SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

ADDIPURE DME

Creation date	30th July 2021
Revision date	Version 1.0

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

1.1. Product identifier — ADDIPURE DME

Substance / mixture	substance
Chemical name	dimethyl ether
CAS number	115-10-6
Index number	603-019-00-8
EC (EINECS) number	204-065-8
Registration number	01-2119472128-37

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

Substance's intended use

Extraction agent.

Substance uses advised against

The product should not be used in ways other then those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name	ADDITEQ s.r.o
Address	Prague Marina, V přístavu 12, Praha 7, 17000 Czech Republic
Identification number (CRN)	24825026
Phone	+420 222 520 870

Competent person responsible for the safety data sheet

Name	Hutter Roger Jakob Martin
E-mail	hutter@additeq.com

1.4. Emergency telephone number

National poisoning information centre, Beaumont Hospital, PO Box 1297, Beaumont Road Dublin 9, tel: healthcare professionals: +353 (01) 809 2566 (24 hour service), members of public: +353 (01) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Aerosol 1, H222, H229

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

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

2.2. Label elements

Hazard pictogram

Signal word

Danger

Dangerous substance

dimethyl ether
(Index: 603-019-00-8; CAS: 115-10-6)

Hazard statements

H222	Extremely flammable aerosol.

H229	Pressurised container: May burst if heated.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe spray.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Substance does not meet the criteria for substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Risk of frostbite.

SECTION 3: Composition/information on ingredients

3.1. Substances

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
	substance main component			
Index: 603-019-00-8 CAS: 115-10-6 EC: 204-065-8 Registration number: 01-2119472128-37	dimethyl ether	<100	Flam. Gas 1A, H220 Press. Gas (liquefied gas), H280	1, 2

Notes

1 Note U (Table 3): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)
Press. Gas (Liq.)
Press. Gas (Ref. Liq.)
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

2 Substance with a Union workplace exposure limit.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled.

If inhaled

Transfer the affected person to the fresh air and ensure calm environment for body and mind. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Thaw frosted parts with lukewarm water. Do not rub affected area. In case of major frost injuries, please contact your doctor.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Provide medical treatment, specialized if possible.

If swallowed

Unlikely. DO NOT INDUCE VOMITING! Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems. Bring an original container with the label and the Safety Data Sheet of the given substance as appropriate.

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

If inhaled

Possible irritation of airways, cough, headache.

If on skin

Contains refrigerated gas; may cause cryogenic burns or injury.

If in eyes

When intruding eyes, it can evoke irritation.

If swallowed

Not expected.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

Vapours mixed up with air can be explosive. The heat from fire increases inner pressure in containers and can cause their bursting or explosion. The exploding containers could fly up to the distance several ten meters. In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Evacuate area. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Extremely flammable aerosol. Pressurised container: May burst if heated. Vapours mixed up with air can be explosive. Remove all ignition sources; provide sufficient ventilation. No smoking. Do not inhale aerosols. Use personal protective equipment for work. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Evacuate area. Ventilate the room. Prevent other leakage. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not inhale aerosols. Use only in a well-ventilated area. Do not eat, drink or smoke when using this product. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Pressurised container: May burst if heated. Protect from sunlight. Do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Take action to prevent static discharges. Read label before use. To avoid risks to human health and the environment, comply with the instructions for use.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature is from +5°C to +30°C. Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of reach of children.

The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

European Union **Commission Directive 2000/39/EC**

Substance name (component)	Type	Value
dimethyl ether (CAS: 115-10-6)	OEL 8 hours	1920 mg/m³
	OEL 8 hours	1000 ppm

Ireland **2018 Code of Practice for the Chemical Agents Regulations**

Substance name (component)	Type	Value
dimethyl ether (CAS: 115-10-6)	OELV 8 hours	1920 mg/m³
	OELV 8 hours	1000 ppm

DNEL

dimethyl ether

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	1894 mg/m³	Systemic chronic effects	
Consumers	Inhalation	471 mg/m³	Systemic chronic effects	

PNEC

dimethyl ether

Route of exposure	Value	Determining method
Freshwater environment	0.155 mg/l	
Seawater	0.016 mg/l	
Water (intermittent release)	1.549 mg/l	
Microorganisms in wastewater treatment plants	160 mg/l	
Freshwater sediment	0.681 mg/kg of dry substance of sediment	
Sea sediments	0.069 mg/kg of dry substance of sediment	
Soil (agricultural)	0.045 mg/kg of dry substance of soil	

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Under regular circumstances it is not necessary. Protective goggles. EN166 - Personal Eye Protection Standard.

Skin protection

Under regular circumstances it is not necessary. When handling in long-term or repeatedly, use protective gloves. EN ISO 374-1. Contaminated skin should be washed thoroughly. Other protection: protective workwear.

Respiratory protection

Under regular circumstances it is not necessary. Mask with a filter against organic vapours in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	gas
Colour	colourless
Odour	specific after solvent
Melting point/freezing point	applies to liquids and solids
Boiling point or initial boiling point and boiling range	<0 °C
dimethyl ether (CAS: 115-10-6)	-24.8 °C
Flammability	Extremely flammable aerosol.
dimethyl ether (CAS: 115-10-6)	extremely flammable gas
Lower and upper explosion limit	
bottom	>0 %
dimethyl ether (CAS: 115-10-6)	3.3 %
upper	>0 %
dimethyl ether (CAS: 115-10-6)	26.2 %
Flash point	not applicable
dimethyl ether (CAS: 115-10-6)	data not available
Auto-ignition temperature	>0 °C
dimethyl ether (CAS: 115-10-6)	226 °C
Decomposition temperature	not applicable
pH	gas
Kinematic viscosity	applies to liquids
Solubility in water	partially soluble
dimethyl ether (CAS: 115-10-6)	45.6 g/l (25 °C)
Partition coefficient n-octanol/water (log value)	0.07 (dimethyl ether, 25°C, pH 7)
Vapour pressure	>0
dimethyl ether (CAS: 115-10-6)	0.51 MPa at 20 °C
Density and/or relative density	
Density	>0 g/cm³
dimethyl ether (CAS: 115-10-6)	0.67 g/cm³ at 20 °C
Relative vapour density	1.6 (air = 1)
Particle characteristics	applies to solids
Form	aerosol dispenser: spray aerosol

9.2. Other information

Gas group	T3
Oxidising properties	The product has no oxidizing properties.
Explosive properties	The product does not have explosive properties but can be explosive when blended with air.

SECTION 10: Stability and reactivity

10.1. Reactivity

When used in the standard way, there is not any dangerous reaction with other substances.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

The product is stable under normal conditions. Vapours mixed up with air can be explosive.

10.4. Conditions to avoid

Even short-time temperatures above 30°C. Protect against flames, sparks, overheating and against frost. Pressurised container: May burst if heated.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Oxygen. Halogens. Halogenated hydrocarbons.

10.6. Hazardous decomposition products

Not developed under normal uses.

SECTION 11: Toxicological information

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

not available

Acute toxicity

Based on available data the classification criteria are not met.

dimethyl ether

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Inhalation	LC50	309 mg/l	4 hour	Rat	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

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.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2. Information on other hazards

not available

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Based on available data the classification criteria are not met.

dimethyl ether

Parameter	Value	Time of exposure	Species	Environment
LC50	>4.1 g/l	96 hour	Fishes	Freshwater
EC50	>4.4 g/l	48 hour	Daphnia	Freshwater
EC50	154.917 mg/l	96 hour	Algae	Freshwater

12.2. Persistence and degradability

Biodegradability

dimethyl ether

Parameter	Value	Time of exposure	Environment	Result
	5 %	28 day	Activated sludge	Hardly biodegradable

The substance is not biodegradable.

12.3. Bioaccumulative potential

Not expected.

12.4. Mobility in soil

Not expected.

12.5. Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification.

Waste management legislation

Ordinance on the European List of Waste (German Waste Catalogue Ordinance -Verordnung über das Europäische Abfallverzeichnis - AVV). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

20 01 13 Solvents *

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances *

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information

14.1. UN number or ID number

UN 1950

14.2. UN proper shipping name

AEROSOLS

14.3. Transport hazard class(es)

2 Gases

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.	
UN number	1950
Classification code	5F
Safety signs	2.1

Road transport - ADR

Special provisions	190, 327, 344, 625
Limited quantities	1 L
Excepted quantities	E0
Packaging	
Packing instructions	P207, LP200
Special packing provisions	PP87, RR6, L2
Mixed packing provisions	MP9
Transport category	2
Tunnel restriction code	(D)
Special provision for	
packages	V14
loading, unloading and handling	CV9, CV12
operation	S2

Railway transport - RID

Special provisions	190, 327, 344, 625
Excepted quantities	E0
Packaging	
Packing instructions	P207, LP200
Special packing provisions	PP87, RR6, L2
Mixed packing provisions	MP9
Transport category	0
Special provision for	
packages	W 14
loading, unloading and handling	CW 9, CW 12

Air transport - ICAO/IATA

Packaging instructions for limited amount	Y203
Packaging instructions passenger	203
Cargo packaging instructions	203

Marine transport - IMDG

EmS (emergency plan)	F-D, S-U
MFAG	620

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for the substance by the supplier.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.

Guidelines for safe handling used in the safety data sheet

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe spray.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC50	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC50	Lethal concentration of a substance in which it can be expected death of 50% of the population
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
OEL	Occupational Exposure Limits

PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
Press. Gas (Comp.)	Gas under pressure: compressed gas
Press. Gas (Diss.)	Gas under pressure: dissolved gas
Press. Gas (Liq.)	Gas under pressure: liquefied gas
Press. Gas (Ref. Liq.)	Gas under pressure: refrigerated liquefied gas
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Aerosol	Aerosol
Flam. Gas	Flammable gas
Press. Gas	Gases under pressure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - on basis of gas test data.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.
