

**Piirox® K318M**

This product is not classified as dangerous. A safety data sheet is not required for this product under Article 31 of REACH. This SDS has been created on a voluntary basis.

**Section 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name: Piirox K318M  
REACH Substance Name: Triiron Tetraoxide  
EG-No.: 215-277-5  
CAS-No.: 1317-61-9  
REACH Registration number: 01-2119457646-28-0030  
**Other names:** C.I. Pigment black 11 (77499), Triiron Tetraoxide Fe<sub>3</sub>O<sub>4</sub>

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Not known  
**Suitable uses** : Colorants (pigments and dyestuffs), inorganic

**1.3 Details of the supplier of the safety data sheet supplier**

PIGMENT INTERNATIONAL GmbH & Co. KG  
Karl-Winnacker-Str. 2-4  
D-36396 Steinau, Germany

**Phone / Telefax / E-Mail**

+49 6663-96070 / +49 6663-960750 / em@pigment-international.com

**1.4 Emergency telephone**

+49 6663-96070 (office times), +49 30-30686700 (24h)

**Section 2: Hazards identification****2.1 Classification of the substance or mixture**

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

Not classified.

**Classification according to Directive 67/548/EEC [DSD]**

Not classified.

**2.2 Label elements**

**Hazard pictograms** : Not applicable.  
**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

**2.3 Other hazards**

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.  
**Other hazards which do not result in classification**

**Section 3: Composition/information on ingredients****3.1 Product definition (REACH) :** Mono-constituent substanceTriiron Tetraoxide Fe<sub>3</sub>O<sub>4</sub>

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting in this section, in accordance with EU or national regulations.

**Section 4: First aid measures****4.1 Description of first aid measures****Inhalation**

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

No special measures required.

**Eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Ingestion**

No special measures required.

**4.2 Most important symptoms and effects, both acute and delayed**

See Section 11 for more detailed information on health effects and symptoms.

**4.3 Indication of any immediate medical attention and special treatment needed**

See Section 11 for more detailed information on health effects and symptoms.

**Section 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing**

**Media** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

**Unsuitable extinguishing**

**Media** : None known.

**5.2 Special hazards arising from the substance or mixture**

No specific fire or explosion hazard.

No hazardous combustion products.

**5.3 Advice for fire fighters**

No special precautions 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.

**Section 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Avoid breathing dust. Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8). Hazard of slipping on spilt product.

**6.2 Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and materials for containment and cleaning up****Small spill:**

Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill:**

Move containers from spill area. 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. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

**6.4 Reference to other sections**

See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

**Section 7: Handling and storage****7.1 Precautions for safe handling**

No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities**

No special measures required.

**7.3 Specific end use(s)**

Not available.

**Section 8: Exposure controls/personal protection****8.1 Control parameters**

**Exposure limit values** : Not available.

**Derived effect levels**

Ingredient name	Type	Exposure	Value	Population	Effects
Piirox K318M	DNEL	Long term Inhalation	10 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	3 mg/m <sup>3</sup>	Workers	Local
<b>Conclusion/Summary</b> : Dust Inhalable 10 mg/m <sup>3</sup> , Respirable dust 3 mg/m <sup>3</sup>					

**Predicted No Effect Concentration (PNEC)**

Ingredient name	Compartment Detail	Value	Method Detail	Remarks
Piirox K318M				
<b>Conclusion/Summary</b> : PNECs Not applicable.				

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical

agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

## 8.2 Exposure controls

### 8.2.1 Technical measures

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.

### 8.2.2 Personal protection measures

#### 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. Recommended: safety glasses with side-shields

#### Skin protection

Personal protective equipment for the body 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

Recommended: Dust-protection mask

#### Hand protection

Recommended: gloves

#### 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.

### 8.2.3 Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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## Section 9: **Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Appearance	
- Physical state:	solid (powder)
- Colour:	black
Odour:	odorless
pH:	5 to 8 (5% aqueous suspension)
Melting point:	> 1000°C
Vapour pressure:	not available.
Density:	4,7 kg/l at 20°C
Solubility :	< 0,000001 g/l (Wasser)
Decomposition temperature :	

### 9.2 Other information

No additional information.

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## Section 10: **Stability and reactivity**

### 10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

### 10.2 Chemical stability

The product is stable.

**10.3 Possibility of hazardous reactions**

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

**Conditions to avoid**

**10.4** At temperatures >80°C the product may become unstable and oxidize. This generates additional heat which may result in the combustion of flammable materials. The product should therefore not be stored near heat sources.

**10.5 Incompatible materials**

No specific data.

**10.6 Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11: Toxicological information****11.1 Information on toxicological effects****Potential acute health effects**

**Eye contact:** Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure	Test
Piiox K318M	LD50 Oral	rat	> 5.000 mg/kg	-	
	LC50 Inhalation Dusts and mists	rat	> 185 mg/m <sup>3</sup>	2 weeks	

**Irritation/Corrosion**

**Skin** : Non-irritating. \*Test results on an analogous product

**Eyes** : Non-irritating. \*Test results on an analogous product

**Sensitiser**

Product/ingredient name	Route of exposure	Species	Result	Test description
Piiox K318M	Skin	Guinea pig	Not sensitizing	-

**Potential chronic health effects Mutagenicity**

Product/ingredient name	Test	Experiment	Result
Piiox K318M	Ames Test	Experiment: In vitro Subject: Bacteria	Negativ

**Chronic effects** : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Section 12: Ecological information****12.1 Toxicity**

Product/ ingredient name	Test	Result	Species	Exposure
Piiox K318M	EU C.2	Acute ELO >10000 mg/l	Daphnia-Daphnia magna	48 hours
	OECD 203	Acute LLO >10000 mg/l	Fish - Danio rerio	96 hours

**Conclusion/Summary** : Not available.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition  
coefficient (KOC )** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects**

**Other adverse effects** : Not available.

**AOX** : Not available.

**Remarks** : No known significant effects or critical hazards.

**Section 13: Disposal considerations****13.1 Waste treatment methods****Product****Methods of disposal**

Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labeled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).

**Hazardous waste**

Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

**Packaging****Methods of disposal**

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions**

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Section 14: Transport information**

	<b>ADR/RID</b>	<b>ADN/ADNR</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number</b>	-----	-----	-----	-----
<b>14.2 UN proper shipping name</b>	-----	-----	-----	-----
<b>14.3 Transport hazard class(es)/ Marks</b>	-----	-----	-----	-----
<b>14.4 Packing group</b>	-----	-----	-----	-----
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>14.6 Special precautions for user/Additional information</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not available.

**Hazard notes:** Not dangerous cargo.  
Keep separated from foodstuffs.

**Section 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

Not applicable.

**Other EU regulations****Seveso II Directive**

This product is not controlled under the Seveso II Directive.

**15.2 Chemical Safety Assessment:** Not applicable.

**Section 16: Other information****Abbreviations and acronyms:**

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

**History****Date of issue : 02.02.2017****Date of previous issue : 13.05.2013****Version 2.0****Notice to reader**

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet and its Annex [if required according to Regulation (EC) 1907/2006 (REACH)] is to describe the products in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.

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