SAFETY DATA SHEET

Ironoxide Yellow 420

00528234

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Iron Oxide Yellow 420

REACH Substance Name : iron hydroxide oxide yellow

REACH Registration number : 01-2119457554-33-0000

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH,
Kassemuehle 3, D-31196 Sehlem, Germany,
phone: +49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : Not classified.

2.2 Label elements

Hazard pictograms : Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Additional warning phrases : Not applicable.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

C.I. Pigment Yellow 42, FeOOH

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.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if you feel unwell.

Ingestion : No special measures required.

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. Get medical attention if irritation occurs.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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	Remarks
Iron hydroxide oxide yellow	DNEL	Long term Inhalation	10 mg/m³	Workers	Systemic	Inhalable Dust
	DNEL	Long term Inhalation	10 mg/m³	Workers	Local	Inhalable Dust

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted No Effect Concentration (PNEC)				
Ingredient name	**Compartment Detail**	**Value**	**Method Detail**	**Remarks**
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

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection **:** Recommended: Dust-protection mask

Hand protection **:** Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures **:** 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [Powder.]

Colour : Yellow.

Odour : Odourless.

Important health, safety and environmental information

pH : 3,5 to 7,5 [Conc. (% w/w): 5%]

Melting point : >1000°C (>1832°F)

Density : 4 kg/L (20°C)

Bulk density : 300 to 1000 kg/m³

Solubility : <0,000001 g/l (water)
Insoluble in the following materials: cold water

Decomposition temperature : 180°C

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 :

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
Iron hydroxide oxide yellow	LD50 Oral	-	Rat	>10000 mg/kg	-	-

Iron hydroxide oxide yellow	LC50 Inhalation Dusts and mists	-	Rat	>195 g/m³	6 hours	-
	LC50 Inhalation Dusts and mists	-	Rat	>195 mg/m³	2 weeks	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Test
Iron hydroxide oxide yellow	Eyes - Oedema of the conjunctivae	Rabbit	0	50 mg	-
	Skin - Oedema	Rabbit	0	24 hours 500 mg	-

Skin : Non-irritating

Eyes : Non-irritating

Sensitiser

Product/ingredient name	Route of exposure	Species	Result	Test description
Iron hydroxide oxide yellow	skin	Guinea pig	Not sensitizing	-

Skin : Iron hydroxide oxide yellow:Not sensitizing

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
Iron hydroxide oxide yellow	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >100000 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 (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

Not available.

12.4 Mobility in soil

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, labelled, 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 minimised 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	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

Annex XIV

None of the components are listed.

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 : **2013-07-16**

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◤ Indicates information that has changed from previously issued version.

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.

SAFETY DATA SHEET

Ironoxide Yellow 930

00528234

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Iron Oxide Yellow 930

REACH Substance Name : iron hydroxide oxide yellow

REACH Registration number : 01-2119457554-33-0000

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH,
Kassemuehle 3, D-31196 Sehlem, Germany,
phone: +49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : Not classified.

2.2 Label elements

Hazard pictograms : Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Additional warning phrases : Not applicable.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

C.I. Pigment Yellow 42, FeOOH

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.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if you feel unwell.

Ingestion : No special measures required.

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. Get medical attention if irritation occurs.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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	Remarks
Iron hydroxide oxide yellow	DNEL	Long term Inhalation	10 mg/m³	Workers	Systemic	Inhalable Dust
	DNEL	Long term Inhalation	10 mg/m³	Workers	Local	Inhalable Dust

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted No Effect Concentration (PNEC)				
Ingredient name	**Compartment Detail**	**Value**	**Method Detail**	**Remarks**
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

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection **:** Recommended: Dust-protection mask

Hand protection **:** Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures **:** 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [Powder.]

Colour : Yellow.

Odour : Odourless.

Important health, safety and environmental information

pH : 3,5 to 7,5 [Conc. (% w/w): 5%]

Melting point : >1000°C (>1832°F)

Density : 4 kg/L (20℃)

Bulk density : 300 to 1000 kg/m³

Solubility : <0,000001 g/l (water)
Insoluble in the following materials: cold water

Decomposition temperature : 180°C

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 :

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
Iron hydroxide oxide yellow	LD50 Oral	-	Rat	>10000 mg/kg	-	-

Iron hydroxide oxide yellow	LC50 Inhalation Dusts and mists	-	Rat	>195 g/m³	6 hours	-
	LC50 Inhalation Dusts and mists	-	Rat	>195 mg/m³	2 weeks	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Test
Iron hydroxide oxide yellow	Eyes - Oedema of the conjunctivae	Rabbit	0	50 mg	-
	Skin - Oedema	Rabbit	0	24 hours 500 mg	-

Skin : Non-irritating

Eyes : Non-irritating

Sensitiser

Product/ingredient name	Route of exposure	Species	Result	Test description
Iron hydroxide oxide yellow	skin	Guinea pig	Not sensitizing	-

Skin : Iron hydroxide oxide yellow:Not sensitizing

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
Iron hydroxide oxide yellow	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >100000 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 (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

Not available.

12.4 Mobility in soil

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, labelled, 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 minimised 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	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

Annex XIV

None of the components are listed.

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 : **2013-07-16**

Date of previous issue : **2013-02-01**

Version : 5

◤ Indicates information that has changed from previously issued version.

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.

SAFETY DATA SHEET

Ironoxide Red 110

00006246

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ironoxide Red 110

REACH Substance Name : diiron trioxide

REACH Registration number : 01-2119457614-35-0000

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

Uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH
Kassemuehle 3, D-31196 Sehlem, Germany
phone: *49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Fe2O3

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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
diiron trioxide	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	3 mg/m³	Workers	Local

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted effect concentrations				
Ingredient name	**Type**	**Compartment Detail**	**Value**	**Method Detail**
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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Red.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 8 [Conc. (% w/w): 5%]

Melting point : 1565°C (2849°F)

Density : 5,25 kg/L (20 °C)

Solubility : <0,000001 g/l (water)

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 : No specific data.

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
diiron trioxide	LD50 Oral -	Rat	>5000 mg/kg	-	-
diiron trioxide	LC50 Inhalation Dusts and mists -	Rat	>210 mg/m³	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
diiron trioxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
diiron trioxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

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
diiron trioxide	ISO 8192	Acute EC50 >10000 mg/l	-	Micro-organism - activated sludge	3 hours
	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	-	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >50000 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 (K_{OC}) : 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.

Remarks : No known significant effects or critical hazards. Iron oxide is an inorganic pigment potentially no polluter. LXS

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

Date of issue : **2011-03-25**

Date of previous issue : **2011-03-24**

Version : **2.01**

Indicates information that has changed from previously issued version.

Notice to reader

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.

SAFETY DATA SHEET

Ironoxide Red 130

00006246

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ironoxide Red 130

REACH Substance Name : diiron trioxide

REACH Registration number : 01-2119457614-35-0000

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

Uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH
Kassemuehle 3, D-31196 Sehlem, Germany
phone: *49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Fe2O3

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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
diiron trioxide	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	3 mg/m³	Workers	Local

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted effect concentrations				
Ingredient name	**Type**	**Compartment Detail**	**Value**	**Method Detail**
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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Red.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 8 [Conc. (% w/w): 5%]

Melting point : 1565°C (2849°F)

Density : 5,25 kg/L (20 °C)

Solubility : <0,000001 g/l (water)

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 : No specific data.

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
diiron trioxide	LD50 Oral -	Rat	>5000 mg/kg	-	-
diiron trioxide	LC50 Inhalation Dusts and mists -	Rat	>210 mg/m³	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
diiron trioxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
diiron trioxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

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
diiron trioxide	ISO 8192	Acute EC50 >10000 mg/l	-	Micro-organism - activated sludge	3 hours
	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	-	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >50000 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 (K_{OC}) : 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.

Remarks : No known significant effects or critical hazards. Iron oxide is an inorganic pigment potentially no polluter. LXS

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

Date of issue : **2011-03-25**

Date of previous issue : **2011-03-24**

Version : **2.01**

Indicates information that has changed from previously issued version.

Notice to reader

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.

SAFETY DATA SHEET

Ironoxide Red 140

00006246

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ironoxide Red 140

REACH Substance Name : diiron trioxide

REACH Registration number : 01-2119457614-35-0000

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

Uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH
Kassemuehle 3, D-31196 Sehlem, Germany
phone: *49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Fe2O3

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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
diiron trioxide	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	3 mg/m³	Workers	Local

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted effect concentrations				
Ingredient name	**Type**	**Compartment Detail**	**Value**	**Method Detail**
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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Red.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 8 [Conc. (% w/w): 5%]

Melting point : 1565°C (2849°F)

Density : 5,25 kg/L (20 °C)

Solubility : <0,000001 g/l (water)

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 : No specific data.

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
diiron trioxide	LD50 Oral -	Rat	>5000 mg/kg	-	-
diiron trioxide	LC50 Inhalation Dusts and mists -	Rat	>210 mg/m³	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
diiron trioxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
diiron trioxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

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
diiron trioxide	ISO 8192	Acute EC50 >10000 mg/l	-	Micro-organism - activated sludge	3 hours
	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	-	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >50000 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 (K_{OC}) : 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.

Remarks : No known significant effects or critical hazards. Iron oxide is an inorganic pigment potentially no polluter. LXS

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

Date of issue : **2011-03-25**

Date of previous issue : **2011-03-24**

Version : **2.01**

Indicates information that has changed from previously issued version.

Notice to reader

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.

SAFETY DATA SHEET

Ironoxide Red 180

00006246

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ironoxide Red 180

REACH Substance Name : diiron trioxide

REACH Registration number : 01-2119457614-35-0000

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

Uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH
Kassemuehle 3, D-31196 Sehlem, Germany
phone: *49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Fe2O3

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : 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
diiron trioxide	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	3 mg/m³	Workers	Local

Conclusion/Summary : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted effect concentrations				
Ingredient name	**Type**	**Compartment Detail**	**Value**	**Method Detail**
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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Red.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 8 [Conc. (% w/w): 5%]

Melting point : 1565°C (2849°F)

Density : 5,25 kg/L (20 °C)

Solubility : <0,000001 g/l (water)

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 : No specific data.

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
diiron trioxide	LD50 Oral -	Rat	>5000 mg/kg	-	-
diiron trioxide	LC50 Inhalation Dusts and mists -	Rat	>210 mg/m³	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
diiron trioxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
diiron trioxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

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
diiron trioxide	ISO 8192	Acute EC50 >10000 mg/l	-	Micro-organism - activated sludge	3 hours
	OECD 202 *Daphnia* sp. Acute Immobilization Test	Acute EC50 >100 mg/l	-	Daphnia - Daphnia magna	48 hours
	-	Acute LC0 >50000 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 (K_{OC}) : 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.

Remarks : No known significant effects or critical hazards. Iron oxide is an inorganic pigment potentially no polluter. LXS

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

Date of issue : **2011-03-25**

Date of previous issue : **2011-03-24**

Version : **2.01**

Indicates information that has changed from previously issued version.

Notice to reader

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.

SAFETY DATA SHEET

Chrome Oxide Green

05601126

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Chrome Oxide Green

REACH Substance Name : chromium oxide

REACH Registration number : 01-2119433951-39-0000

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : **Kreidezeit Naturfarben GmbH**
Kassemuehle 3, D-31196 Sehlem, Germany,
phone: +49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650, Kreidezeit Naturfarben GmbH
(only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

Cr_2O_3

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
chromium oxide	REACH #: 01-2119433951-39 EC: 215-160-9 CAS: 1308-38-9	98.5 - 99.5	Not classified. **See section 16 for the full text of the R-phrases declared above**	Not classified. **See Section 16 for the full text of the H statements declared above.**

Occupational exposure limits, if available, are listed in Section 8.

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient name	Occupational exposure limits
chromium oxide	**EU OEL (Europe, 12/2009).** TWA: 2 MG/M3 8 hour(s).

Derived effect levels

Ingredient name	Type	Exposure	Value	Population	Effects
chromium oxide	DNEL	Short term Inhalation	2 mg/m³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m³	Workers	Local
	DNEL	Long term Inhalation	0,5 mg/m³	Consumers	Local

Conclusion/Summary : Not available.

Predicted effect concentrations

Ingredient name	Type	Compartment Detail	Value	Method Detail
Cr III	PNEC	soil	3,2 mg/kg dwt	-
	PNEC	Sewage Treatment Plant	10 mg/l	-
	PNEC	Marine water sediment	1,31 mg/kg dwt	-
	PNEC	Marine water	0,0047 mg/l	-
	PNEC	Intermittent release.	0,0047 mg/l	-
	PNEC	Fresh water sediment	18,2 mg/kg dwt	-
	PNEC	Fresh water	0,0047 mg/l	-

Conclusion/Summary : Not available.

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

Ingredient name	Occupational exposure limits

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Green.

Odour : Odourless.

Important health, safety and environmental information

pH : 5 to 7 [Conc. (% w/w): 5%]

Boiling point : 4000 °C (1013 hPa)

Melting point : 2435°C (4415°F)

Density : 5,2 kg/L (20 °C)

Solubility : 0,00000313 Cr III g/l (water, pH 6)

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 : No specific data.

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
chromium oxide	LD50 Oral	-	Rat	>5000 mg/kg	-	OECD 401 Acute Oral Toxicity
chromium oxide	LC50 Inhalation Dusts and mists	-	Rat	>5,41 mg/l	4 hours	OECD 403 Acute Inhalation Toxicity

Irritation/Corrosion

Skin : chromium oxide:Non-irritating

Eyes : chromium oxide:Non-irritating

Respiratory : chromium oxide:Non-irritating

Sensitiser

Product/ingredient name	Route of exposure	Species	Result	Test description
chromium oxide	skin	Guinea pig	Not sensitizing	406 Skin Sensitization

Skin : chromium oxide:Not sensitizing

Respiratory : chromium oxide:Not sensitizing

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
chromium oxide	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative

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
chromium oxide	ISO 8192	Acute EC50 >10000 mg/l	-	Bacteria - Activated sludge	3 hours
	ISO 7346-1	Acute LC50 >10000 mg/L Fresh water	-	Fish - Danio rerio	96 hours

Product/ingredient name	Test	Result	Species	Exposure

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 (K_{OC}) : 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 : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

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, labelled, 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 minimised 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 dry.
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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

Date of issue : **2011-10-11**

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Version : **3**

Indicates information that has changed from previously issued version.

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.

SAFETY DATA SHEET

Ironoxide Brown 610

00005517

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ironoxide Brown 610

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH,
Kassemuehle 3, D-31196 Sehlem, Germany,
phone: +49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

Classification according to Directive 1999/45/EC [DPD]

Classification : 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

Other hazards which do not result in classification : Not available.

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mixture

Mixture of: Fe_2O_3 , Fe_3O_4 and FeO(OH)

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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. 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. 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)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limit values : Not available.

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

Technical measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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. 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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Brown.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 7 [Conc. (% w/w): 5%]

Melting point : >1000°C (>1832°F)

Density : 4,4 kg/L (20 °C)

Solubility : Insoluble in the following materials: cold water

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 above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, 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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
BAYFERROX 610	LD50 * Oral	Rat	>5000 mg/kg	-	-

*Test results on an analogous product

Acute toxicity estimates

Not available.

Irritation/Corrosion

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

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

SECTION 12: Ecological information

12.1 Toxicity

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 (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Not available.

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects

Other adverse effects : Not available.

AOX : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification

History

Date of issue : **2012-03-02**
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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.

SAFETY DATA SHEET

Ironoxide Black

00249394

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : **Ironoxide Black**

REACH Substance Name : triiron tetraoxide

REACH Registration number : 01-2119457646-28-0000

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

Suitable uses : Colorants (pigments and dyestuffs), inorganic

1.3 Details of the supplier of the safety data sheet

Supplier : Kreidezeit Naturfarben GmbH,
Kassemuehle 3, D-31196 Sehlem, Germany,
phone: +49-(0)5060-6080650, E-mail: info@kreidezeit.de

1.4 Emergency telephone number : +49-(0)5060-6080650 (only during opening times)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification : Not classified.

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

Classification : 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

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

SECTION 3: Composition/information on ingredients

Product definition (REACH) : Mono-constituent substance

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.

Ingestion : No special measures required.

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.

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_2.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters : Not applicable.

Special protective equipment 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 : Do not store above the following temperature: 80°C (176°F). No special measures required.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : 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	Remarks
triiron tetraoxide	DNEL	Long term Inhalation	10 mg/m³	Workers	Local	Inhalable Dust
	DNEL	Long term Inhalation	3 mg/m³	Workers	Local	Respirable dust

Conclusion/Summary	:	DNEL : Dust Inhalable 10 mg/m³ , Respirable dust 3 mg/m³

Predicted effect concentrations

Ingredient name	Type	Compartment Detail	Value	Method Detail	Remarks

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Risk management measures

Occupational exposure controls

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.

Personal protection measures

Respiratory protection : Recommended: Dust-protection mask

Hand protection : Recommended: gloves

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.

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.

Environmental exposure controls

Technical measures : 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Physical state : Solid. [powders]

Colour : Black.

Odour : Odourless.

Important health, safety and environmental information

pH : 4 to 8 [Conc. (% w/w): 5%]

Melting point : 1597°C (2906,6°F)

Density : 5,17 kg/L (20 °C)

Solubility : <0,000001 g/l (water)

Decomposition temperature : >80°C

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 above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, 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
triiron tetraoxide	LD50 Oral	-	Rat	>5000 mg/kg	-	-

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
triiron tetraoxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

Product/ingredient name	Test	Experiment	Result
triiron tetraoxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

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
triiron tetraoxide	EU C.2	Acute EC0 >10000 mg/l	-	Daphnia - Daphnia magna	48 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC0 >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 (K_{OC}) : 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.

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, labelled, 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 minimised 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 XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

History

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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.