

# Safety Data Sheet

pursuant to Regulation (EC) 1907/2006 (REACH)  
REACH reg. no. 01-2119472304-43-0000 (molybdenum)

Trade name: **Molybdenum-Tantalum**  
SDS no. SD-MT-02



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<b>1. Identification of the substance and of the company</b>	<b>*Identification of the substance:</b> Mo-Ta <b>*Use of the substance:</b> products such as for sputtering targets <b>*Company:</b> PLANSEE SE, A-6600 Reutte, e-mail: <a href="mailto:environment.management@plansee.com">environment.management@plansee.com</a> <b>*Emergency number:</b> phone +43 (5672)600-0
<b>2. Hazards Identification</b>	<b>*Classification:</b> not hazardous material pursuant to regulation (EC) no. 1272/2008 EC or EC Directive 67/548/EEC <b>*Compact Metal / Alloy with no Risk to Human Health or the Environment.</b>
<b>3. Composition/Information on ingredients</b>	<b>*Summary:</b> molybdenum 89,25 % mass fraction, tantalum 10,75 % mass fraction EC no. molybdenum: 231-107-2, tantalum: 231-135-5 CAS no. molybdenum: 7439-98-7, tantalum: 7440-25-7 <b>*Hazardous components:</b> none
<b>4. First-aid measures</b>	<b>*Inhalation:</b> no exposure when used as directed. <b>*Skin contact:</b> wash dust off thoroughly with soap and water. <b>*Doctor is needed or advisable:</b> consult a physician after prolonged exposure to dust.
<b>5. Fire-fighting measures</b>	<b>*Suitable extinguishing media:</b> The product itself is not flammable. <b>*Adapt extinguishing measures to surroundings.</b> <b>*Special hazard:</b> increased fire hazard during dust formation. <b>*Protective equipment:</b> breathing protection in the presence of dust.
<b>6. Accidental release measures</b>	<b>*Personnel-related precautionary measures:</b> dust should be suction cleaned directly at source. <b>*Environmental protection measures:</b> avoid contamination of agricultural soils (see item 12).
<b>7. Handling and storage</b>	<b>*Handling:</b> Avoid dust formation. Use suction cleaning if unavoidable and when processing at high temperatures (sublimate formation, see item 10). <b>*Storage:</b> no special measures required.
<b>8. Exposure controls/personal protection</b>	<b>*Exposure thresholds:</b> workplace: molybdenum 10 mg/m <sup>3</sup> inhalable fraction, mean daily value, tantalum 5 mg/m <sup>3</sup> inhalable fraction, mean daily value <b>*Dust-like emissions:</b> General 5 mg/m <sup>3</sup> <b>*Wastewater emissions:</b> molybdenum 5 mg/l <b>*Workplace exposure:</b> install suction cleaning when working with dust and sublimate and use at least one FFP2 respirator. <b>*Environmental exposure:</b> install suction cleaning with filter when working with dust formation. <b>*Do not empty into drains.</b>
<b>9. Physical and chemical properties</b>	<b>*Appearance:</b> solid grey material <b>*Melting point:</b> 2630°C <b>*Density:</b> 10,66 g/cm <sup>3</sup> at 20°C <b>*Solubility:</b> insoluble in water, acids and bases; soluble only in complex-forming acids (sulphuric or phosphoric) or bases in combination with a strong oxidizing agent.
<b>10. Stability and reactivity</b>	<b>*Conditions to be avoided:</b> high temperatures in air (strong oxidation beginning around 600 °C, sublimation of MoO <sub>3</sub> beginning around 700 °C). <b>*Substances to be avoided:</b> none
<b>11. Toxicological information</b>	*No known toxic effects.
<b>12. Ecological information</b>	<b>*Ecotoxicity:</b> "molybdenosis (copper deficiency disease caused by Mo in ruminants). <b>*No other ecotoxicological effects.</b> <b>*Mobility:</b> low mobility due to low solubility. <b>*Persistence and degradability:</b> stable inorganic material. <b>*Bioaccumulation potential:</b> no data available.
<b>13. Disposal considerations</b>	*Dispose of residues as metal waste. <b>*Obey national or regional regulations.</b>
<b>14. Transport information</b>	<b>*ADR / RID / ADN / IATA (ICAO) / IMDG:</b> not a dangerous good pursuant to international transport regulations.
<b>15. Regulatory information</b>	*No labeling required. <b>*The exposure thresholds given under item 8 pertain to Austrian legal regulations.</b> <b>*Obey national regulations.</b>
<b>16. Other information</b>	*Above information corresponds to our current state of knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. <b>*Detailed results of toxicological and ecotoxicological effects are described in the chemical safety report for REACH registration.</b>