

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

Commercial Product Name: Kimpigment Iron Oxide Orange

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 Orange**

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)

iron hydroxide oxide (CAS RN 20344-49-4, EINECS No. 257-098-5, REACH RN 01-2119457554-33-0021)

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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. |
|----------|---|

Indication of any immediate medical attention and special treatment needed

| | |
|-----------------------------|--|
| Immediate medical attention | First Aid, decontamination, treatment of symptoms. |
|-----------------------------|--|

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. |
|------------------------------|---|

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. |
|---|---------------------------------------|

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). |
|----------------------|--|

Environmental precautions

| | |
|---------------------------|--|
| Environmental precautions | Do not allow uncontrolled discharge of product into the environment. |
|---------------------------|--|

Methods and material for containment and cleaning up

| | |
|-------------------------|---|
| Methods for cleaning up | Avoid dust formation. Take up mechanically, placing in appropriate containers for disposal. |
|-------------------------|---|

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

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 |
| Form | Powder |
| Colour | orange |
| Odour | odourless The product has not been tested. The statement is derived from the properties of the single components. |
| Odour threshold | not applicable |

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| | |
|--|---|
| pH | ca. 3.5 – 7 |
| Concentration: | 100 g/l |
| Melting point [°C] | 1565 °C (diiron trioxide) 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] | 4.1 |
| 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. |

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.

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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 (iron hydroxide oxide)

Dermal toxicity [mg/kg] No data available

Inhalative toxicity [mg/l]

| Value | Exposure duration | Remarks |
|-------------------------------|-------------------|---|
| LC50 > 24.2 mg/m ³ | 2 h | Virtually nontoxic by a single inhalative exposure. The product has not been tested. By analogy. (triiron tetraoxide) |

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.

Remarks: The product has not been tested. Substance related information: diiron trioxide.

Gene-mutations mammalian cells (V79 cells, OECD 476): negative.

Remarks: The product has not been tested. By analogy. (triiron tetraoxide)
Chromosomal aberrations mammalian cells (OECD 473): negative.

Remarks: The product has not been tested. By analogy. (triiron tetraoxide)

Reproduction toxicity No data available

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

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

| Value | Test species | Exposure duration | Remarks |
|-----------------------------|--------------|---|---|
| NOAEC 4.7 mg/m ³ | Rat. | Subchronic inhalation toxicity (6 h/day, 5 days/week, 13 weeks) | The product has not been tested. By analogy. (triiron tetraoxide) |

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 |
| LC50 > 100000 mg/l (iron hydroxide oxide) | 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 |
| EC50 > 100 mg/l (iron hydroxide oxide) | 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.

Other adverse effects

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

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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, REACH RN 01-2119457614-35-0075)
iron hydroxide oxide (CAS RN 20344-49-4, EINECS No. 257-098-5, REACH RN 01-2119457554-33-0021)

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.