

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 2 of 11

H319 Causes serious eye irritation.

Precautionary statements

P102 Keep out of reach of children.
 P211 Do not spray on an open flame or other ignition source.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P251 Do not pierce or burn, even after use.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.
 86 % by mass of the contents are flammable.

Additional advice on labelling

Product is classified and labelled in accordance with EC regulations or the corresponding national laws.

2.3. Other hazards

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
 Spilled product must not leak into the ground.
 Do not allow uncontrolled leakage of product into the environment.

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
115-10-6	dimethyl ether			40 - < 60 %
	204-065-8	603-019-00-8		
	Flam. Gas 1; H220			
64-17-5	ethanol; ethyl alcohol			20 - < 40 %
	200-578-6	603-002-00-5		
	Flam. Liq. 2; Eye Irrit. 2; H225 H319			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol; ethyl alcohol	20 - < 40 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg		

Further Information

DMSO-Extrakt < 3 %, IP 346.

Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

SECTION 4: First aid measures

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 3 of 11

4.1. Description of first aid measures

General information

Remove affected person from the danger area and lay down. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position. Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist. In case of breathing difficulties administer oxygen.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

Rinse mouth thoroughly with water. Call a physician immediately.

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

following inhalation: drowsiness. Headache. Nausea.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Extinguishing powder. alcohol resistant foam. Water fog.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). carbon black.

Flammable. Vapours may form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear chemical resistant suit.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

High slip hazard because of leaking or spilled product. Provide adequate ventilation. The vapours are heavier than air and can accumulate in high concentrations on the ground, in cavities, channels and cellars. Avoid contact with skin, eyes and clothes. Keep away from sources of ignition - No smoking.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 4 of 11

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. 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

Section 12: Ecological Information (non-mandatory)

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Take precautionary measures against static discharges. Do not spray on naked flames or any incandescent material. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep container tightly closed in a cool place. Keep away from sources of ignition - No smoking.

Please note: TRG 300, aerosol directive (75/324/EEC).

Keep/Store only in original container.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Keep away from: Oxidizing agent. Material, rich in oxygen, oxidizing.

Further information on storage conditions

Protect against: UV-radiation/sunlight. frost. heat.

Recommended storage temperature: 5 - 40°C

7.3. Specific end use(s)

Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 5 of 11

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
115-10-6	Dimethyl ether	1000	1920		TWA (8 h)	
64-17-5	Ethanol	1000	-		STEL (15 min)	
7782-42-5	Graphite (all forms except fibres) (Respirable Fraction)	-	2		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64-17-5	ethanol; ethyl alcohol			
Worker DNEL, long-term		inhalation	systemic	380 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	114 mg/m ³
7782-42-5	Graphite			
Worker DNEL, long-term		inhalation	local	1,2 mg/m ³
Consumer DNEL, long-term		inhalation	local	0,3 mg/m ³
Consumer DNEL, long-term		oral	systemic	813 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1,2 mg/m ³

PNEC values

CAS No	Substance	Value
64-17-5	ethanol; ethyl alcohol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		380 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg

Additional advice on limit values

source:

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): EN 166

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN ISO 374

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 6 of 11

Duration of wearing with permanent contact: 480 min
 Suitable material: NBR (Nitrile rubber).
 Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min
 Suitable material: NBR (Nitrile rubber).
 Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

Skin protection

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Cosaint riospráide le scagaire i gcoinne gás orgánach agus gaile cineál A - fiuchphointe > 65 ° C: A1: <1000 ppm; A2: <5000 ppm; A3: <10,000 ppm.

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

Physical state:	gaseous
Colour:	grey
Odour:	like: Alcohol
Odour threshold:	not determined

	Test method
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	< -20 °C
Flammability:	No data available
Lower explosion limits:	2,5 vol. %
Upper explosion limits:	15 vol. %
Flash point:	< -20 °C
Auto-ignition temperature:	>300 °C
Decomposition temperature:	No data available
pH-Value:	not applicable
Water solubility:	partially miscible
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	0,78 g/cm ³ DIN 51757
Relative vapour density:	No data available

9.2. Other information**Information with regard to physical hazard classes****Explosive properties**

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Self-ignition temperature

Solid: No data available

Gas: No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 7 of 11

Evaporation rate:

No data available

Pour point:

not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Ignition hazard.

Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children. Take precautionary measures against static discharges. See protective measures under point 7 and 8.

10.5. Incompatible materials

Oxidizing agent. Material, rich in oxygen, oxidizing.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). carbon black. Combustible. Vapours may form explosive mixtures with air.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation gas) > 20000 ppm

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 mg/kg	6200	Rat	IUCLID
	inhalation (4 h) vapour	LC50	95,6 mg/l	Rat	RTECS

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

STOT-single exposure

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 8 of 11

STOT-repeated exposure

Based on available data, the classification criteria are not met.
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

not applicable

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64-17-5	ethanol; ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	

12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria). Do not allow to enter into surface water or drains.

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
115-10-6	dimethyl ether	0,1
64-17-5	ethanol; ethyl alcohol	-0,31

12.4. Mobility in soil

Product is easily volatile. Product is difficult to dissolve in water.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

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

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 9 of 11

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 2
 Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Special Provisions: 63, 190, 277, 327, 344, 381, 959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 10 of 11

Special Provisions:	A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: flammable gases.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 40

Directive 2010/75/EU on industrial emissions: 84,156% (656,417 g/l)

Directive 2004/42/EC on VOC in paints and varnishes: 84,156% (656,417 g/l)

Information according to Directive 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information

To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC , 2008/47/EC Aerosolrichtlinie (75/324/EWG)

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): 2,3,5,6,7,8,9,10,11,13,14.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL TSM 401 Spray

Revision date: 05.01.2024

Product code: 717298

Page 11 of 11

Abbreviations and acronyms

Flam. Gas: Flammable gases

Aerosol: Aerosol

Flam. Liq: Flammable liquid

Eye Irrit: Eye irritation

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ASTM - American Society for the Testing of Materials; ATE - Acute Toxicity Estimates; bw - Body weight; CAO - Cargo Aircraft Only; CAS - Chemical Abstracts Service; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL - Derived No-Effect Level; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EG - European Union; EN - European standards; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n;o;s - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulation concerning the International Carriage of Dangerous Goods by Rail; RQ - Reportable Quantity; SADT - Self- Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 3; H229	On basis of test data
Eye Irrit. 2; H319	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

Further Information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

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 receiver of our product is singularly responsible for adhering to existing laws and regulations.

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