

Safety Data Sheet as per regulation (EC) 1907/2006

Commercial Product Name: Kimpigment Iron Oxide Brown

Revision date: 01.07.2013

Version: 1.0/en

Print date: 01.07.2013



1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Commercial Product Name **Kimpigment Iron Oxide Brown**

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

Relevant identified uses Paints, Coating, Paving stone, Roofing Tile, Bricks, Concrete block

Details of the supplier of the safety data sheet

Manufacturer Kimix Chemical Co., Ltd.
Add:Rm. 501, Hongshi Mansion, No. 225 Chaowang Rd.
RC- Hangzhou 310015, China
Telephone: +86 571 8839 2380
FAX: +86 571 8839 0023
Internet: www.kimix.com.cn

2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 According to CLP criteria and based on the available data the product does not need to be classified.

Classification according to Directive 67/548/EEC / 1999/45/EEC According to EC directives and based on the available data the product does not need to be classified.

Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] According to CLP criteria and based on the available data the product does not need to be labelled.

Other hazards

Particular information pertaining specific risk for human / environment Health injuries are not known or expected under normal use.
Ecological injuries are not known or expected under normal use.

3. Composition/information on ingredients

Chemical characterization pigment mixture
Contains:
diiron trioxide (CAS RN 1309-37-1, EINECS No. 215-168-2, REACH RN 01-2119457614-35-0075)
triiron tetraoxide (CAS RN 1317-61-9, EINECS No. 215-277-5, REACH RN 01-2119457646-28-0025)

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4. First aid measures

Description of first aid measures

General advice	Get medical advice/attention if you feel unwell.
If inhaled	Remove casualty to fresh air and keep warm and at rest.
In case of skin contact	After contact with skin, wash immediately with plenty of water and soap.
In case of eye contact	In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed	Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms	The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.
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Indication of any immediate medical attention and special treatment needed

Immediate medical attention	First Aid, decontamination, treatment of symptoms.
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5. Firefighting measures

Extinguishing media

Suitable extinguishing media	The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases	No hazards to be specially mentioned.
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Advice for firefighters

Special protective equipment for firefighting	In case of fire: Wear self-contained breathing apparatus.
Additional information on firefighting	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protection equipment. (see chapter 8).
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Environmental precautions

Environmental precautions	Do not allow uncontrolled discharge of product into the environment.
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Methods and material for containment and cleaning up

Methods for cleaning up	Avoid dust formation. Take up mechanically, placing in appropriate containers for disposal.
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Reference to other sections

Reference to other sections	Personal protection equipment: see section 8 Disposal: see section 13
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7. Handling and storage

Precautions for safe handling

Advice on safe handling

Avoid generation of dust. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation as well as local exhaustion at critical locations. Avoid contact with skin and eyes.

Advice on protection against fire and explosion

Usual measures for fire prevention. Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Conditions for safe storage, including any incompatibilities

Storage space and container requirements

Store in a dry place. Store in a closed container. Recommended storage temperature: at room temperature

Specific end use(s)

Specific use(s)

See chapter 1

8. Exposure controls/personal protection

Control parameters

diiron trioxide

Denmark

Value / mg/m ³	Remarks	Source
3,5	beregnet som Fe	21

21 – Grænseværdier for stoffer og materialer – 28. marts 2008

Norway

Value / mg/m ³	Note	Source
3	(beregnet som Fe)	17

17 – Veiledning om administrative normer for forurensning i arbeidsatmosfære Oktober 2010

Sweden

Long-term exposure value/ mg/m ³	Note	Remarks	Source
3,5	(som Fe)	respirabelt damm	25

25 – HYGIENISKA GRÄNSVÄRDEN OCH ÅTGÄRDER MOT LUFTFÖRORENINGAR 2007:2

Finland

Remarks	Source
Fe, huurut	23

23 – HTTP-arvot 2009:11 HAITALLISIKSI TUNNETUT PITOISUUDET

Poland

Short-term exposure value / mg/m ³	Long-term exposure value/ mg/m ³	Maximum admissible concentration /mg/m ³	Source
10	5	–	28

28 – ROZPORZADZENIE MINISTRA PRACY I POLITYKI SPOLECZNEJ1) z dnia 16 czerwca 2009 r. zmieniajace rozporzadzenie w sprawie najwyzszych dopuszczalnych stezen i natezen czynnikow szkodliwych dla zdrowia w srodowisku pracy

Austria

Area of validity	Long-term exposure value/ mg/m ³	Short-term exposure value / mg/m ³	Duration	Frequency per shift	Source
MAK	10 E 5 A	20 E 10 A	60(Miw)	2x	15

15 – Stoffliste (MAK-Werte und TRK-Werte 2007)

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Switzerland

Long-term exposure value/ mg/ m3	Remarks	Source
3a	NIOSHs. Anhang 1.3.6.	26

26 – Grenzwerte am Arbeitsplatz 2011 (SUVA)

USA (ACGIH)

Remarks	Long-term value	Basis	Source
Not classifiable as a Human Carcinogen Respirable fraction	5 mg/m ³	Pneumoconiosis	27

27 – ACGIH Threshold Limit Values for Chemical Substances 2008

Spain

Long-term exposure value/ mg/ m3	Remarks	Source
5	como Fe (polvo y humos)	22

22 – Límites de exposición profesional para Agentes Químicos 05/2010

France

Long-term exposure value/ mg/m3	Remarks	TMP n°	Source
10			20
5	fumées, en Fe	44, 44 bis, 94	20

20 – Valeurs limites d'exposition professionnelle aux agents chimiques en France (Juin 2008)

Belgium

Long-term exposure value/ ppm	Long-term exposure value/ mg/m3	Remarks	Source
2	5	en Fe	35

35 – Liste de valeurs limites d'expositions professionnelle aux agents chimiques (11.06.2009)

Great Britain

Long-term exposure value/ mg/m3	Remarks	Short-term exposure value / mg/m3	Source
10	total inhalable		19
4	respirable		19
5	(as Fe) , fume	10	19

19 – EH40/200 Workplace exposure limits (October 2007)

Ireland

Long-term exposure value/ mg/m3	Short-term exposure value / mg/m3	Note	Source
5	10	as Fe	32
10		total inhalable dust	32
4		respirable dust	32

32 – Code of Practice for the Safety Health and Welfare at Work (2011)

Hungary

Long-term exposure value/ mg/m3	Source
6 resp	31

31 – 25/2000. (IX. 30.) EüM-SzCsM együttes rendelet a munkahelyek kémiai biztonságáról

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Estonia

Long-term exposure value/ mg/m ³	Remarks	Source
3,5	1, peentolm, arvutatud rauale	29
3,5	peentolm, arvutatud rauale Peentolm on kogu tolmu kopsu jõudev osa	29

29 – Töökeskkonna keemiliste ohutegurite piirnormid 11.10.2007 nr 223 (RT I 2007, 55, 369) 1.01.2008

Lithuania

Remarks	Short-term exposure value / mg/m ³	Source
kaip Fe alveolinū frakcija	3,5	36

36 – del LIETUVOS HIGIENOS NORMOS HN 23:2007 □CHEMINIU MED□IAGU PROFESINIO POVEIKIO RIBINIAI DYD□IAI. MATAVIMO IR POVEIKIO vertinimo BENDRIEJI REIKALAVIMAI□ patvirtinimo

Bulgaria

Long-term exposure value/ mg/m ³	Source
5	81

81 – 81

Greece

Long-term exposure value/ mg/m ³	Short-term exposure value / mg/m ³	Source
10	10	80

80 – 80

triiron tetraoxide

Austria

Area of validity	Long-term exposure value/ mg/m ³	Short-term exposure value / mg/m ³	Duration	Frequency per shift	Source
MAK	10 E 5 A	20 E 10 A	60(Miw)	2x	15

15 – Stoffliste (MAK-Werte und TRK-Werte 2007)

Exposure controls

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Half mask with a particle filter P2 (EN 143).

Hand protection

Wear suitable gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection

Wear eye glasses with side protection according to EN 166.

Skin and body protection

Wear suitable protective clothing.

General protective and hygiene measures

When using do not eat, drink or smoke. Avoid contact with skin and eyes. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

Engineering measures

Comply with occupational limit values for dust. Provide adequate ventilation as well as local exhaust at critical locations.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state

solid

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Form	Powder
Colour	brown
Odour	odourless The product has not been tested. The statement is derived from the properties of the single components.
Odour threshold	not applicable
pH	ca. 4 – 7
Concentration:	100 g/l
Melting point [°C]	1565 °C (diiron trioxide) 1597 °C (triiron tetraoxide) The product has not been tested. The statement is derived from the properties of the single components.
Boiling point [°C]	> 300 °C The product has not been tested. The statement is derived from the properties of the single components.
Flash point [°C]	not applicable
Evaporation rate [kg/(s*m ²)]	not applicable
Flammability	Non-flammable. The product has not been tested. The statement is derived from the properties of the single components.
Risk of explosion.	not explosive. The product has not been tested. The statement is derived from the properties of the single components.
Vapour pressure [kPa]	not applicable
Density [g/cm ³]	4.4 – 4.8
Relative density	No data available
Relative density of a vapour / air mixture (saturated)	Not applicable.
Water solubility [g/l]	< 0.000001 g/l Fe The product has not been tested. The statement is derived from the properties of the single components.
Partition coefficient n-octanol /water (log P O/W)	not applicable
Autoignition temperature [°C]	> 400 °C The product has not been tested. The statement is derived from the properties of the single components.
Decomposition temperature [°C]	No data available
Viscosity, dynamic [kg/(m*s)]	not applicable
Oxidation	Not oxidising. The product has not been tested. The statement is derived from the properties of the single components.
Other information	
Other data	Particle size (µm): 0.4 µm The product has not been tested. The statement is derived from the properties of the single components.

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10. Stability and reactivity

Reactivity

Reactivity Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

Chemical stability

Chemical stability Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

Possibility of hazardous reactions

Hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid

Conditions to avoid Protect from moisture. Protect from heat and direct sunlight.

Incompatible materials

Materials to avoid No special restrictions on storage with other products.

Hazardous decomposition products

Hazardous decomposition products No data available

11. Toxicological information

Information on toxicological effects

Oral toxicity [mg/kg] Virtually nontoxic after a single ingestion. The product has not been tested. The statement is derived from the properties of the single components.
LD50 > 2000 mg/kg (diiron trioxide)
LD50 > 2000 mg/kg (triiron tetraoxide)

Dermal toxicity [mg/kg] No data available

Inhalative toxicity [mg/l]

Value	Exposure duration	Remarks
LC50 > 24.2 mg/m ³ (triiron tetraoxide)	2 h	Virtually nontoxic by a single inhalative exposure. The product has not been tested. The statement is derived from the properties of the single components.

Irritant effect on skin Not an irritant.
The product has not been tested. The statement is derived from the properties of the single components.

Irritant effect on eyes Not an irritant.
The product has not been tested. The statement is derived from the properties of the single components.

Irritant effect on the respiratory tract Not an irritant.
The product has not been tested. The statement is derived from the properties of the single components.

Sensitization not sensitising.
The product has not been tested. The statement is derived from the properties of the single components.

Carcinogenic effects No data available

Mutagenicity Ames test negative.
Gene-mutations mammalian cells (V79 cells, OECD 476): negative.
Chromosomal aberrations mammalian cells (OECD 473): negative.

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The product has not been tested. The statement is derived from the properties of the single components.

Reproduction toxicity No data available

Specific target organ toxicity (single exposure) [mg/kg] No data available

Specific target organ toxicity (repeated exposure) [mg/kg]

Value	Test species	Exposure duration	Remarks
NOAEC 4.7 mg/m ³ (triiron tetraoxide)	Rat.	Subchronic inhalation toxicity (6 h/day, 5 days/week, 13 weeks)	The product has not been tested. The statement is derived from the properties of the single components.

Aspiration hazard not applicable

12. Ecological information

Toxicity

Toxicity to fish [mg/l]

Value	Test species	Exposure duration
There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement is derived from the properties of the single components.		
LC50 > 50000 mg/l (diiron trioxide)	Brachydanio rerio (zebra-fish)	96 h
LL0 > 10000 mg/l (triiron tetraoxide)	Brachydanio rerio (zebra-fish)	96 h

Toxicity to daphnia [mg/l]

Value	Test species	Exposure duration
There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement is derived from the properties of the single components.		
EC50 > 100 mg/l (diiron trioxide)	Daphnia magna (Big water flea).	48 h
ELO > 10000 mg/l	Daphnia magna (Big water flea).	48 h

Toxicity to algae [mg/l] no data available

Persistence and degradability

Biodegradability Not applicable. Product/Substance is inorganic.

Bioaccumulative potential

Bioaccumulation No indication of bioaccumulation potential. The product has not been tested. The statement is derived from the properties of the single components.

Mobility in soil

Distribution in the environment Not expected to adsorb on soil. The product has not been tested. The statement is derived from the properties of the single components.

Results of PBT and vPvB assessment

Results of PBT characteristics determination Not applicable. Product/Substance is inorganic.

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Other adverse effects

Further information on ecology Do not allow uncontrolled discharge of product into the environment.

13. Disposal considerations

Waste treatment methods

Disposal considerations Dispose according to legislation. Observe in addition any national regulations!

Uncleaned empty packaging Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of.

14. Transport information

	Land transport ADR/RID	Marine transport IMDG/ GGVSee	Air transport ICAO/IATA
Remarks	No dangerous good in sense of this transport regulation.	No dangerous good in sense of this transport regulation.	No dangerous good in sense of this transport regulation.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Additional regulations Observe in addition any national regulations!

Water hazard class (self-classification) non-hazardous to water (nwg)

Chemical safety assessment

Safety assessment For the following substances of this mixture a chemical safety assessment has been carried out:
diiron trioxide (CAS RN 1309-37-1, EINECS No. 215-168-2, RECh RN 01-2119457614-35-0075)
triiron tetraoxide (CAS RN 1317-61-9, EINECS No. 215-277-5, RECh RN 01-2119457646-28-0025)

16. Other information

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.