# SAFETY DATA SHEET

LANXESS
Energizing Chemistry

BAYFERROX 360

06480853

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

**1.1 Product identifier**

**Product name** : BAYFERROX 360

**REACH Substance Name** : triiron tetraoxide

**REACH Registration number** : 01-2119457646-28

**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** : LANXESS Distribution GmbH, Katzbergstr. 1
D-40764 Langenfeld
Telephone: +49 2173 2033 0 Fax: +49 2173 2033 108
E-mail: info@lanxess-distribution.com

**1.4 Emergency telephone number** : 0870 190 6777. National Chemical Emergency Centre

## 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** : Not available.

# 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. 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**

| Ingredient name | Occupational exposure limits |
|---|---|

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|---|---|
| triiron tetraoxide | **EH40/2005 WELs (United Kingdom (UK), 8/2007).**<br>STEL: 10 mg/m³, (as Fe) 15 minute(s). Form: Fume<br>TWA: 5 mg/m³, (as Fe) 8 hour(s). Form: Fume |

**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** : 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** : Black.

**Odour** : Odourless.

**Important health, safety and environmental information**

**pH** : 4 to 8 [Conc. (% w/w): 10%]

**Melting point** : >1000°C (>1832°F)

**Density** : 4,6 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 360 | LD50 Oral | * | Rat | >5000 mg/kg | - | - |

*Test results on an analogous product

**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<br>Subject: Bacteria | Negative |

# 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 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**

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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.***