

SAFETY DATA SHEET

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Die in diesem Produktdatenblatt genannten Spezifikationen dienen nur zur Produktbeschreibung und beziehen sich auf den Zeitpunkt unmittelbar nach der Produktion bzw. Import des Produktes. Sie entsprechen den Angaben des Herstellers. Eine rechtsverbindliche Zusicherung bestimmter Eigenschaften oder der Eignung für einen bestimmten Einsatzzweck kann hieraus nicht abgeleitet werden. Durch unsachgemäßen Transport und / oder unsachgemäße Lagerung können sich Änderungen ergeben. Die Angaben in diesem Produktdatenblatt entbinden den Verarbeiter nicht von eigener Prüfung der Eigenschaften des Produktes und dessen Eignung für die vorgesehene Verwendung.

| Trade name: Manganese Blue | | | Prin | t date: 03.11.23 |
|--|-------------------------|-----------------|---------------|------------------|
| | Version: | 9 / DE | Date revis | ed: 19.10.2023 |
| | Replaces | s Version: 8 | / DE | |
| | | | | |
| SECTION 1: Identification of the subst | ance/mixture and of | the compan | y/undertaking | |
| 1.1. Product identifier | | | | |
| Manganese Blue | | | | |
| 1.2. Relevant identified uses of the sul | bstance or mixture and | d uses advise | d against | |
| Use of the substance/preparation | | | | |
| Colourant | | | | |
| 1.3. Details of the supplier of the safet | y data sheet | | | |
| Address | | | | |
| Deffner & Johann GmbH Mühläckerstraße 13 | | | | |
| D-97520 Röthlein | | | | |
| Telefon-Nr.: + 49 (0) 9723 Fax-Nr.: + 49 (0) 9723 | | | | |
| E-Mail-Adresse: info@deffner- | | | | |
| | | | | |
| 1.4. Emergency telephone number +49 (0) 9723 9350-0 (Mo - Fr: 7.30 - 1 | 5.00) | | | |
| +49 (0) 9723 9330-0 (100 - F1. 7.30 - 13 | 5.00) | | | |
| SECTION 2: Hazards identification *** | | | | |
| 2.1. Classification of the substance or | mixture | | | |
| This product is not classified hazardou | s in accordance with Re | egulation (EC) | No 1272/2008. | |
| 2.2. Label elements | | | | |
| Hazardous component(s) to be indicated | ted on label (Regulatio | on (EC) No. 12 | 72/2008) | |
| Supplemental information EUH210 | Safety data sh | eet available o | n request | |
| 2.3. Other hazards | | | | |
| Dust loading. Possible dust explosion I | nazard. | | | |
| *** | | | | |
| This substance/mixture does not conta of 0.1% or higher. This substance/mixt bioaccumulative (vPvB) at concentration | ure does not contain co | | | |
| SECTION 3: Composition/information | on ingredients | | | |
| 3.2. Mixtures | | | | |
| Chemical characterization colourant mixture, inorganic/organic co | onstruction | | | |
| Further ingredients | | | | |
| Calcium fluoride | | | | |
| CAS No. Concentration >= | 14542-23-5 = 1 < | 10 | % | |
| Advice: [5] | | | ,. | |
| Note | | | | |
| [5] Substance with EU occupational ex | posure limits | | | |
| SECTION 4: First aid measures | | | | |
| 4.1. Description of first aid measures | | | | |
| General information | | | | |
| In case of persistent symptoms consul- | t doctor. | | | |
| After inhelation | | | | |

After inhalation

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Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

After skin contact

Wash off immediately with soap and water. Consult a doctor if skin irritation persists.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion

Rinse mouth thoroughly with water. Call in a physician immediately and show him the Safety Data Sheet.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

4.2. Most important symptoms and effects, both acute and delayed

Until now no symptoms known so far.

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / treatment Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray jet, Foam

Non suitable extinguishing media Full water jet, Carbon dioxide

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Sulphur oxides; Carbon monoxide (CO); Carbon dioxide (CO2); Nitrogen oxides (NOx); Hydrogen sulfide (H2S); Hydrogen halide; Irritant and harmful combustion products.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear full protective suit.

Other information

Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Do not inhale dust. Use breathing apparatus if exposed to vapours/dust/aerosol. Ensure adequate ventilation. High risk of slipping due to leakage/spillage of product. Use personal protective clothing. Refer to protective measures listed in Sections 7 and 8. Remove persons to safety.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water.

6.3. Methods and material for containment and cleaning up

Avoid raising dust. Pick up mechanically. When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid the formation and deposition of dust. Provide exhaust ventilation if dust is formed. Ensure adequate ventilation. Handle and open container with care. Provide suitable exhaust ventilation at the processing machines. Use breathing apparatus when transferring large quantities without exhaust ventilation facilities. If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Observe the usual precautions for handling

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| chemicals. | | | |
| Advice on protection against fi | e and explosion | | |
| Avoid dust formation. Take acti | on to prevent static | discharges. Earthing necessary orm an explosive mixture with ai | during loading operations. Keep ir. Do not smoke. |
| 7.2. Conditions for safe storage | , including any in | compatibilities | |
| Hints on storage assembly | | | |
| | ls, Oxidising agents | s, Do not store together with food | dstuffs. |
| Further information on storage | | | |
| | | Il-ventilated place. Protect from | direct sunlight. Protect from extreme |
| heat and cold. | | · | Ũ |
| ECTION 8: Exposure controls/p | ersonal protect | ion | |
| 8.1. Control parameters | | | |
| Exposure limit values | | | |
| zinc sulfide | | | |
| List | | BAT-Werte Liste | |
| Туре | MAK | | |
| Value | | mg/m ³ Remarks: Zink und soine anergy | aniachan Varbindungan |
| (alveolengängige Fraktion) | gnancy group. C, | Remarks: Zink und seine anorga | anschen verbindungen |
| zinc sulfide | | | |
| List | MAK- UNC MAK | BAT-Werte Liste | |
| Type Value | MAR 2 | mg/m³ | |
| | — | | anischen Verbindungen (einatembare |
| Calcium fluoride | | | |
| List | 2000/39/E | - | |
| Туре | Indicative | Occupational Exposure Limit (E | U) |
| Value Demorke: Elucridee inergenie | 2,5 | mg/m ³ | |
| Remarks: Fluorides, inorganic | | | |
| Calcium fluoride | | | |
| List Value | TRGS 900 | mg/m ³ | |
| | n resorption / sens | 5 | : Y; Status: 12/2007; Remarks: EU, |
| DFG | | isinoution. It, Troghanoy group | , , otatao. 12/2007, rtomano. 20, |
| Quartz Type | MAK | | |
| Value | 0,05 | mg/m³ | |
| | | emarks: Alveolengängige Fraktic | on, TRGS 559, TRGS- |
| Biological limit values | | | |
| Calcium fluoride | | | |
| List | TRGS 903 | | |
| Value | 7,0 | mg/g creatinine | |
| Parameter | Fluoride | | |
| Testing material | Urine (U) | | |
| Test date | End of ex | posure or end of shift (b) | |
| Calcium fluoride | | | |
| List Value | TRGS 903 4,0 | 3 mg/g | |
| | | creatinine | |
| Parameter | Fluoride | | |
| Testing material Test date | Urine (U) Before ne | xt shift (d) | |
| Other information | | | |

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8.2. Exposure controls

General protective and hygiene measures

Do not inhale dust/fumes/aerosols. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Use barrier skin cream. Observe the usual precautions for handling chemicals. Take off immediately all contaminated clothing.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Particle filter P2; Use breathing apparatus in dust-laden atmosphere.

Hand protection

Protective gloves

Observe the information of the glove manufacturers on permeability and breakthrough times and other workplace requirements.

Eye protection

Safety glasses with side protection shield

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and | I chemical properties |
|--|-----------------------------------|
| Physical state | Powder |
| Colour | see tradename |
| Odour | characteristic |
| Melting point Remarks | not determined |
| Freezing point Remarks | not determined |
| Boiling point or initial boiling point an Remarks | d boiling range not determined |
| Flammability not determined | |
| Upper and lower explosive limits | |
| Remarks | not determined |
| Flash point | |
| Remarks | Not applicable |
| Ignition temperature | |
| Remarks | not determined |
| Decomposition temperature | |
| Remarks | not determined |
| pH value | |
| Remarks | not determined |
| Viscosity | |
| Remarks | not determined |
| Solubility(ies) | |
| Remarks | not determined |
| Partition coefficient n-octanol/water (I | |
| Remarks | not determined |
| Vapour pressure | |
| Remarks | not determined |
| Density and/or relative density | not determined |
| Remarks | not determined |
| Relative vapour density | |
| Remarks | not determined |
| Particle characteristics | |
| Remarks | not determined |
| 9.2. Other information | |
| | |

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| Odour threshold | | | |
| Remarks | not determined | | |
| Evaporation rate (ether = 1) : | | | |
| Remarks | not determined | | |
| Solubility in water Remarks | not determined | | |
| Explosive properties | | | |
| evaluation | not determined | | |
| Oxidising properties Remarks | not determined | | |
| Other information | not determined | | |
| None known | | | |
| ECTION 10: Stability and reactivi | ity | | |
| 10.1. Reactivity | | | |
| Product reacts with: Acids | | | |
| 10.2. Chemical stability | | | |
| No hazardous reactions known. | | | |
| 10.3. Possibility of hazardous rea | actions | | |
| No hazardous reactions known. | | | |
| 10.4. Conditions to avoid | | | |
| Static charges. Dust can form an | explosive mixture with air. Avoid all sources of ignition | n: heat, sparks, open flame. | |
| Decomposition temperature Remarks | not determined | | |
| 10.5. Incompatible materials | | | |
| | ns with strong alkalies and oxidising agents. | | |
| 10.6. Hazardous decomposition p | | | |
| | s (SOx), Hydrogen sulfide (H2S), nitrous oxides (NOx) | , Chlorine compounds | |
| ECTION 11: Toxicological inform | ation | | |
| 11.1 Information on hazard class | es as defined in Regulation (EC) No 1272/2008 | | |
| Acute oral toxicity | | | |
| Remarks | Based on available data, the classification criteria | are not met. | |
| Acute dermal toxicity Remarks | Based on available data, the classification criteria | are not met | |
| Acute inhalational toxicity | Dased on available data, the classification chiena | are not met. | |
| Remarks | Based on available data, the classification criteria | are not met. | |
| Skin corrosion/irritation | | | |
| Remarks | Based on available data, the classification criteria | are not met. | |
| Serious eye damage/irritation Remarks | Based on available data, the classification criteria | are not met. | |
| | Based on available data, the classification criteria | are not met. | |
| Sensitization Remarks | | | |
| Remarks Subacute, subchronic, chronic to | oxicity | | |
| Remarks Subacute, subchronic, chronic tc Remarks | not determined | | |
| Remarks Subacute, subchronic, chronic to | oxicity | to chronic respiratory irritation. | |
| Remarks Subacute, subchronic, chronic to Remarks Remarks Remarks Remarks | not determined Repeated or prolonged inhalation of dust may lead | d to chronic respiratory irritation. e skin irritation. | |
| Remarks Subacute, subchronic, chronic to Remarks Remarks Remarks Remarks Mutagenicity | not determined Repeated or prolonged inhalation of dust may lead Frequent persistent contact with the skin can caus Like any foreign body, particles (dust) can cause n | d to chronic respiratory irritation. e skin irritation. nechanical irritation. | |
| Remarks Subacute, subchronic, chronic to Remarks Remarks Remarks Remarks | not determined Repeated or prolonged inhalation of dust may lead Frequent persistent contact with the skin can caus | d to chronic respiratory irritation. e skin irritation. nechanical irritation. | |

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| Remarks Specific Target Organ Toxicity (ST | Based on available data, the classification criteria a | are not met. |
| Single exposure Remarks | Based on available data, the classification criteria a | are not met. |
| Repeated exposure Remarks | Based on available data, the classification criteria a | are not met. |
| Aspiration hazard Based on available data, the classi | fication criteria are not met. | |
| 11.2 Information on other hazards | | |
| Endocrine disrupting properties w No data available | ith respect to humans | |
| Other information No toxicological data are available. | | |
| ECTION 12: Ecological informatio | n | |
| 12.1. Toxicity | | |
| General information not determined | | |
| 12.2. Persistence and degradability | / | |
| General information not determined | | |
| Biodegradability Remarks | not determined | |
| 12.3. Bioaccumulative potential | | |
| General information not determined | | |
| Partition coefficient n-octanol/wate Remarks | er (log value) not determined | |
| 12.4. Mobility in soil | | |
| General information not determined | | |
| 12.5. Results of PBT and vPvB ass | essment | |
| General information not determined | | |
| Results of PBT and vPvB assessme This substance/mixture does not co of 0.1% or higher. | ent ontain components classified as persistent, bioaccum | ulative and toxic (PBT) at levels |
| This substance/mixture does not co concentrations of 0.1% or higher. | ontain components classified as very persistent and v | very bioaccumulative (vPvB) at |
| 12.6 Endocrine disrupting properti | es | |
| Endocrine disrupting properties w No data available | ith respect to the envrionment | |
| 12.7. Other adverse effects | | |
| General information not determined | | |
| General information / ecology Ecological data are not available. | Do not discharge product unmonitored into the enviro | nment. |
| ECTION 13: Disposal consideratio | ns | |
| 13.1. Waste treatment methods | | |
| Disposal recommendations for the | product | |

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| Product should be taken to a suitable and aut necessary after consultation with the waste d | | |
| Disposal recommendations for packaging Packaging that cannot be cleaned should be Uncontaminated packaging may be taken for | | |
| SECTION 14: Transport information | | |
| Land transport ADR/RID | | |
| The product does not constitute a hazardous | substance in land transport. | |
| Marine transport IMDG/GGVSee | | |
| The product does not constitute a hazardous | substance in sea transport. | |
| Air transport ICAO/IATA | | |
| The product does not constitute a hazardous | substance in air transport. | |
| SECTION 15: Regulatory information | | |
| 15.1. Safety, health and environmental regul | ations/legislation specific for the sub | ostance or mixture |
| (), | er hazardous on of WGK according to Annex 1 No. 5.2 | 2 AwSV |
| Other regulations, restrictions and prohibition VDI 2263 "Dust fires and explosions; Danger, | | |
| 15.2. Chemical safety assessment | | |
| For this preparation a chemical safety assess | ment has not been carried out. | |
| SECTION 16: Other information | | |
| Abbreviations | | |
| ADR: Accord européen relatif au transport int AGW: Arbeitsplatzgrenzwert | ernational des marchandises Dangereu | ises par Route |
| AwSV: Verordnung über Anlagen zum Umga substances that are hazardous to water) | ng mit wassergefährdenden Stoffen (Or | dinance on facilities for handling |
| BGW: Biologischer Grenzwert CAS: Chemical Abstracts Service | | |
| DNEL: Derived no effect level | | |
| EINECS: European Inventory of Existing Com | | |
| ELINCS: European List of Notified Chemical GGVSee: Gefahrgutverordnung See | Substances | |
| IARC: International Agency for Research on (| Cancer | |
| IATA: International Air Transport Association ICAO: International Civil Aviation Organizatio | ~ | |
| IMDG: International Maritime Code for Dange | | |
| LC: Lethal concentration | | |
| LD: Lethal dose MAK: Maximale Arbeitsplatz-Konzentration | | |
| NOEC: No observable effect concentration | | |
| NOEL: No observable effect level | ion and Develo | |
| OECD: Organisation for Economic Co-operat OEL: Occupational exposure limit | ion and Development | |
| PBT: Persistent, Bioaccumulative and Toxic | | |
| PNEC: Predicted no effect concentration | national ferroviciro do morchandiaco do | ndereuses |
| RID: Règlement concernant le transport inter TRGS: Technische Regeln für Gefahrstoffe | national terrovialle de marchandises da | าเมือเอตรอ |
| VDI: Verein Deutscher Ingenieure | | |
| VLEP: Valeurs Limites d'exposition Professio | nnelle | |

vPvB: Very persistent and very bioaccumulative WGK: Wassergefährdungsklasse (water hazard class)

Supplemental information

These data is based on our present knowledge and experience respectively supplier-information. This safety data sheet

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| describes the product in regard to the requ certain properties. Existing laws and regula responsibility. It is the responsibility of the u and the respective intended purpose. A lial Relevant changes compared with the previ | ations are to be observed by the recipient user, to determine if the product is suitable bility for damages in connection with the u | of our products in own e for the deliberate operational area use of this information is excluded. |
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