

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 1 of 10

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

TUNPAS MoS2

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

Lubricant

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name:	TUNAP GmbH & Co. KG	
Street:	Bürgermeister-Seidl-Str. 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+ 49 (0) 8171/1600 - 0	Telefax: + 49 (0) 8171/1600 - 40
e-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

Supplier

Company name:	TUNAP UK Limited
Street:	Unit L4 Deacon Trading Estate, Morley Road
Place:	GB Tonbridge, Kent. TN9 1RA
Telephone:	+44 (0)1732 365163
e-mail:	sdb@tunap.com
Internet:	www.tunap.co.uk

1.4. Emergency telephone number:

111 NHS (National Health Service)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Toxic to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Pictograms:****Hazard statements**

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P391 Collect spillage.

Special labelling of certain mixtures

EUH208 Contains 4-Nonylphenoxyacetic acid. May produce an allergic reaction.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 2 of 10

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
1317-33-5	molybdenum disulphide			25 - < 50 %
	215-263-9			
	Acute Tox. 4; H332			
61791-55-7	N-Tallowalkyl-1,3-propanediamine			0.1 - < 1 %
	263-189-0		01-2119487014-41	
	Acute Tox. 4, Skin Corr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H372 H400 H410			
3115-49-9	4-Nonylphenoxyacetic acid			0.1 - < 1 %
	221-486-2			
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H317 H400 H410			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 3 of 10

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Observe instructions for use.

Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Store in a cool dry place. Observe legal regulations and provisions.

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 4 of 10

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1332-58-7	Kaolin respirable dust	-	2		TWA (8 h)	WEL

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long term exposure: after several previous shifts
- d before next shift

blood (B)
Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Protective and hygiene measures

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.
DIN EN 166

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min
Thickness of the glove material 0,45 mm
EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
Filtering device with filter or ventilator filtering device of type: A
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 5 of 10

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: pasty
Colour:
Odour: characteristic

pH-Value (at 20 °C):

Test method

DIN 19268

Changes in the physical state

Initial boiling point and boiling range: > 240 °C

Flash point: > 200 °C ISO 3679

Flammability

Solid: not determined

Gas: not applicable

Lower explosion limits: 0,6 vol. %

Upper explosion limits: 6,5 vol. %

Auto-ignition temperature

Solid: not determined

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Density (at 20 °C): 1,5 g/cm³ DIN 51757

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Viscosity / dynamic: DIN 53019-1

Viscosity / kinematic:
(at 40 °C) DIN EN ISO 3104Flow time:
(at 20 °C) DIN EN ISO 2431**9.2. Other information****SECTION 10: Stability and reactivity****10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges.



TUNPAS MoS2

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 6 of 10

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name			
	Exposure route	Dose	Species	Source
1317-33-5	molybdenum disulphide			
	oral	LD50 2820 mg/kg	Rat	
	dermal	LD50 > 2000 mg/kg	Rat	
	inhalation vapour	ATE 11 mg/l		
	inhalation (4 h) aerosol	LC50 2,82 mg/l	Rat	
61791-55-7	N-Tallowalkyl-1,3-propanediamine			
	oral	LD50 >300 - 2000 mg/kg	Rat	
3115-49-9	4-Nonylphenoxyacetic acid			
	oral	LD50 1674 mg/kg	Rat	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Contains 4-Nonylphenoxyacetic acid. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

No indications of human carcinogenicity exist.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.



TUNPAS MoS2

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 7 of 10

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
61791-55-7	N-Tallowalkyl-1,3-propanediamine				
	Acute fish toxicity	LC50 mg/l	>0,02 - 0,1	96 h	Brachydanio rerio (zebra-fish)
	Acute algae toxicity	ErC50 mg/l	>0,02 - 0,1	72 h	Desmodesmus subspicatus
	Acute crustacea toxicity	EC50 mg/l	>0,02 - 0,1	48 h	Daphnia magna (Big water flea)
3115-49-9	4-Nonylphenoxyacetic acid				
	Acute fish toxicity	LC50	9 mg/l	96 h	Brachydanio rerio (zebra-fish)
	Acute crustacea toxicity	EC50	0,88 mg/l	48 h	Daphnia magna

12.2. Persistence and degradability

The product has not been tested. There are no data available on the mixture itself. AOX (mg/l): 0

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
3115-49-9	4-Nonylphenoxyacetic acid			
	OECD 301B; ISO 9439; 92/69/EWG, C.4-C	42 - 46 %	28	
	Moderately/partially biodegradable.			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

120112 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; spent waxes and fats; hazardous waste

List of Wastes Code - used product



TUNPAS MoS2

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 8 of 10

120112 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; spent waxes and fats; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Tallowalkyl-1,3-propanediamine)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Classification code: M7
 Special Provisions: 274 335 375 601
 Limited quantity: 5 kg
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 90
 Tunnel restriction code: -

Inland waterways transport (ADN)

14.1. UN number: UN 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Tallowalkyl-1,3-propanediamine)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Classification code: M7
 Special Provisions: 274 335 375 601
 Limited quantity: 5 kg
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Tallowalkyl-1,3-propanediamine)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Marine pollutant: yes
 Special Provisions: 274, 335, 966, 967, 969
 Limited quantity: 5 kg
 Excepted quantity: E1
 EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)



TUNPAS MoS2

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 9 of 10

14.1. UN number:	UN 3077
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Tallowalkyl-1,3-propanediamine)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Special Provisions:	A97 A158 A179 A197
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y956
Excepted quantity:	E1
IATA-packing instructions - Passenger:	956
IATA-max. quantity - Passenger:	400 kg
IATA-packing instructions - Cargo:	956
IATA-max. quantity - Cargo:	400 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	N-Tallowalkyl-1,3-propanediamine

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,4,5,6,7,8,10,11,13,14,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

**TUNPAS MoS2**

Print date: 27.01.2021

Product code: 11ACD12000G0010

Page 10 of 10

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
EC50: half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH208	Contains 4-Nonylphenoxyacetic acid. May produce an allergic reaction.

Further Information

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]:
Calculation method.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)