

Acylation Concentrate BA R-8312

Safety Data Sheet

according to Regulation (EU) 2020/878

EUH-statements : EUH071 - Corrosive to the respiratory tract.

Reduced labelling (contents of the package ≤ 125 ml) according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05



GHS08

Signal word (CLP) : Danger

Hazardous ingredients : Succinic anhydride

Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements (CLP) : P260 - Do not breathe mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye 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/doctor.
P501 - Dispose of contents/container to an authorised waste collection point.

EUH-statements : EUH071 - Corrosive to the respiratory tract.

2.3. Other hazards

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.

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]
Dimethyl sulfoxide	(CAS no) 67-68-5 (EC no) 200-664-3	> 60	Not classified
Succinic anhydride	(CAS no) 108-30-5 (EC no) 203-570-0 (EC index no) 607-103-00-5	15 - < 25	Acute Tox. 4 (oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Resp. Sens. 1, H334 EUH071

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a physician immediately.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Drink water as a precaution. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Corrosive to the respiratory tract.

Symptoms/effects after skin contact : Causes severe skin burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage.

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing agents to the environment. Carbon dioxide. Foam. Dry extinguishing powder. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic gases may be formed. Carbon dioxide. Carbon monoxide. Sulphur oxides.

5.3. Advice for firefighters

Firefighting instructions : Prevent firefighting water from entering the environment. Use water spray or fog for cooling exposed containers.

Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Provide adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours/spray.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a cool, well-ventilated place. Protect from heat and direct sunlight. Protect from frost. Store locked up.

Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Laboratory reagent, Immunoassays.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethyl sulfoxide (67-68-5)		
Austria	Local name	Dimethylsulfoxid
Austria	MAK (OEL TWA) (mg/m ³)	160 mg/m ³
Austria	MAK (OEL TWA) (ppm)	50 ppm
Austria	Remark (AT)	H
Germany	TRGS 900 Local name	Dimethylsulfoxid (DMSO)
Germany	TRGS 900 Occupational Exposure Limit Value (mg/m ³)	160 mg/m ³
Germany	TRGS 900 Occupational Exposure Limit Value (ppm)	50 ppm
Germany	TRGS 900 Remark	2(I), DFG, Z, H
Switzerland	Local name	Diméthylsulfoxyde (DMSO) / Dimethylsulfoxid (DMSO)
Switzerland	MAK (mg/m ³)	160 mg/m ³

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Dimethyl sulfoxide (67-68-5)		
Switzerland	MAK (ppm)	50 ppm
Switzerland	KZGW (mg/m ³)	320 mg/m ³
Switzerland	KZGW (ppm)	100 ppm
Switzerland	Notation (CH)	H
Dimethyl sulfoxide (67-68-5)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal		365 mg/kg bodyweight/day
Long-term - systemic effects, inhalation		75 mg/m ³
Long-term - local effects, inhalation		17.67 mg/m ³
DNEL/DMEL (General population)		
Long-term - systemic effects, oral		1.67 mg/kg bodyweight/day
Long-term - systemic effects, inhalation		56 mg/m ³
Long-term - systemic effects, dermal		178 mg/kg bodyweight/day
Long-term - local effects, inhalation		3.13 mg/m ³
PNEC (Water)		
PNEC aqua (freshwater)		17 mg/l
PNEC aqua (marine water)		1.7 mg/l
PNEC (Sediment)		
PNEC sediment (freshwater)		61.4 mg/kg dry weight
PNEC sediment (marine water)		6.14 mg/kg dry weight
PNEC (Soil)		
PNEC soil		2.32 mg/kg dry weight
PNEC (Oral)		
PNEC oral (secondary poisoning)		0.7 g/kg food
PNEC (STP)		
PNEC sewage treatment plant		11 mg/l
Succinic anhydride (108-30-5)		
PNEC (Water)		
PNEC aqua (freshwater)		0.085 mg/l
PNEC aqua (marine water)		0.009 mg/l
PNEC aqua (freshwater, intermittent)		0.85 mg/l
PNEC aqua (marine water, intermittent)		0.085 mg/l
PNEC (Sediment)		
PNEC sediment (freshwater)		1.959 mg/kg dry weight
PNEC sediment (marine water)		0.196 mg/kg dry weight
PNEC (Soil)		
PNEC soil		0.342 mg/kg dry weight
PNEC (STP)		
PNEC sewage treatment plant		2.5 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations.

Hand protection:

Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm, Butyl rubber, 0.5 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Wear safety glasses (EN 166).

Skin and body protection:

Wear suitable protective clothing.

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Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type A-P2.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: No data available
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: No data available
Flammability	: No data available
Lower and upper explosion limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: No data available
Kinematic viscosity	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and/or relative density	: No data available
Relative vapour density	: No data available
Particle size	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosive properties	: No explosive properties.
Oxidising properties	: No oxidising properties.

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

High temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

No hazardous decomposition products known. In case of fire: Toxic fumes may be released. Carbon dioxide. Carbon monoxide. Sulphur oxides.

SECTION 11: Toxicological information

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

Acute toxicity	: Not classified
Based on available data, the classification criteria are not met	

Dimethyl sulfoxide (67-68-5)	
LD50 oral rat	28300 mg/kg
LD50 dermal rat	~ 40000 mg/kg
LC50 inhalation rat	> 5.33 mg/l air, 4 h

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Succinic anhydride (108-30-5)	
LD50 oral rat	1794.9 mg/kg
LD50 dermal rat	> 2000 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Serious eye damage, category 1, implicit
Respiratory or skin sensitisation	: May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met

11.2. Information on other hazards

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
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SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Dimethyl sulfoxide (67-68-5)	
LC50 fish	25000 mg/l 96 h, Danio rerio
EC50 daphnia	24600 mg/l 48 h, Daphnia magna
ErC50 algae	17000 mg/l 72 h, Raphidocelis subcapitata

Succinic anhydride (108-30-5)	
LC50 fish	> 100 mg/l 96 h, Danio rerio
EC50 daphnia	> 102 mg/l 48 h, Daphnia magna
ErC50 algae	> 100 mg/l 72 h, Raphidocelis subcapitata
NOEC algae	100 mg/l 72 h, Raphidocelis subcapitata

12.2. Persistence and degradability

Dimethyl sulfoxide (67-68-5)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	31 %, 28 d

Succinic anhydride (108-30-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	96.6 %, 28 d

12.3. Bioaccumulative potential

Dimethyl sulfoxide (67-68-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.35 (20 °C)

Succinic anhydride (108-30-5)	
Partition coefficient n-octanol/water (Log Pow)	2.44 (40 °C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Do not empty into drains. Dispose of this material and its container in a safe way.
Waste code	: The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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

Contains no substance on the REACH Candidate List
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Water hazard class (WGK)	: WGK 1 - Slightly hazardous to water
WGK Remark	: Classification according to AwSV, Annex 1
Storage class (LGK)	: LGK 8A - Combustible corrosive substances

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Employment restrictions : Employment prohibitions for the protection of young people at work according to § 22 section 1(6) JArbSchG have to be observed.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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.

Changes compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
EUH071	Corrosive to the respiratory tract.

SDS EU (REACH Annex II)

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.

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

Product form : Mixture
 Product name : Assay Buffer BA R-8313
 UFI : -

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Laboratory reagent, Immunoassays
 Use by professionals.

1.2.2. Uses advised against

No additional information available

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

LDN Labor Diagnostika Nord GmbH & Co. KG
 Am Eichenhain 1
 48531 Nordhorn, Germany
 T +49 (0)5921 81970 - F +49 (0)5921 8197 201
support@ldn.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency telephone number
Germany	LDN Labor Diagnostika Nord GmbH & Co. KG	Am Eichenhain 1 48531 Nordhorn, Germany	+49 (0) 5921-81970 (Mo-Fr 8:00-16:00)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Entzündbare Flüssigkeiten, Kategorie 3 H226

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapour.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P280 - Wear eye protection.
 P370+P378 - In case of fire: Use carbon dioxide, dry extinguishing powder, water spray, alcohol resistant foam to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container to an authorised waste collection point.

Reduced labelling (contents of the package ≤ 125 ml) according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

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Signal word (CLP) : Warning

Hazard statements (CLP) : -

Precautionary statements (CLP) : -

2.3. Other hazards

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.

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]
Ethanol, ethyl alcohol* ¹	(CAS no) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5 (REACH no) 01-2119457610-43-xxxx	< 25	Flam. Liq. 2, H225 Eye Irrit. 2, H319

Name	Product identifier	Specific concentration limits according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol, ethyl alcohol	(CAS no) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5 (REACH no) 01-2119457610-43-xxxx	(C ≥ 50) Eye Irrit. 2, H319

*¹ denatured with ethyl methyl ketone (CAS no 78-93-3)

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Make the affected person rest and keep at warm. If breathing stops, give artificial respiration.
- First-aid measures after skin contact : Take off immediately all contaminated clothing. Gently wash with plenty of soap and water.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Drink plenty of water as a precaution.

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

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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. Dry extinguishing powder. Water spray. For a significant fire: Alcohol resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.
- Hazardous decomposition products in case of fire : Toxic gases may be formed. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

- Firefighting instructions : Prevent firefighting water from entering the environment. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Provide adequate ventilation. Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Avoid contact with skin and eyes.

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6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Clean preferably with a detergent - Avoid the use of solvents. Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Remove all sources of ignition. No open flames. No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Store in original container. Keep container tightly closed. Store in a cool, well-ventilated place. Keep in fireproof place. Protect from direct sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs. Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.

7.3. Specific end use(s)

Laboratory reagent, Immunoassays

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethanol (64-17-5)		
Austria	Local name	Ethanol
Austria	MAK (OEL TWA) (mg/m ³)	1900 mg/m ³
Austria	MAK (OEL TWA) (ppm)	1000 ppm
Austria	MAK (OEL STEL) (mg/m ³)	3800 mg/m ³
Austria	MAK (OEL STEL) (ppm)	2000 ppm
Belgium	Local name	Ethanol
Belgium	OEL TWA (mg/m ³)	1907 mg/m ³
Belgium	OEL TWA (ppm)	1000 ppm
Germany	TRGS 900 Local name	Ethanol
Germany	TRGS 900 Occupational Exposure Limit Value (mg/m ³)	200 mg/m ³
Germany	TRGS 900 Occupational Exposure Limit Value (ppm)	380 ppm
Germany	TRGS 900 Remark	4(II), DFG,Y
Switzerland	Local name	Ethanol
Switzerland	MAK (mg/m ³)	960 mg/m ³
Switzerland	MAK (ppm)	500 ppm
Switzerland	KZGW (mg/m ³)	1920 mg/m ³
Switzerland	KZGW (ppm)	1000 ppm
Switzerland	Notation (CH)	SSc

Ethanol (64-17-5)		
DNEL/DMEL (Workers)		

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Ethanol (64-17-5)	
Long-term - systemic effects, inhalation	380 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	114 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.96 mg/l
PNEC aqua (marine water)	0.79 mg/l
PNEC aqua (intermittent, freshwater)	2.75 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.6 mg/kg dwt
PNEC sediment (marine water)	2.9 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.63 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	0.38 g/kg food
PNEC (STP)	
PNEC sewage treatment plant	580 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations.

Hand protection:

Wear suitable gloves (EN 374). Butyl rubber. 0.5 mm. FKM. 0.4 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Wear safety glasses (EN 166).

Skin and body protection:

Wear suitable protective clothing. Flame retardant antistatic protective clothing.

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type A.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: No data available
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: No data available
Flammability	: Flammable liquid and vapour
Lower and upper explosion limit	: No data available
Flash point	: $\geq 23 - \leq 60$ °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: No data available
Kinematic viscosity	: No data available
Solubility	: Water: completely miscible
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and/or relative density	: No data available
Relative vapour density	: No data available
Particle size	: Not applicable

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Safety Data Sheet

according to Regulation (EU) 2020/878

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosive properties : May form flammable/explosive vapour-air mixture.

Oxidising properties : No oxidising properties

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. Open flame. Sparks. Ignition sources.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

May release flammable gases. In case of fire: Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

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

Acute toxicity : Not classified
Based on available data, the classification criteria are not met

Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg
LC50 inhalation rat (Vapours)	124.7 mg/l/4 h

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

Serious eye damage/irritation : Not classified
Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified
Based on available data, the classification criteria are not met

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

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

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

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

11.2. Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

Ethanol (64-17-5)	
LC50 fish	14200 mg/l 96 h, Pimephales promelas
EC50 daphnia	5012 mg/l 48h, Ceriodaphnia dubia

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Ethanol (64-17-5)	
ErC50 algae	275 mg/l 72 h, Chlorella vulgaris
NOEC fish	250 mg/l 120 h, Danio rerio
NOEC daphnia	9.6 mg/l 10 d, Ceriodaphnia dubia

12.2. Persistence and degradability

Ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	84 %, 20 d

12.3. Bioaccumulative potential

Ethanol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.35 (25 °C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Do not empty into drains. Dispose of this material and its container in a safe way.
Waste code	: The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

Assay Buffer BA R-8313

Safety Data Sheet

according to Regulation (EU) 2020/878

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1 – Slightly hazardous to water
WGK Remark : Classification according to AwSV, Annex 1
Storage class (LGK) : LGK 3 – Flammable liquids
Employment restrictions : Employment prohibitions for the protection of young people at work according to § 22 section 1(6) ArbSchG have to be observed.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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.

Changes compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

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Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H225	Flammable liquid and vapour.
H319	Causes serious eye irritation.

SDS EU (REACH Annex II)

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.

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

Product form : Mixture
Product name : Elution Buffer BA R-8326
UFI : -

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Laboratory reagent, Immunoassays
Use by professionals.

1.2.2. Uses advised against

No additional information available

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

LDN Labor Diagnostika Nord GmbH & Co. KG
Am Eichenhain 1
48531 Nordhorn, Germany
T +49 (0)5921 81970 - F +49 (0)5921 8197 201
support@ldn.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency telephone number
Germany	LDN Labor Diagnostika Nord GmbH & Co. KG	Am Eichenhain 1 48531 Nordhorn, Germany	05921-81970 (Mo-Fr 8:00-16:00)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Corrosive to metals, Category 1 H290

Skin corrosion/irritation, Category 1 H314

Serious eye damage/eye irritation, Category 1 H318

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger

Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P280 - Wear protective gloves, protective clothing, eye protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
P310 - Immediately call a doctor, a POISON CENTER.
P501 - Dispose of contents/container to an authorised waste collection point.

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Reduced labelling (contents of the package \leq 125 ml) according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) :

P280 - Wear protective gloves, protective clothing, eye protection.

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

P310 - Immediately call a doctor, a POISON CENTER.

P501 - Dispose of contents/container to an authorised waste collection point.

2.3. Other hazards

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.

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]
sodium hydroxide; caustic soda	(CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6	< 0,5	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

Name	Product identifier	Specific concentration limits according to Regulation (EC) No. 1272/2008 [CLP]
sodium hydroxide; caustic soda	(CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index-No.) 011-002-00-6	(0.5 \leq C < 2) Skin Irrit. 2, H315 (0.5 \leq C < 2) Eye Irrit. 2, H319 (2 \leq C < 5) Skin Corr. 1B, H314 (5 \leq C \leq 100) Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.

First-aid measures after inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact

: Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a physician immediately.

First-aid measures after eye contact

: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion

: Rinse mouth. Do NOT induce vomiting. Drink plenty of water as a precaution. Call a physician immediately.

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

Symptoms/effects after skin contact

: Causes severe skin burns.

Symptoms/effects after eye contact

: Causes serious eye damage.

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

: Adapt extinguishing agents to the environment. Carbon dioxide. Foam. Dry extinguishing powder. Water spray.

Unsuitable extinguishing media

: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire

: Toxic gases may be formed. Carbon dioxide. Carbon monoxide.

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according to Regulation (EU) 2020/878

5.3. Advice for firefighters

- Firefighting instructions : Prevent firefighting water from entering the environment. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Ensure adequate air ventilation. Avoid contact with skin and eyes. Do not breathe vapours/spray.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2. Environmental precautions

- Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Absorb spillage to prevent material damage. Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

- Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in corrosive resistant container with a resistant inner liner. Store in original container. Keep container tightly closed. Store in a cool, well-ventilated place. Protect from heat and direct sunlight. Keep out of frost. Store locked up.

- Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs.

- Incompatible materials : Metals.

7.3. Specific end use(s)

- Laboratory reagent, Immunoassays

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium hydroxide; caustic soda (1310-73-2)		
Austria	Local name	Natriumhydroxid
Austria	MAK (OEL TWA) (mg/m ³)	2 mg/m ³ (E)
Austria	MAK (OEL STEL) (ppm)	4 mg/m ³ (E)
Belgium	Local name	Sodium (hydroxyde de) # Natriumhydroxide
Belgium	OEL TWA (mg/m ³)	2 mg/m ³
Belgium	Remark	M
Switzerland	Local name	Soude caustique / Natriumhydroxid
Switzerland	MAK (mg/m ³)	2 mg/m ³ (i) / (e)
Switzerland	KZGW (mg/m ³)	2 mg/m ³ (i) / (e)
Switzerland	Notation (CH)	SS _C

sodium hydroxide; caustic soda (1310-73-2)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	1 mg/m ³

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sodium hydroxide; caustic soda (1310-73-2)	
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	1 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations.

Hand protection:

Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm. Butyl rubber, 0.5 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Wear safety glasses (EN 166).

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type P2.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: Odourless
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: No data available
Flammability	: No data available
Lower and upper explosion limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: 12.5 – 13.3
Kinematic viscosity	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and/or relative density	: No data available
Relative vapour density	: No data available
Particle size	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosive properties	: No explosive properties
Oxidising properties	: No oxidising properties

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

May be corrosive to metals.

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Safety Data Sheet

according to Regulation (EU) 2020/878

10.4. Conditions to avoid

High temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. Metals.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. In case of fire: Toxic gases may be formed. Carbon dioxide. Carbon monoxide..

SECTION 11: Toxicological information

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

Acute toxicity	: Not classified Based on available data, the classification criteria are not met
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: ≥ 11.5
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: ≥ 11.5
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met

11.2. Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

sodium hydroxide; caustic soda (1310-73-2)	
EC50 crustacea	40.4 mg/l 48 h, Ceriodaphnia sp.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Do not empty into drains. Dispose of this material and its container in a safe way.

Elution Buffer BA R-8326

Safety Data Sheet

according to Regulation (EU) 2020/878

Waste code : The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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

Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1 - Slightly hazardous to water
WGK Remark : Classification according to AwSV, Annex 1
Storage class (LGK) : LGK 8B - Non-combustible corrosive substances
Employment restrictions : Employment prohibitions for the protection of young people at work according to § 22 section 1(6) JArbSchG have to be observed.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Elution Buffer BA R-8326

Safety Data Sheet

according to Regulation (EU) 2020/878

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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.

Changes compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-phrases:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

SDS EU (REACH Annex II)

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.

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

Product form : Mixture
Product name : Standards and Controls BA E-8301, BA E-8302, BA E-8303, BA E-8304, BA E-8305,
BA E-8306, BA E-8351 and BA E-8352
UFI : -

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Laboratory reagent, Immunoassays
Use by professionals.

1.2.2. Uses advised against

No additional information available

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

LDN Labor Diagnostika Nord GmbH & Co. KG
Am Eichenhain 1
48531 Nordhorn, Germany
T +49 (0)5921 81970 - F +49 (0)5921 8197 201
support@ldn.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency telephone number
Germany	LDN Labor Diagnostika Nord GmbH & Co. KG	Am Eichenhain 1 48531 Nordhorn, Germany	+49 (0) 5921-81970 (Mo-Fr 8:00-16:00)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Corrosive to metals, Category 1 H290

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Warning
Hazard statements (CLP) : H290 - May be corrosive to metals.
Precautionary statements (CLP) : P234 - Keep only in original packaging.
P390 - Absorb spillage to prevent material damage.
P406 - Store in a corrosion resistant container with a resistant inner liner.

Reduced labelling (contents of the package ≤ 125 ml) according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) : -
Signal word (CLP) : -

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Hazard statements (CLP) : -

Precautionary statements (CLP) : -

2.3. Other hazards

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.

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]
hydrochloric acid ... %	(EC-No) 231-595-7 (EC Index-No) 017-002-01-X	< 1	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Name	Product identifier	Specific concentration limits according to Regulation (EC) No. 1272/2008 [CLP]
hydrochloric acid ... %	(EC-No) 231-595-7 (EC Index-No) 017-002-01-X	(10 ≤ C < 25) Skin Irrit. 2, H315 (10 ≤ C < 25) Eye Irrit. 2, H319 (10 ≤ C ≤ 100) STOT SE 3, H335 (25 ≤ C ≤ 100) Skin Corr. 1B, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Take off immediately all contaminated clothing. Gently wash with plenty of soap and water.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Drink plenty of water as a precaution.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

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 : Adapt extinguishing agents to the environment. Carbon dioxide. Foam. Dry extinguishing powder. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic gases may be formed. Carbon dioxide. Carbon monoxide. Hydrogen chloride. Chlorine.

5.3. Advice for firefighters

- Firefighting instructions : Prevent firefighting water from entering the environment. Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate air ventilation. Avoid contact with skin and eyes. Do not breathe vapours/spray.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

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6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb spillage to prevent material damage. Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

Exposure controls and personal protection, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Store in original container. Keep container tightly closed. Store in a cool, well-ventilated place. Protect from direct sunlight. Keep out of frost.

Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs.

Incompatible materials : Metals.

7.3. Specific end use(s)

Laboratory reagent, Immunoassays

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrochloric acid ... % (EC 231-595-7)		
EU	Local name	Hydrogen chloride
EU	IOELV TWA (mg/m ³)	8 mg/m ³
EU	IOELV TWA (ppm)	5 ppm
EU	IOELV STEL (mg/m ³)	15 mg/m ³
EU	IOELV STEL (ppm)	10 ppm
Austria	Local name	Chlorwasserstoff
Austria	MAK (OEL TWA) (mg/m ³)	8 mg/m ³
Austria	MAK (OEL TWA) (ppm)	5 ppm
Austria	MAK (OEL STEL) (mg/m ³)	15 mg/m ³
Austria	MAK (OEL STEL) (ppm)	10 ppm
Belgium	Local name	Hydrogène (chlorure d') # Waterstofchloride
Belgium	OEL TWA (mg/m ³)	8 mg/m ³
Belgium	OEL TWA (ppm)	5 ppm
Belgium	OEL STEL (mg/m ³)	15 mg/m ³
Belgium	OEL STEL (ppm)	10 ppm
Germany	TRGS 900 Local name	Hydrogenchlorid
Germany	TRGS 900 Occupational Exposure Limit Value (mg/m ³)	3 mg/m ³
Germany	TRGS 900 Occupational Exposure Limit Value (ppm)	2 ppm
Germany	TRGS 900 Remark	2(l), DFG, EU, Y
Luxembourg	Local name	Chlorure d'hydrogène
Luxembourg	OEL TWA (mg/m ³)	8 mg/m ³
Luxembourg	OEL TWA (ppm)	5 ppm
Luxembourg	OEL STEL (mg/m ³)	15 mg/m ³
Luxembourg	OEL STEL (ppm)	10 ppm
Switzerland	Local name	Acide chlorhydrique / Chlorwasserstoff [Salzsäure]
Switzerland	MAK (mg/m ³)	3 mg/m ³

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Hydrochloric acid ... % (EC 231-595-7)		
Switzerland	MAK (ppm)	2 ppm
Switzerland	KZGW (mg/m ³)	6 mg/m ³
Switzerland	KZGW (ppm)	4 ppm
Switzerland	Notation	SSC

Hydrochloric acid ... % (EC 231-595-7)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	15 mg/m ³
Long-term - local effects, inhalation	8 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	15 mg/m ³
Long-term - local effects, inhalation	8 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations.

Hand protection:

Wear suitable gloves (EN 374). Nitrile rubber, 0.35 mm. Butyl rubber, 0.5 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Wear safety glasses (EN 166).

Skin and body protection:

Wear suitable protective clothing.

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type P2.

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: No data available
Melting point/freezing point	: No data available
Boiling point or initial boiling point and boiling range	: No data available
Flammability	: No data available
Lower and upper explosion limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: 1.0 - 1.3
Kinematic viscosity	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and/or relative density	: No data available
Relative vapour density	: No data available
Particle size	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosive properties : No explosive properties

Oxidising properties : No oxidising properties

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

May be corrosive to metals.

10.4. Conditions to avoid

High temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. Metals.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. In case of fire: Toxic gases may be formed. Carbon dioxide. Carbon monoxide. Hydrogen chloride. Chlorine.

SECTION 11: Toxicological information

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

Acute toxicity : Not classified

Based on available data, the classification criteria are not met

Hydrochloric acid ... % (EC 231-595-7)	
LC50 inhalation rat	7051 mg/m ³ 30 min

Skin corrosion/irritation : Not classified

Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified

Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified

Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Based on available data, the classification criteria are not met

11.2. Information on other hazards

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

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Hydrochloric acid ... % (EC 231-595-7)	
LC50 fish	pH 3.25 – 3.5 96 h, Lepomis macrochirus
EC50 crustacea	pH 4.92 48 h, Daphnia magna
EC50 algae	pH 4.7 72 h, Chlorella vulgaris

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Do not empty into drains. Dispose of this material and its container in a safe way.
Waste code	: The waste code number according to the Ordinance on the European Waste Catalogue depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

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14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Water hazard class (WGK)

: WGK 1 - Slightly hazardous to water

WGK Remark

: Classification according to AwSV, Annex 1

Storage class (LGK)

: LGK 10 - 13

Employment restrictions

: Employment prohibitions for the protection of young people at work according to § 22 section 1(6) JArbSchG have to be observed.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 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.

Changes compared to the previous version : -

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	"International Maritime Dangerous Goods Code" for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC/L	No Observed Adverse Effect Concentration/Level
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SDS	Safety Data Sheet
STP	Sewage Treatment Plant
UFI	Unique Formula Identifier

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vPvB	Very Persistent and Very Bioaccumulative
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Full text of H- and EUH-phrases:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

SDS EU (REACH Annex II)

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.