

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 Fe₃O₄

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 substance**

Triiron Tetraoxide Fe₃O₄

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 CO₂.

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**

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : General industrial hygiene practice.
When using do not eat, drink or smoke. Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing before reusing.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep containers tightly closed in a dry, cool and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : No materials to be especially mentioned.

Further information on storage stability : Keep in a dry place. No decomposition if stored and applied as directed.

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
Piiox K318M	DNEL DNEL	Long term Inhalation Long term Inhalation	10 mg/m ³ 3 mg/m ³	Workers Workers	Systemic Local
Conclusion/Summary		: Dust Inhalable 10 mg/m ³ , Respirable dust 3 mg/m ³			

Predicted No Effect Concentration (PNEC)

Ingredient name	Compartment Detail	Value	Method Detail	Remarks
Piiprox K318M				
Conclusion/Summary : 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.

Water : The product should not be allowed to enter drains, water courses or the soil.

Section 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

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 :	At temperatures >80°C the product may become unstable and oxidize.
Boiling point/boiling range :	
Flash point :	No data available
Evaporation rate :	No data available
Flammability (solid, gas)	No data available
Upper explosion limit :	No data available
Lower explosion limit :	No data available
Vapour pressure :	No data available
Relative vapour density :	No data available
Partition coefficient: n-octanol/water :	No data available
Ignition temperature :	No data available
Viscosity:	No data available

9.2 Other information

No additional information.

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.

10.4 Conditions to avoid

At temperatures >80°C the product may become unstable and oxidize.

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	-	

Irritation/Corrosion

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

Eyes : Non-irritating. *Test results of 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.

Germ cell mutagenicity : Not classified based on available information.

Carcinogenicity : Not classified based on available information.

Reproductive toxicity : Not classified based on available information.

STOT - single exposure : Not classified based on available information.

STOT - repeated exposure : Not classified based on available information.

Aspiration toxicity : Not classified based on available information.

Section 12: Ecological information**12.1 Toxicity**

Product/ ingredient name	Test	Result	Species	Exposure
Piiox K318M	EU 440/2008-C.2	Acute EC0 >10.000 mg/l	Daphnia-Daphnia magna	48 hours
	OECD Test Guideline 203	Acute LC0 >10.000 mg/l	Fish - Danio rerio	96 hours
	OECD guideline 209	Acute EC50 >10.000 mg/l	activated sludge	3hours

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

: 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 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

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	-----	-----	-----	-----
14.2 UN proper shipping name	-----	-----	-----	-----
14.3 Transport hazard class(es)/ Marks	-----	-----	-----	-----
14.4 Packing group	-----	-----	-----	-----
14.5 Environmental hazards	No.	No.	No.	No.
14.6 Special precautions for user/Additional information	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.

International Chemical Weapons Convention (CWC)**Schedules of Toxic Chemicals and Precursors**

Not applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer

Not applicable.

Water hazard classes : non-hazardous to water

Remark: Classification after AwSV, Annex 1 (2.1)

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 : 01.07.2020****Date of previous issue : 02.02.2017****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.