

MARMOLINE POWDER COLOUR WHITE**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product name: MARMOLINE POWDER COLOUR WHITE

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

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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.

Contact with dust can cause mechanical irritation or drying of the skin.

Dust contact with the eyes can lead to mechanical irritation.

May cause nose, throat, and lung irritation..

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances**

Titanium dioxide (CAS-No.13463-67-7) (EC-No.236-675-5)

Registration Nr.: 01-2119489379-17-0016

Concentration (%w/w): ≥ 80 - ≤ 99 %

3.2. Substances

Not applicable

The above products are REACH compliant; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures.

Inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention

Ingestion: Consult a physician if necessary

Skin contact: Wash off with soap and water.

Eye contact: Rinse with plenty of water..

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

Risks: No special protective equipment required.

Symptoms: irritant effects

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

Treatment: No specific intervention is indicated.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media.

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture.

Specific hazards during firefighting: Not a fire or explosion hazard.

5.3. Advice for firefighters.

Special protective equipment for fire-fighters: No special protective equipment required.

Further information: The product itself does not burn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures.

Avoid breathing dust

6.2. Environmental precautions.

Do not flush into surface water or sanitary sewer system

6.3. Methods and material for containment and cleaning up.

Pick up and arrange disposal without creating dust. After cleaning, flush away traces with water.

6.4. Reference to other sections.

Not applicable

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling.

Advice on safe handling: Avoid breathing dust.

Advice on protection against fire and explosion: This is a fully oxidized mineral product. As such it cannot support combustion or participate in a dust explosion

7.2. Conditions for safe storage, including any incompatibilities.

Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilated place

7.3. Specific end use(s).

Information not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters.

Components with workplace control parameters

<u>Type</u> <u>Form of exposure</u>	<u>Control</u> <u>parameters</u>	<u>Update</u>	<u>basis</u>	<u>Remarks</u>
Titanium dioxide (CAS-No. 13463-67-7)				
TWA Inhalable	10 mg/m ³	2007	EH40 WEL	
TWA Respirable.	4 mg/m ³	2007	EH40 WEL	

Derived No Effect Level (DNEL)

- Titanium dioxide : Type of Application (Use): Workers
Exposure routes: Inhalation
Health Effect: Chronic effects
Value: 10 mg/m³

Predicted No Effect Concentration (PNEC)

- Titanium dioxide : Value: 0.127 mg/l
Compartment: Fresh water

Value: >= 1 mg/l
Compartment: Marine water

Value: 0.61 mg/l
Compartment: Water

Value: >= 1000 mg/kg
Compartment: Fresh water sediment

Value: >= 100 mg/kg
Compartment: Marine sediment

Value: 100 mg/kg
Compartment: Soil

Value: >= 100 mg/l
Compartment: Sewage treatment plants

8.2. Exposure controls.

Engineering measures: Use sufficient ventilation to keep employee exposure below recommended limits.

Eye protection: Safety glasses with side-shields

MARMOLINE POWDER COLOUR WHITE

Hand protection: gloves

Skin protection: No personal body protection normally required

Hygiene measures: Wash hands before breaks and at the end of workday.

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators..

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties.**

Form:	crystalline
Colour:	white
Odour:	Odourless.
pH:	Not applicable
Melting point:	1,843 °C
Boiling point:	3,000 °C
Flash point:	Does not flash
Flammability (solid, gas):	The product is not flammable.
Vapour pressure:	Not applicable
Density:	Not applicable
Relative density:	3.4 – 4.3
Bulk density:	Not applicable
Water solubility:	Insoluble
Partition coefficient: noctanol/ Water:	Not applicable
Solubility in other solvents:	Not applicable

9.2. Other information.

Information not available.

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity.**

None reasonably foreseeable

10.2. Chemical stability.

The product is stable.

10.3. Possibility of hazardous reactions.

None

10.4. Conditions to avoid.

None known

10.5. Incompatible materials.

None

10.6. Hazardous decomposition products.

Not applicable.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects.

Acute oral toxicity

Titanium dioxide
LD50 / Rat : > 5,000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity

Titanium dioxide
LC50 / 4 h Rat : > 6.82 mg/l

Acute dermal toxicity

Titanium dioxide
LD50 / Rabbit : > 10,000 mg/kg

Skin irritation

Titanium dioxide
Rabbit
Classification: Not classified as irritant
Result: No skin irritation
Method: OECD Test Guideline 404

Eye irritation

Titanium dioxide
Rabbit
Classification: Not classified as irritant
Result: No eye irritation
Method: OECD Test Guideline 405

Sensitisation

Titanium dioxide
Guinea pig
Classification: Does not cause skin sensitisation.
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Mouse
Classification: Does not cause respiratory sensitisation.
Result: Does not cause respiratory sensitisation.

Repeated dose toxicity

Inhalation Rat
No toxicologically significant effects were found.

Titanium dioxide
Oral Rat
NOAEL: 1,000 mg/kg
Method: OECD Test Guideline 408
No toxicologically significant effects were found.

Mutagenicity assessment

MARMOLINE POWDER COLOUR WHITE

Did not cause genetic damage in animals. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Titanium dioxide

Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity assessment

In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50 and 250 mg/m³ of respirable TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m³, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms. In further studies, these tumours were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO₂ particles exposure was also found to be much more severe in rats than in other rodent species. In February 2006, IARC has re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumours, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ dust. Based upon all available study results, scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

Titanium dioxide

Not classifiable as a human carcinogen. Overall weight of evidence indicates that the substance is not carcinogenic.

Toxicity to reproduction assessment

Titanium dioxide

No toxicity to reproduction No effects on or via lactation Evidence suggests the substance is not a reproductive toxin in animals.

Assessment teratogenicity

Titanium dioxide

Evidence suggests the substance is not a developmental toxin in animals.

Human experience

Excessive exposures may affect human health, as follows:

Inhalation

Respiratory system: May cause nose, throat, and lung irritation.

Skin contact

Skin: Contact with dust can cause mechanical irritation or drying of the skin.

Eye contact

Eyes: Dust contact with the eyes can lead to mechanical irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity.

Toxicity to fish

Titanium dioxide

LC50 / 96 h / Pimephales promelas (fathead minnow): > 1,000 mg/l

Toxicity to aquatic plants

Titanium dioxide

ErC50 / 72 h / Pseudokirchneriella subcapitata (green algae): > 10,000 mg/l

Method: see user defined free text

NOEC / 72 h / Algae: 5,600 mg/l

Method: see user defined free text

Toxicity to aquatic invertebrates

Titanium dioxide

EC50 / 48 h / Daphnia magna (Water flea): > 100 mg/l

Method: OECD Test Guideline 202

12.2. Persistence and degradability.

Biodegradability

Pigments are practically not biodegradable.

12.3. Bioaccumulative potential.

Bioaccumulation

Does not bioaccumulate.

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

PBT and vPvB assessment

Non-classified PBT substance / Non-classified vPvB substance

12.6. Other adverse effects.

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods.

Product: Dispose of as special waste in compliance with local and national regulations

Contaminated packaging: If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION

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

Not dangerous cargo

Keep separated from foodstuffs.

SECTION 15: REGULATORY INFORMATION

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

Water contaminating class: nwg not water endangering
(Germany) Self assessment

15.2. Chemical safety assessment.

A Chemical Safety Assessment has been carried out for this substance..

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-No.	Chemical Abstracts Service number
CLP	Classification, Labelling and Packaging
EbC50	Concentration at which 50% reduction of biomass is observed
EC50	Median effective concentration
EN	European Norm
EPA	Environmental Protection Agency
ErC50	Concentration at which a 50% inhibition of growth rate is observed
EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization
ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level –
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):
vPvB	very Persistent and very Bioaccumulative

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 -