

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 12/18/2013 Revision date: 9/12/2023 Supersedes version of: 6/29/2023 Version: 5.0

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

1.1. Product identifier

Product form : Mixture

Trade name : 20% Diethylamine in Acetonitrile UFI : 91S2-A0CW-A00T-NG11

Product code : NC-0302

Type of product : Synthesis Reagent Product group : End product

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

1.2.1. Relevant identified uses

Main use category : Industrial use,Laboratory chemical

Industrial/Professional use spec : Industrial

For professional use only
: Laboratory chemicals

Substance manufacture
Function or use category : Laboratory chemicals

1.2.2. Uses advised against

Use of the substance/mixture

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

emp Biotech GmbH GmbH Robert-Rössle-Str. 10 DE– 13125 Berlin Deutschland

T +49 (0)30 94 89 22 01 (Monday-Friday, 9:00 am-5:00 pm) - F +49 (0)30 94 89 32 01

 $\underline{info@empbiotech.com} - \underline{www.empbiotech.com}$

1.4. Emergency telephone number

Emergency number : Giftnotruf Berlin +49 30 30686700 (Beratung in Deutsch), 24 Stunden, 7 Tage/Woche;

International: INFOTRAC +1-352-323-3500 (Phone) or in the US 800-535-5053 (toll-free),

24 hours/day, 7 days/week

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225
Acute Tox. 4 (Oral) H302
Acute Tox. 4 (Dermal) H312
Acute Tox. 4 (Inhalation) H332
Skin Corr. 1A H314
STOT SE 3 H335
Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)





GHS02

GHS05 GHS07

Signal word (CLP)

Hazard statements (CLP)

: Danger

: H225 - Highly flammable liquid and vapour.

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, hearing

protection.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a POISON CENTER, a doctor.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Other hazards which do not result in classification

This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Acetonitrile (anhydrous)(75-05-8)	

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetonitrile (anhydrous) substance with national workplace exposure limit(s) (DE); substance with a Community workplace exposure limit	CAS-No.: 75-05-8 EC-No.: 200-835-2 EC Index-No.: 608-001-00-3 REACH-no: 01-2119471307- 38-XXXX	70 – 90	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Diethylamine substance with national workplace exposure limit(s) (DE); substance with a Community workplace exposure limit	CAS-No.: 109-89-7 EC-No.: 203-716-3 EC Index-No.: 612-003-00-X	10 – 30	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Diethylamine	CAS-No.: 109-89-7 EC-No.: 203-716-3 EC Index-No.: 612-003-00-X	(1 ≤ C < 100) STOT SE 3, H335

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Consult a doctor. Show this safety data sheet to the doctor in attendance. First-aid measures after inhalation : Move person to fresh air and ensure comfortable breathing. Call a doctor.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Get

immediate medical advice/attention.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of water and seek medical

advice. Get immediate medical advice/attention. Remove contact lenses, if possible.

Continue rinsing.

First-aid measures after ingestion : Drink water immediatly (max. 2 cups). Do NOT induce vomiting. Get immediate medical

advice/attention. No attempts at neutralization.

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

Symptoms/effects : The most important known symptoms and effects are described on the label (see 2.2) and /

or in section 11.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide (CO2). Dry powder.

Unsuitable extinguishing media : There are no extinguishing agent restrictions for this substance.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible.

Explosion hazard : Vapors are heavier than air and may spread along floors. Development of hazardous

combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air

at ambient temperatures.

Hazardous decomposition products in case of fire : Carbon oxides

Nitrogen oxides (NOx)

Mixture with combustible ingredients.

Pay attention to flashback.

5.3. Advice for firefighters

Firefighting instructions : Remove container from danger zone and cool with water. Suppress (knock down)

gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from

contaminating surface water or the ground water system.

Protection during firefighting : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by

keeping a safe distance or by wearing suitable protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : For personal protection see section 8. EN 166. EN 374. EN 143.

Emergency procedures : Avoid substance contact. Avoid breathing vapours, spray. Ensure adequate ventilation,

observe emergency procedures, consult an expert. Evacuate unnecessary personnel. Keep

away from heat and sources of ignition.

6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Be careful of explosion risk.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see

sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®).

Dispose of properly. Clean up affected area.

6.4. Reference to other sections

Information on exposure controls/personal protective equipment and on Instructions for disposal can be found in sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use under laboratory hood. Do not inhale substance/mixture. Avoid generation of

vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take

precautionary measures against static discharge. For precautions see section 2.2.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Take off immediately all contaminated clothing and wash it

before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry, well-ventilated place. Keep away from heat and

sources of ignition.

Incompatible materials : Heat sources. Sources of ignition.

Storage area : Storage class (TRGS 510): See section 15.1.2.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Acetonitrile (anhydrous) (75-05-8)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Acetonitrile	
IOEL TWA	70 mg/m³	
IOEL TWA [ppm]	40 ppm Indicative: Indicates the possibility of significant absorption of the substance through the skin.	

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Acetonitrile (anhydrous) (75-05-8)		
Germany - Occupational Exposure Limits (TRGS 90	Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Acetonitril	
AGW (OEL TWA) [1]	17 mg/m³	
AGW (OEL TWA) [2]	10 ppm Remark: Skin resorptive: There is no reason to fear a risk of damage to the developing embryo or foetus when AGW and BGW are adhered to. Source: DFG, EU	
Diethylamine (109-89-7)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Diethylamine	
IOEL TWA	15 mg/m³	
IOEL TWA [ppm]	5 ppm	
IOEL STEL	30 mg/m³	
IOEL STEL [ppm]	10 ppm	
Germany - Occupational Exposure Limits (TRGS 900)		
Local name	Diethylamin	
AGW (OEL TWA) [1]	15 mg/m³	
AGW (OEL TWA) [2]	5 ppm	
Remark	DFG,EU,6,H	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):









8.2.2.1. Eye and face protection

Eye protection:

Wear eye protection. Wear closed safety glasses. EN 166. Use face shield for larger quantities.

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8.2.2.2. Skin protection

Skin and body protection:

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Flame retardant antistatic protective clothing

Hand protection:

Wear protective gloves. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

. Splash contact-material: Viton® Minimum layer thickness: 0,7 mm Break through time: 120 min

8.2.2.3. Respiratory protection

Respiratory protection:

Wear respiratory protection. Required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards:

DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not let product enter drains. Risk of explosion.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Colorless to light yellow.

Appearance : Clear.
Odour
Odour threshold : Not available
Melting point : Not available
Freezing point : Not available

Boiling point : 56 °C (Minor component); 86 °C (Main component)

Flammability : Not available

Lower explosion limit : 1.8 vol % (Main component)
Upper explosion limit : 10.1 vol % (Main component)

Flash point : -28 °C (Minor component); +2 °C (Main component)
Auto-ignition temperature : Not available

Auto-ignition temperature : Not available Decomposition temperature : Not available pН Viscosity, kinematic : Not available Solubility : Soluble in water. Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure : Not available Vapour pressure at 50 °C : Not available Density : Not available Relative density : Not available Relative vapour density at 20 °C Not available Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

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9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors can form an explosive mixture with air.

10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents. Acids.

10.6. Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Harmful in contact with skin.

Acute toxicity (inhalation) : Harmful if inhaled.

Additional information : Acetonitrile:

LD50 Oral - Mouse - male and female: 617 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Mouse - male and female - 4 h: 6,022 mg/l

(OECD Test Guideline 403)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table

3.1/3.2)

Diethylamine:

LD50 Oral - Rat - male: 540 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - female - 4 h: 17,11 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male: 582 mg/kg

Remarks: (IUCLID) (ECHA)

20% Diethylamine in Acetonitrile	
ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

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Additional information Diethylamine: Skin - Rabbit Result: Causes severe burns. (OECD Test Guideline 404) (Regulation (EC) No 1272/2008, Annex VI) Diethylamine (109-89-7) 13	Acetonitrile (anhydrous) (75-05-8)	
Diethylamine (109-89-7) LD50 oral rat 540 mg/kg - AMA Archives of Environmental Health. Vol. 1, Pg. 343, 1980. LD50 darmal rabbit 580 mg/kg - AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 4, Pg. 119, 1951. LC50 Inhalation - Rat 12 mg/l4h - Archives of Environmental Health. Vol. 1, Pg. 343, 1980. Sinc corosion/initation Additional information Causes severe kin burns. (Debylamine) (Debylamine) Diethylamine (109-89-7) pH 13 Serious eye damage/initation Additional information Ensure Causes serious eye initiation. (Decoro Test Guideline 405) Classified according to Regulation (EU) 1277/2008, Annex VI (Table 3.1/3.2) Diethylamine (109-89-7) pH 13 Result Causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-89-7) pH 13 Respiratory or skin sensitisation For cause serious eye initiation. Enspiratory or skin sensitisation For cause serious eye initiation. For causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-89-7) pH 13 Respiratory or skin sensitisation For causes serious eye initiation. For causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-89-7) pH Additional information No classified For causes serious eye initiation. For causes serious eye in	LD50 oral rat	2460 mg/kg - Union Carbide Data Sheet. Vol. 3/18/1965.
LD50 arai rat 540 mg/kg - Archives of Environmental Health, Vol. 1, Pg. 343, 1960. LD50 dermal rabbit 550 mg/kg - AMA Archives of Industrial Hyglene and Occupational Medicine, Vol. 4, Pg. 119, 1951. LC50 Inhalation - Rat 12 mg/tl/h - Archives of Environmental Health, Vol. 1, Pg. 343, 1960. Skin cornosion/intration 2 causes severe skin burns. 2 Diethylamine (109-83-7) PH 13 Serious eye damage/irritation Additional information 14 Mixture causes serious eye irritation. 2 Risk of blindness! 3 Acciontifile: Eyes - Rabbit 4 Result Causes serious eye irritation. 2 (DECD Test Guideline 405) 3 Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) 3 Diethylamine (109-83-7) PH 13 Serious eye damage/irritation Risk of blindness! 3 Acciontifile: Eyes - Rabbit 4 Result Causes serious eye irritation. 2 (DECD Test Guideline 405) 3 Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) 3 Diethylamine (109-83-7) PH 13 Respiratory or skin sensitisation Serious eyes damage/irritation 14 Acciontifile 3 Acciontifile 4 Result: Causes burns - 7 Days 4 Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-83-7) ph 13 Respiratory or skin sensitisation Serious eyes irritation 14 Acciontifile 15 Acciontifile 16 Result: Causes burns - 7 Days 16 Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-83-7) ph 15 Respiratory or skin sensitisation Not classified Carcinogenicity Not classified Result: Causes decreased accident from the mouth and throat, as well as a danger of perforation of the epophagus and the stomach. Acute inhalation baciety, mucosal irritations, cough, shortness of breath; Possible damages: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Not classified Acciontifile (anhydrous) (75-05-8)	LD50 dermal rabbit	> 2000 mg/kg - International Journal of Toxicology. Vol. 19, Pg. 363, 2000.
LD50 demail rabbit 580 mg/kg - AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 4, Pg. 119, 1961. LC50 Inhalation - Rat	Diethylamine (109-89-7)	
119, 1951. 12 mg/ldh - Archives of Environmental Health. Vol. 1, Pg. 343, 1960.	LD50 oral rat	540 mg/kg - Archives of Environmental Health. Vol. 1, Pg. 343, 1960.
Skin corrosion/irritation Additional information Causes severe skin burns. Dietrylamine: Skin - Rabbit Result: Causes severe burns. (OECD Test Guideline 404) (Regulation (EC) No 1272/2008, Annex VI) Dietrylamine (109-89-7) pH 13 Serious eye damage/irritation Result: Causes serious eye irritation. Risk of blindness! Additional information Additional information Result: Causes serious eye irritation. (OECD Test Guideline 405) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Dietrylamine: Eyes - Rabbit Result: Causes serious eye irritation. (OECD Test Guideline 405) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Dietrylamine: Eyes - Rabbit Result: Causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Dietrylamine (109-89-7) pH 13 14 15 Respiratory or skin sensitisation Germ cell mutagenicity Respiratory or skin sensitisation Respiratory according to Respiratory irritation. Remarks: Classified Respiratory irritation. Remarks: Classified Respiratory according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure Respiratory irritation. Remarks: Classified Respiratory hazard Resultine (ED) 1272/2008, Annex VI (Table 3.1/3.2) Respiratory hazard Respiratory irritation. Remarks: Classified Respiratory hazard Respiratory irritation. Remarks: Classified Respiratory irritation. Remarks: Classified Respiratory irritation. Remarks: Classified Respiratory irritation. Remarks: Classified Respiratory according to Regulation (LD50 dermal rabbit	70
Additional information Diethylamine: Sin: - Rabbit Result: Causes severe burns. (OECD Test Guideline 404) (Regulation (EC) No 1272/2008, Annex VI) Diethylamine (109-89-7) PH	LC50 Inhalation - Rat	12 mg/l/4h - Archives of Environmental Health. Vol. 1, Pg. 343, 1960.
PH 13 Serious eye damage/irritation	Skin corrosion/irritation Additional information	: Diethylamine: Skin - Rabbit Result: Causes severe burns. (OECD Test Guideline 404)
Serious eye damage/irritation : Mixture causes serious eye irritation Risk of blindness! Additional information : Acetonitrile: Eyes - Rabbit Result: Causes serious eye irritation. (OECD Test Guideline 402) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Diethylamine: Eyes - Rabbit Result: Causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-89-7) pH	Diethylamine (109-89-7)	
Additional information Risk of blindness! Acetonitrilie: Eyes - Rabbit Result: Causes serious eye irritation. (OECD Test Guideline 405) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Diethylamine: Eyes - Rabbit Result: Causes burns 7 Days (Regulation (EC) No. 440/2008, Annex, B.5) Diethylamine (109-89-7) pH	рН	13
Diethylamine (109-89-7) pH 13 Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Additional information : Acetonitrile:	Serious eye damage/irritation Additional information	. Risk of blindness! : Acetonitrile: Eyes - Rabbit Result: Causes serious eye irritation. (OECD Test Guideline 405) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Diethylamine: Eyes - Rabbit Result: Causes burns 7 Days
Respiratory or skin sensitisation Germ cell mutagenicity Additional information : Not classified Additional information : Acetonitrile: Test system: Saccharomyces cerevisiae Result: positive Remarks: Cytogenetic analysis (ECHA) Carcinogenicity : Not classified 20% Diethylamine in Acetonitrile IARC group No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity : Not classified STOT-single exposure Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages: damage of respiratory tract Additional information i Diethylamine: May cause respiratory irritation. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure : Not classified Acetonitrile (anhydrous) (75-05-8)	Diethylamine (109-89-7)	
Germ cell mutagenicity Additional information I Acetonitrile: Test system: Saccharomyces cerevisiae Result: positive Remarks: Cytogenetic analysis (ECHA) Carcinogenicity I Not classified No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity I Not classified I Mixture may cause respiratory irritation. Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages: damage of respiratory tract Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure I Not classified Not classified Acetonitrile (anhydrous) (75-05-8)	рН	13
20% Diethylamine in Acetonitrile IARC group No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity STOT-single exposure Mixture may cause respiratory irritation. Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages: damage of respiratory tract STOT-repeated exposure STOT-repeated exposure Acetonitrile (anhydrous) (75-05-8)	Respiratory or skin sensitisation Germ cell mutagenicity Additional information	 : Not classified : Acetonitrile: Test system: Saccharomyces cerevisiae Result: positive Remarks: Cytogenetic analysis (ECHA)
IARC group No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. Reproductive toxicity STOT-single exposure Mixture may cause respiratory irritation. Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages: damage of respiratory tract Additional information Diethylamine: May cause respiratory irritation. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure Aspiration hazard Not classified Not classified		: Not classified
Reproductive toxicity STOT-single exposure : Mixture may cause respiratory irritation. Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages: damage of respiratory tract Additional information : Diethylamine: May cause respiratory irritation. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure Aspiration hazard : Not classified Acetonitrile (anhydrous) (75-05-8)	-	
Additional information Diethylamine: May cause respiratory irritation. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) STOT-repeated exposure Aspiration hazard Not classified Acetonitrile (anhydrous) (75-05-8)	Reproductive toxicity STOT-single exposure	 : Not classified : Mixture may cause respiratory irritation. Acute oral toxicity: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute inhalation toxicity: mucosal irritations, cough, shortness of breath; Possible damages:
Aspiration hazard : Not classified Acetonitrile (anhydrous) (75-05-8)	Additional information	: Diethylamine: May cause respiratory irritation. Remarks:
Acetonitrile (anhydrous) (75-05-8)	STOT-repeated exposure	
	•	. INOL GIASSIIIEU
		0.405 mm²/s

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Diethylamine (109-89-7)	
Viscosity, kinematic	0.479 mm²/s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other information

Other information

 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated, Other dangerous properties can not be excluded.
 Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term

: Not classified

(acute)

Hazardous to the aquatic environment, long-term

: Not classified

(chronic)

Acetonitrile (anhydrous) (75-05-8)	
LC50 - Fish [1]	1640 mg/l - Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows(Pimephales promelas), Vol. 1. Center for Lake Superior Environmental Stud., Univ.of Wisconsin-Superior, Superior, WI:414
EC50 - Crustacea [1]	3600 mg/l - Tong, Z., Z. Huailan, and J. Hongjun 1996. Chronic Toxicityof Acrylonitrile and Acetonitrile to Daphnia magna in 14-d and 21-d Toxicity Tests. Bull.Environ.Contam.Toxicol. 57(4):655-659
Diethylamine (109-89-7)	
LC50 - Fish [1]	156 (25 – 855) mg/l - Reference for median: Van Leeuwen, C.J., J.L. Maas-Diepeveen, G. Niebeek, W.H.A. Vergouw, P.S. Griffioen, and M.W. Luijken 1985. Aquatic Toxicological Aspects of Dithiocarbamates and Related Compounds. I. Short-Term Toxicity Tests. Aquat.Toxicol. 7(3):145-164.
EC50 96h - Algae [1]	38 (20 – 56) mg/l - Reference for median: Calamari, D., R.D. Gasso, S. Galassi, A. Provini, and M. Vighi 1980. Biodegradation and Toxicity of Selected Amines on Aquatic Organisms. Chemosphere 9(12):753-762.

12.2. Persistence and degradability

Acetonitrile (anhydrous) (75-05-8)		
Biodegradation	70 % - Result: Readily biodegradable. (OECD Test Guideline 310)	
Diethylamine (109-89-7)		
ThOD	3.62 g O ₂ /g substance	
Biodegradation	68 – 70 % - Aerobic - Exposure time 28 d Result: Readily biodegradable. (OECD Test Guideline 301C)	

12.3. Bioaccumulative potential

Acetonitrile (anhydrous) (75-05-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.34

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Acetonitrile (anhydrous) (75-05-8)	
Bioaccumulative potential No bioaccumulation is to be expected (log Pow <= 4).	
Diethylamine (109-89-7)	
Partition coefficient n-octanol/water (Log Kow)	0.58
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Acetonitrile (anhydrous) (75-05-8)	
Mobility in soil	Not expected to adsorb on soil.

12.5. Results of PBT and vPvB assessment

20% Diethylamine in Acetonitrile	
Results of PBT assessment	This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Diethylamine

Acetonitrile : Toxicity to fish:

Flow-through test LC50 - Pimephales promelas (fathead minnow): 1.640 mg/l - 96 h

Remarks: (ECHA) Toxicity to algae:

Static test NOEC - Phaeodactylum tricornutum: 400 mg/l - 72 h

Remarks: (ISO 10253)

Static test ErC50 - Phaeodactylum tricornutum: 9.696 mg/l - 72 h

Remarks: (ISO 10253) Toxicity to fish:

Semi-static test LC50 - Oryzias latipes: 27 mg/l - 96 h

Remarks: (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates:

Semi-static test LC50 - Ceriodaphnia dubia (water flea): 4,6 mg/l - 48 h

Remarks: (US-EPA)
Toxicity to algae:

Static test EC50 - Pseudokirchneriella subcapitata: 54 mg/l - 72 h

Remarks: (OECD Test Guideline 201)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Product residues are to be disposed of in compliance with national and regional regulations

dispose. Keep chemicals in original containers. Not with other waste mix. Uncleaned containers are to be treated according to the product. Pay attention to the waste policy

2008/98/EG.

Product/Packaging disposal recommendations : Contaminated packaging to be disposed as unused product.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

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ADR	IMDG	IATA
14.1. UN number or ID n	umber	
UN 2924	UN 2924	UN 2924
14.2. UN proper shippin	g name	
FLAMMABLE LIQUID, N.O.S. (Solution of Diethylamine in Acetonitrile)	FLAMMABLE LIQUID, N.O.S. (Solution of Diethylamine in Acetonitrile)	Flammable liquid, n.o.s. (Solution of Diethylamine in Acetonitrile)
14.3. Transport hazard	class(es)	
3 (8)	3 (8)	3 (8)
3 8	3 8	3 8
14.4. Packing group		
II	II	II
14.5. Environmental haz	ards	
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information	on available	

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

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POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : Seveso III: Directive 2012/18/EU of the : FLAMMABLE LIQUIDS

European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Employment restrictions : Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or

stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).

Storage class (LGK, TRGS 510) : LGK 3 - Flammable liquids.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of H- and EUH-statements:		
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 2	Flammable liquids, Category 2	
H225	Highly flammable liquid and vapour.	
H302	Harmful if swallowed.	
H312	Harmful in contact with skin.	
H314	Causes severe skin burns and eye damage.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	

Safety Data Sheet (SDS), EU

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.