. The statement was derived from substances/products of similar structure or composition. No evidence of adverse effects on fertility was found in tests on</i>

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animals. The results were determined in a screening test (OECD 421/422).

Carcinogenicity:

No relevant data found.

Teratogenicity:

The results were determined in a screening test (OECD 421/422). The substance did not lead to malformations in animal tests. The product has not been tested. The statement was derived from substances/products of similar structure or composition.

Specific target organ toxicity (STOT):

Single exposure: no organospecific toxicity expected.
Repeated exposure: inhalation, category 2, lungs

Aspiration hazard:

Not applicable

11. 2. Information on other Hazards

Endocrine Disrupting Properties: no information available.

12. Ecological Information

12. 1. Aquatic Toxicity

Not hazardous for aqueous organisms.

Fish toxicity:

LC50: > 1350 mg/l (96h, *Brachydanio rerio*)

Daphnia toxicity:

EC50: > 0.0065 mg/l (48h, *Daphnia magna*)

Bacteria toxicity:

NOEC: > 1000 mg/l (30 min, active sludge)

Algae toxicity:

EC50: > 0.007 mg/l (7d, *Lemma gibba*)

EC50: > 100 mg/l (72h, *Pseudokirchneriella subcapitata*)

12. 2. Persistency and Degradability

0 to 10 % (28 days; 100 mg/l, active sludge; OECD 301F)

Colorants are by their nature very stable and are therefore not readily biodegradable under conditions prevailing in surface water or in effluent treatment plants. Poorly biodegradable. Non-biodegradable according to OECD.

12. 3. Bioaccumulation

log POW: 1 (low bioaccumulation)

12. 4. Mobility

Partition coefficient soil/water (Koc): not available

12. 5. Results of PBT- und vPvP Assessment

According to Annex VIII to Regulation (EC) No. 1907/2006 (REACH): this product is neither a PBT (persistent/bioaccumulative/toxic) or vPvB (very persistent/very bioaccumulative/very toxic) substance nor does it contain a PBT or vPvB substance.

12. 6. Endocrine Disrupting Properties

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Not listed.

12. 7. Other Adverse Effects

Water hazard class:

1, slightly hazardous

Behaviour in sewage systems:

Treatment in biological waste treatment plant has to be performed according to local and administrative regulations.

Further ecological effects:

AOX Value:

Product does not contain any organically bound halogens which influence the AOX value of discard water.

13. Disposal Considerations

13. 1. Waste Treatment Methods

Product:

Disposal should be avoided or minimized.

Do not empty into drains. Avoid release into the environment.

European Waste Code (EWC):

040216 - Dyestuffs and pigments other than those mentioned in 040216

Uncleaned packaging:

Non-contaminated packaging may be recycled.

Contaminated packaging must be disposed like the substance.

Waste Code No.:

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).

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

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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 applicable

14. 7. Maritime Transport in Bulk according to IMO Instruments

not applicable

14. 8. Further Information

Not classified as a dangerous good under transport regulations.

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:

Seveso III Directive: not applicable under Directive 2012/18/EC.

Employment restrictions:

Restriction and prohibition of application:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable

Technical instructions on air quality:

5.2.1.: 99.6 %

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

15. 3. Further Information

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

Listed in the following inventories:

TSCA (8b, US), AIIIC (AUS), CA (DSL), CSCL (JP), KECI (KR), PICCS (PH), NZIoC (NZ), IECSC (CN), TCSI (TW), CICR (TR)

VOC Content: not applicable

16. Other Information

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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.