

SAFETY DATA SHEET

Product: Mo₂Ti₂AlC₃-MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



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

Product Name: Mo₂Ti₂AlC₃-MAX Phase ceramic materials

CAS Number:

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

Identified uses: For R&D use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

MENDEL Chemicals SRL

Moldova, Chisinau, str.Cetatea Alba 16A

MD-2002

t: +37378813683

f: +37322857123

e: info@mendelchemicals.com

w: mendelchemicals.com

1.4. Emergency telephone number

Moldova: +37378813683 MENDEL Chemicals SRL

In case of medical emergency phone 112 (Moldova) or to your local emergency number.

SECTION 2: Hazards identification

2.2 Label elements

Labeling according Regulation (EC) No 1272/2008

2.3 Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1 Substances

SKU: MND-132368

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

SAFETY DATA SHEET

Product: $\text{Mo}_2\text{Ti}_2\text{AlC}_3$ MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x), silicon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.2 Conditions for safe storage, including any incompatibilities

SAFETY DATA SHEET

Product: $\text{Mo}_2\text{Ti}_2\text{AlC}_3$ MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameter

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance - black powder
- b) Odor - No data available
- c) Odor Threshold - No data available
- d) pH - No data available
- e) Melting point/freezing point - No data available
- f) Initial boiling point and boiling range - No data available

SAFETY DATA SHEET

Product: Mo₂Ti₂AlC₃-MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



- g) Flash point - No data available / No data available
- h) Evaporation rate - No data available
- i) Flammability (solid, gas) - No data available
- j) Upper/lower flammability or explosive limits - No data available
- k) Vapour pressure - No data available
- l) Vapour density - No data available
- m) Density - No data available
- n) Water solubility - No data available
- o) Partition coefficient: noctanol/water - No data available
- p) Auto-ignition temperature - No data available
- q) Decomposition temperature - No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Acids, Bases, Alcohols, Strong oxidizing agents, Material generates methanol on contact with water or moisture

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), silicon oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

SAFETY DATA SHEET

Product: Mo₂Ti₂AlC₃-MAX-Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)

RTECS: No data available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)

12.7 Other adverse effects

SAFETY DATA SHEET

Product: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



SECTION 13: Disposal considerations

Product: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

13.1 Waste treatment methods

Product

See www.moldrec.md for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID:

IMDG:

IATA:

14.2 UN proper shipping name

ADR/RID: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

IMDG: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

IATA: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

14.3 Transport hazard class(-es)

ADR/RID:

IMDG:

IATA:

14.4 Packaging group

ADR/RID:

IMDG:

IATA:

14.5 Environmental hazards

ADR/RID:

IMDG:

IATA:

14.6 Special precautions for user:

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

SAFETY DATA SHEET

Product: Mo₂Ti₂AlC₃ MAX Phase ceramic materials

According to Regulation (EU) 2015/830

Doc.nr. MND-132368-SDS

Last revision date: 10.05.2023



The information provided above is believed to be accurate; however, it should not be considered exhaustive and is intended solely as a reference. This document is based on our current knowledge and pertains to the product in the context of appropriate safety precautions. It does not constitute a warranty regarding the product's properties. [Your Company Name] and its Affiliates shall not assume liability for any damages arising from the handling or contact with the aforementioned product. For further terms and conditions of sale, please refer to www.mendelchemicals.com

Copyright 2023 Mendel Chemicals SRL. License granted to make unlimited paper copies for internal use only. For further information please contact <mailto:info@mendelchemicals.com>