

MARMOLINE - POWDER COLOUR BEIGE-BROWN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: MARMOLINE POWDER COLOUR BEIGE-BROWN

Substances names: Iron hydroxide oxide yellow (REACH r.n.: 01-2119457554-33-0000) , diiron trioxide, triiron tetraoxide (REACH r.n.: 01-2119457646-28-0000)

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

Intended use: Natural colorants (pigments) in powder

1.3. Details of the supplier of the safety data sheet

NORDIA S.A.

364 Kifisias Av.

15233 Chalandri - Greece

Phone.: +30 22950 22225 -

Fax: +30 22950 22120

info@marmoline.gr

www.marmoline.gr

1.4. Emergency telephone number +30 22950 22225 / Greek poison center +30 2107793777

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture.

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]: Not classified

Classification according to Directive 67/548/EEC [DSD]: Not classified

2.2. Label elements.

Hazard pictograms: Not applicable

Signal words: No signal word

Hazard statements: No known significant effects or critical hazards.

Precautionary statements: Not applicable

2.3. Other hazards.

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: Mixture FeO(OH), Fe₂O₃, 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.

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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 CO₂.

Unsuitable extinguishing media: Not 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 firefighters: 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 material 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

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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).

Information not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters.

Ingredient name

Iron hydroxide oxide yellow

Occupational exposure limits

EH40/2005 WELs (United Kingdom (UK), 8/2007).
STEL: 10 mg/m³, (as Fe) 15 minute(s). Form: Fume
TWA: 5 mg/m³, (as Fe) 8 hour(s). Form: Fume

Derived effect levels

<u>Ingredient name</u>	<u>Type</u>	<u>Exposure</u>	<u>Value</u>	<u>Population</u>	<u>Effects</u>	<u>Remarks</u>
Iron hydroxide oxide yellow	DNEL	Long term Inhalation	10 mg/m ³	Workers	Local	Inhalable Dust
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Local	Respirable dust
diiron trioxide	DNEL	Long term Inhalation	10 mg/m ³	Workers	Local	Inhalable Dust
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Local	Respirable dust
triiron tetraoxide	DNEL	Long term Inhalation	10 mg/m ³	Workers	Local	Inhalable Dust
	DNEL	Long term Inhalation	3 mg/m ³	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 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

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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:	beige-brown
Odour:	Odourless.
<u>Important health, safety and environmental information:</u>	
pH:	4,5 to 8 [Conc. (% w/w): 5%]
Melting point:	>1000°C (>1832°F)
Vapour pressure:	
Density:	4,4 kg/L (20 °C)
Solubility:	Insoluble in the following materials: cold water
Decomposition temperature:	>80°C

9.2. Other information.

Information not available.

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.

From approx. 180 °C conversion into Fe₂O₃

10.5. Incompatible materials.

Information not available.

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

<u>Product/ingredient name</u>	<u>Result</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>	<u>Test</u>
MARMOLINE POWDER COLOUR BEIGE-BROWN	LD50 Oral	* Rat	>5000 mg/kg	-	-
Iron hydroxide oxide yellow	LC50 Inhalation Dusts and mists	- Rat	>195 g/m ³	6 hours	-
	LC50 Inhalation Dusts and mists	- Rat	>195 g/m ³	2 weeks	-
diiron trioxide	LC50 Inhalation Dusts and mists	- Rat	>210 g/m ³	2 weeks	-

*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

<u>Product/ingredient name</u>	<u>Route of exposure</u>	<u>Species</u>	<u>Result</u>	<u>Test description</u>
Iron hydroxide oxide yellow	skin	Guinea pig	Not sensitizing	-
diiron trioxide	skin	Guinea pig	Not sensitizing	-
triiron tetraoxide	skin	Guinea pig	Not sensitizing	-

Potential chronic health effects

Mutagenicity

<u>Product/ingredient name</u>	<u>test</u>	<u>Experiment</u>	<u>Result</u>
diiron trioxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative
triiron tetraoxide	Ames test	Experiment: In vitro Subject: Bacteria	Negative

Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity.

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Species</u>	<u>Exposure</u>
Iron hydroxide oxide yellow	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute EC50 >100 mg/l	- <i>Daphnia</i> - <i>Daphnia</i> <i>magna</i>	48 hours
	-	Acute LCO >100000 mg/L	Fish - <i>Danio</i> <i>rerio</i>	96 hours
diiron trioxide	ISO 8192	Acute EC50 >10000 mg/l	Microorganism- Activated sludge	3 hours
	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test	Acute EC50 >100 mg/l	- <i>Daphnia</i> - <i>Daphnia</i> <i>magna</i>	48 hours
triiron tetraoxide	-	Acute LCO >50000 mg/L	Fish - <i>Danio</i> <i>rerio</i>	96 hours
	EU C.2	Acute EC0 >10000 mg/l	- <i>Daphnia</i> - <i>Daphnia</i> <i>magna</i>	48 hours
-	-	Acute LCO >10000 mg/l	Fish - <i>Danio</i> <i>rerio</i>	96 hours

12.2. Persistence and degradability.

Information not available.

12.3. Bioaccumulative potential.

Information not available.

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

Not applicable

12.6. Other adverse effects.

Information not available. 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

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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

This product is not regulated for transport (ADR/RID,IMDG,IATA)

Not dangerous cargo

Keep separated from foodstuffs.

Keep dry

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]
- RRN = REACH Registration Number
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CE50: Effective concentration (required to induce a 50% effect)
- DNEL: Derived No Effect Level
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%

Safety Data Sheet

According to 1907/2006/EC (REACH) and its amendments

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- LD50: Lethal dose 50%
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit

The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -