

Revision date: 22.08.2023

li Product code: 18485

Page 1 of 12

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

1.1. Product identifier

Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for li

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

Use of the substance/mixture

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	
1.4. Emergency telephone	For Hazardous Materials [or Danger	ous Goods] Incidents Spill, Leak, Fire,
number:	Exposure, or Accident Call CHEMTF	REC Day or Night Within USA and Canada:
	1-800-424-9300 Outside USA and C	anada: +1 703-741-5970 (collect calls
	accepted)	

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 2; H225 Acute Tox. 4; H302 Acute Tox. 4; H312 Acute Tox. 4; H332 Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

Danger

2.2. Label elements

Pictograms:

Regulation (EC) No 1272/2008

Signal word:



Hazard statements

H225 H302+H312+H332 Highly flammable liquid and vapour. Harmful if swallowed, in contact with skin or if inhaled.



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

	li	
Revision date: 22.08.2023	Product code: 18485	Page 2 of 12
H319	Causes serious eye irritation.	
Precautionary statemen	ts	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
P240	Ground and bond container and receiving equipment.	
P302+P352	IF ON SKIN: Wash with plenty of soap and water.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	
2.3. Other hazards		

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity		
	EC No	EC No Index No REACH No				
	Classification (Regulation (EC) No 1272/2008)					
75-05-8	acetonitrile	acetonitrile				
	200-835-2	608-001-00-3	01-2119471307-38			
	Flam. Liq. 2, Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H225 H332 H312 H302 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				
75-05-8	200-835-2	acetonitrile	90 - < 95 %		
	8 200-835-2 acetonitrile Inhalation: LC50 = 3587 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: Inhalation: LD50 = > 2000 mg/kg; oral: LD50 = 469 mg/kg LD50 = 469 mg/kg <thld50 469="" =="" kg<="" mg="" th=""> <thld50 469="" =="" kg<="" mg="" th=""> <t< td=""></t<></thld50></thld50>				

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air. Call a physician immediately.

If breathing is irregular or stopped, administer artificial respiration.

After contact with skin

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

Call a physician immediately.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

Revision date: 22.08.2023

li Product code: 18485

Page 3 of 12

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

Headache Dyspnoea Irritant Vomiting Spasms Unconsciousness Respiratory complaints Cardiac arrhythmias Dizziness Release of: Hydrogen cyanide (hydrocyanic acid)

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

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquid.

Vapours are heavier than air, spread along floors and form explosive mixtures with air. Hazardous combustion products In case of fire may be liberated: Carbon dioxide (CO2) Carbon monoxide Hydrogen cyanide (hydrocyanic acid) Hydrogen fluoride Beware of reignition.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes. Avoid contact with skin, eyes and clothes.

Additional information

Danger of bursting container. Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Take action to prevent static discharges.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

li

Page 4 of 12

Revision date: 22.08.2023

Product code: 18485

Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Danger of explosion

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

Read label before use. Handle and open container with care. When using do not eat, drink, smoke, sniff. Keep container tightly closed. Use personal protection equipment. Use extractor hood (laboratory). Do not breathe vapour/aerosol. Provide adequate ventilation.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary.

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

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks,



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

Revision date: 22.08.2023

li Product code: 18485

Page 5 of 12

open flames and other ignition sources. No smoking. storage temperature: +5°C - +30°C

Further information on storage conditions

Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm ³	Category	Origin
75-05-8	Acetonitrile	40	70		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance						
DNEL type		Exposure route	Effect	Value			
75-05-8	acetonitrile						
Worker DNEL,	long-term	inhalation	systemic	68 mg/m³			
Worker DNEL,	acute	inhalation	systemic	68 mg/m³			
Worker DNEL,	long-term	inhalation	local	68 mg/m³			
Worker DNEL,	acute	inhalation	local	68 mg/m³			
Worker DNEL,	long-term	dermal	systemic	32,2 mg/kg bw/day			
Consumer DN	EL, long-term	inhalation	systemic	4,8 mg/m³			
Consumer DN	EL, acute	inhalation	systemic	220 mg/m ³			
Consumer DN	EL, long-term	inhalation	local	4,8 mg/m³			
Consumer DN	EL, acute	inhalation	local	22 mg/m ³			
Consumer DN	EL, acute	oral	systemic	0,6 mg/kg bw/day			

PNEC values

CAS No	Substance			
Environmental	Environmental compartment			
75-05-8 acetonitrile				
Freshwater		10 mg/l		
Freshwater (intermittent releases)		10 mg/l		
Marine water		1 mg/l		
Freshwater sediment		7,53 mg/kg		
Micro-organisms in sewage treatment plants (STP)		32 mg/l		
Soil	Soil			

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

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



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for li

Revision date: 22.08.2023

Product code: 18485

Page 6 of 12

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact Trade name/designation KCL 897 Butoject® Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm Wearing time with permanent contact: > 480 min

By short-term hand contact Trade name/designation KCL 897 Butoject® Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Danger of explosion

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

-			
	Physical state:	Liquid	
	Colour:	colourless	
	Odour:	like: Ether	
	Odour threshold:	No data available	
	Melting point/freezing point:		No data available
	Boiling point or initial boiling point and		>35 °C
	boiling range:		
	Flammability:		not applicable
	Lower explosion limits:		No data available
	Upper explosion limits:		No data available
	Flash point:		<21 °C
	Auto-ignition temperature:		No data available
	Decomposition temperature:		not determined
	pH-Value:		not determined
	Viscosity / kinematic:		No data available



Acetonitine / water / trinuoroacetic ac	li	
Revision date: 22.08.2023	Product code: 18485	Page 7 of 12
Solubility in other solvents		
not determined		
Dissolution rate:	No data available	
Partition coefficient n-octanol/water:	not determined	
Dispersion stability:	No data available	
Vapour pressure:	No data available	
Vapour pressure:	No data available	
Density:	0,80909 g/cm³	
Relative density:	No data available	
Bulk density:	No data available	
Relative vapour density:	not determined	
Particle characteristics:	No data available	
9.2. Other information		
Information with regard to physical hazard classes Explosive properties Vapours may form explosive mixtures with air. Sustaining combustion: Self-ignition temperature Solid:	No data available not applicable	
Gas: Oxidizing properties Not oxidising.	not applicable	
Other safety characteristics		
Evaporation rate:	not determined	
Solvent separation test:	No data available	
Solvent content:	No data available	
Solid content:	No data available	
Sublimation point:	No data available	
Softening point:	No data available	
Pour point:	No data available	
No data available:		
Viscosity / dynamic:	No data available	
Flow time:	No data available	
Further Information		
No data available		

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapours may form explosive mixtures with air.

10.2. Chemical stability

Keep away from heat.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

Rubber articles Plastic articles

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

Product code: 18485

li

Page 8 of 12

Further information

No data available

Revision date: 22.08.2023

SECTION 11: Toxicological information

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

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

OAO NI-

Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.

ATEmix calculated

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ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	No Chemical name						
	Exposure route	Dose		Species	Source	Method	
75-05-8	acetonitrile						
	oral	LD50 mg/kg	469	Mouse	Study report (1998)	OECD Guideline 401	
	dermal	LD50 mg/kg	> 2000	Rabbit	Study report (1997)	OECD Guideline 402	
	inhalation (4 h) vapour	LC50	3587 mg/l	Mouse	Study report (1998)	OECD Guideline 403	

1,5 mg/l

Irritation and corrosivity

Causes serious eye irritation.

inhalation dust/mist

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.

ATE

Carcinogenic/mutagenic/toxic effects for reproduction

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

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.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for

Revision date: 22.08.2023

li Product code: 18485

Page 9 of 12

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

Headache Dyspnoea Irritant Vomiting Spasms Unconsciousness Respiratory complaints Cardiac arrhythmias Dizziness Release of: Hydrogen cyanide (hydrocyanic acid)

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name	Chemical name							
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method		
75-05-8	acetonitrile								
	Acute fish toxicity	LC50 mg/l	1640	96 h	Pimephales promelas	Review article or handbook (1984)	Guideline not specified		
	Acute algae toxicity	ErC50 mg/l	3560	72 h	Phaeodactylum tricornutum	Study report (2010)	ISO 10253		
	Acute crustacea toxicity	EC50 mg/l	3600	48 h	Daphnia magna	Bull. Environ. Contam. Toxicol. 57:655-6	other: OECD Guidelines for Testing Chemi		
	Fish toxicity	NOEC	102 mg/l	7 d	Oryzias latipes	Study report (1996)	OECD Guideline 204		
	Crustacea toxicity	NOEC	960 mg/l	21 d	Daphnia magna	Study report (1996)	other: OECD Guideline 202		

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No Chemical name						Log Pow
75-05-8	acetonitrile					0,29
BCF						
CAS No	Chemical name		BCF	Species	Source	
75-05-8	acetonitrile		3		HSDB (200	9)

12.4. Mobility in soil

There are no data available on the mixture itself.

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.



Acetonitrile / water / trifluoroacetic acid (TFA) mixture mixed 90 : 9.9 : 0.1 volumetrically for li

Revision date: 22.08.2023

Product code: 18485

Page 10 of 12

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

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

Land transport (ADR/RID)	
14.1. UN number or ID number:	UN 1648
14.2. UN proper shipping name:	ACETONITRILE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 1648
14.2. UN proper shipping name:	ACETONITRILE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2
Marine transport (IMDG)	
14.1. UN number or ID number:	UN 1648
14.2. UN proper shipping name:	ACETONITRILE
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D



according to Regulation (EC) No 1907/2006

Product code: 18485	Page 11 of 12		
UN 1648 ACETONITRILE 3 II 3 1 L Y341 E2 353 5 L 364 60 L			
No IMO instruments			
SECTION 15: Regulatory information 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture			
P5c FLAMMABLE LIQUIDS			
work protection guideline' (94/33/EC). Observe employment re	strictions		
	Ii Product code: 18485 UN 1648 ACETONITRILE 3 IL Y341 E2 353 5 L 364 60 L No IMO instruments ations/legislation specific for the substance or mixture P5c FLAMMABLE LIQUIDS Observe restrictions to employment for juveniles according to t work protection guideline' (94/33/EC). Observe employment re under the Maternity Protection Directive (92/85/EEC) for expecting mothers. 2 - obviously hazardous to water		

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 9,12.



Product code: 18485

according to Regulation (EC) No 1907/2006

li

Page 12 of 12

Abbreviations and acronyms

Revision date: 22.08.2023

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50% LD50: Lethal dose, 50% Flam. Liq: Flammable liquid Acute Tox: Acute toxicity Eye Irrit: Eye irritation

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

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H312	Calculation method
Acute Tox. 4; H332	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Further Information

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.)