Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
555899	BD Pharm Lyse™ Lysing Buffer	

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

Identified uses: Scientific and industrial laboratory use. For research use only.
Uses advised against: Not for use in diagnostic or therapeutic procedures.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Becton Dickinson France S.A.S. Belgian Branch
Erembodegem-Dorp 86
Erembodegem 9320
Belgium

Telephone: 32 2 400 98 95
Fax: 32 2 401 70 94

Contact Person: BD Biosciences - Centralized European Office Regulatory Compliance Department
E-mail: help.biosciences@europe.bd.com

1.4 Emergency telephone number: 32 2 400 98 95

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has not been classified as hazardous according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

2.2 Label Elements Not applicable

Supplemental information
EUH210: Safety data sheet available on request.

2.3 Other hazards No data available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
ammonium chloride	5 - <10%	12125-02-9	235-186-4	No data available.	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).

Classification

Chemical name	CLP Classification	Notes
ammonium chloride	Eye Irrit.: 2: H319Acute Tox.: 4: H302	No data availabl e.

Regulation No. 1272/2008.
The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General: Get medical attention if symptoms occur.

4.1 Description of first aid measures

Inhalation: Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.
Skin Contact:	Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.
Ingestion:	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards:	No data available.
Treatment:	No data available.

SECTION 5: Firefighting measures

General Fire Hazards: Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water spray to keep fire-exposed containers cool.

5.1 Extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Not applicable

5.2 Special hazards arising from the substance or mixture: Fire or excessive heat may produce hazardous decomposition products.

5.3 Advice for firefighters

Special fire fighting procedures:	No unusual fire or explosion hazards noted.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

6.2 Environmental Precautions: Avoid release to the environment.

6.3 Methods and material for containment and cleaning up: Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.

6.4 Reference to other sections: No data available.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: When using do not eat, drink or smoke. Read and follow manufacturer's recommendations. Use personal protective equipment as required.

7.2 Conditions for safe storage, including any incompatibilities: Store in a cool, dry place. Keep container tightly closed.

7.3 Specific end use(s): Reserved for industrial and professional use. Read label before use.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

ammonium chloride - Fume.	STEL	20 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (2007)
	TWA	10 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (2007)

Biological Limit Values

None.

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
ammonium chloride	Workers	Dermal	Systemic, long-term; 128.9 mg/kg body weight/day	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 11.4 mg/kg body weight/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 190 mg/kg body weight/day	Repeated dose toxicity
	General population	Oral	Systemic, short-term; 55.2 mg/kg body weight/day	Acute toxicity
	General population	Dermal	Systemic, long-term; 114 mg/kg body weight/day	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 55.2 mg/kg body weight/day	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 55.2 mg/kg body weight/day	Repeated dose toxicity

PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

ammonium chloride	Aquatic (freshwater)	1.2 mg/l	
	Sediment (marine water)	0.09 mg/kg	
	Sewage treatment plant	13.1 mg/l	
	Soil	50.7 mg/kg	
	Aquatic (intermit. releases)	0.43 mg/l	
	Aquatic (marine water)	0.025 mg/l	
	Sediment (freshwater)	0.9 mg/kg	
	Aquatic (freshwater)	0.25 mg/l	
	Aquatic (marine water)	11.2 mg/l	
	Soil	0.163 mg/kg	

8.2 Exposure controls

Appropriate Engineering Controls: No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection

Hand Protection: Chemical resistant gloves Suitable gloves can be recommended by the glove supplier. Wash hands after contact.

Other: Wear a lab coat or similar protective clothing.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Observe good industrial hygiene practices.
Environmental Controls:	No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	The physical-chemical properties of this material have not been fully investigated.
Boiling Point:	No data available.
Flash Point:	The physical-chemical properties of this material have not been fully investigated.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	Soluble
Solubility (other):	The physical-chemical properties of this material have not been fully investigated.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
SADT:	No data available.
Viscosity:	Not determined.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information

Molecular weight:	No data available.
VOC Content:	No data available.
Bulk density:	No data available.
Dust Explosion Limit, Upper:	No data available.
Dust Explosion Limit, Lower:	No data available.
Dust Explosion Description Number Kst:	No data available.
Minimum ignition energy:	No data available.
Minimum ignition temperature:	No data available.
Metal Corrosion:	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	Material is stable under normal conditions.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Not determined.
10.4 Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight.
10.5 Incompatible Materials:	Metals. Water reactive material.
10.6 Hazardous Decomposition Products:	Stable; however, may decompose if heated.

SECTION 11: Toxicological information

General information: No data on possible toxicity effects have been found.

Information on likely routes of exposure

Inhalation:	Limited inhalation hazard at normal work temperatures.
Ingestion:	No harmful effects expected in amounts likely to be ingested by accident.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Skin Contact: Negligible irritation to skin at ambient temperatures.

Eye contact: Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product: ATEmix: 16,272.37 mg/kg

Specified substance(s)

ammonium chloride	LD Lo (Guinea pig, Rabbit, Rat): 1,000 mg/kg Experimental result, Supporting studyLD Lo (Sheep): 1,000 mg/kg Experimental result, Supporting studyLD 50 (Rat): 1,410 mg/kg Experimental result, Key studyLD Lo (Rabbit): 1,000 mg/kg No data, Supporting studyLD Lo (Dog): 600 mg/kg No data, Supporting studyLD 50 (Mouse): 1,300 mg/kg Experimental result, Supporting study

Dermal

Product: Not classified for acute toxicity based on available data.

Specified substance(s)

ammonium chloride	LD 50 (Rat): > 2,000 mg/kg Experimental result, Key study

Inhalation

Product: Not classified for acute toxicity based on available data.

Specified substance(s)

ammonium chloride	No data available.

Repeated dose toxicity

Product: No data available.

Specified substance(s)

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

ammonium chloride	NOAEL (Rat(Male), Oral, 10 Weeks): 684 mg/kg NOAEL (Rat(Male), Oral, 56 d): >= 580 mg/kg NOAEL (Rat(Male), Oral, 56 d): 768.5 mg/kg NOAEL (Rat(Male), Oral): 493 mg/kg NOAEL (Cattle(Female, Male), Oral, 112 d): 206 mg/kg

Skin Corrosion/Irritation:

Product: No data available.

Specified substance(s)

ammonium chloride	in vivo (Rabbit): Irritating Experimental result, Not specified

Serious Eye Damage/Eye Irritation:

Product: No data available.

Specified substance(s)

ammonium chloride	in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating in vivo (Rabbit, 24 - 72 hrs): Irritating

Respiratory or Skin Sensitization:

Product: No data available.

Specified substance(s)

ammonium chloride	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s)

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

ammonium chloride No data available.

In vivo
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

Carcinogenicity
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

Reproductive toxicity
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

Aspiration Hazard
Product: No data available.

Specified substance(s)
ammonium chloride No data available.

SECTION 12: Ecological information

12.1 Toxicity

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Acute toxicity

Fish

Product: No negative effects on the aquatic environment are known.

Specified substance(s)

ammonium chloride
LC 50 (Lepomis cyanellus, 96 h): 218 mg/l (flow-through) Experimental result, Supporting study
LC 50 (96 h): 174 mg/l (semi-static and flow-through; open system) Experimental result, Supporting study
LC 50 (Cyprinus carpio, 96 h): 209 mg/l (semi-static) Experimental result, Key study
LC 50 (Various, 96 h): 96.2 mg/l (flow-through) Experimental result, Supporting study
LC 50 (Pimephales promelas, 96 h): 163 mg/l (flow-through) Experimental result, Supporting study

Aquatic Invertebrates

Product: No negative effects on the aquatic environment are known.

Specified substance(s)

ammonium chloride
NOAEL (Mulinia lateralis, 10 d): 31.3 mg/l (semi-static) Experimental result, Supporting study
EC 50 (Daphnia magna, 48 h): 136.6 mg/l (Static) Other, Key study
EC 50 (Daphnia magna, 96 h): 139 mg/l (Static) Experimental result, Supporting study
NOAEL (Mulinia lateralis, 10 d): 8.8 mg/l (semi-static) Experimental result, Supporting study
LC 50 (Daphnia magna, 48 h): +/- 271 mg/l (Static) Experimental result, Not specified

Chronic Toxicity

Fish

Product: No negative effects on the aquatic environment are known.

Specified substance(s)

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

ammonium chloride	LOAEL (Pimephales promelas, 28 d): 18.7 mg/l (flow-through) Experimental result, Key study NOAEL (Menidia beryllina, 28 d): 8 mg/l Experimental result, Supporting study NOAEL (Lepomis cyanellus, 44 d): 23.9 mg/l Experimental result, Supporting study LOAEL (Lepomis cyanellus, 44 d): 53.2 mg/l Experimental result, Supporting study EC 10 (Lepomis macrochirus, 30 d): 4.28 mg/l (flow-through) Other, Key study

Aquatic Invertebrates

Product:	No negative effects on the aquatic environment are known.

Specified substance(s)

ammonium chloride	EC 50 (Fenneropenaeus penicillatus, 56 d): 38.8 mg/l Experimental result, Supporting study EC 10 (Hyalella azteca, 10 Weeks): 2.52 mg/l (semi-static) Other, Key study EC 10 (Musculium transversum, 42 d): 0.78 mg/l Experimental result, Not specified NOAEL (Daphnia magna, 21 d): 14.6 mg/l (semi-static) Experimental result, Key study EC 10 (Daphnia magna, 21 d): 4.81 mg/l (semi-static) Experimental result, Not specified

Toxicity to Aquatic Plants

Product:	No negative effects on the aquatic environment are known.

Specified substance(s)

ammonium chloride	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	Expected to be readily biodegradable.

Specified substance(s)

ammonium chloride	No data available.

BOD/COD Ratio

Product	No data available.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Specified substance(s)

ammonium chloride	No data available.

12.3 Bioaccumulative potential

Product: No data available.

Specified substance(s)

ammonium chloride	No data available.

12.4 Mobility in soil:

Product: No data available.

Specified substance(s)

ammonium chloride	No data available.

12.5 Results of PBT and vPvB assessment:

Product: No data available.

Specified substance(s)

ammonium chloride	No data available.

12.6 Other adverse effects: The product is not expected to be hazardous to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: Dispose of waste and residues in accordance with local authority requirements.

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

SECTION 14: Transport information

ADR

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
Hazard No. (ADR):	Not regulated.
Tunnel restriction code:	Not regulated.
14.4 Packing Group:	Not regulated.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

14.5 Environmental Hazards:	Not regulated.
Marine Pollutant:	Not regulated.
14.6 Special precautions for user:	Not regulated.

ADN

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
Hazard No. (ADR):	Not regulated.
Tunnel restriction code:	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
Marine Pollutant:	Not regulated.
14.6 Special precautions for user:	Not regulated.

RID

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
Marine Pollutant:	Not regulated.
14.6 Special precautions for user:	Not regulated.

IMDG

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

EmS No.:	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
Marine Pollutant:	Not regulated.
14.6 Special precautions for user:	Not regulated.

IATA

14.1 UN Number:	Not regulated.
14.2 Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es):	
Class:	Not regulated.
Label(s):	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
Marine Pollutant:	Not regulated.
14.6 Special precautions for user:	Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

SECTION 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): none

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none
Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances: none

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
ammonium chloride	12125-02-9	1.0 - 10%

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Revision Information: Not relevant.

References

PBT	PBT: persistent, bioaccumulative and toxic substance.
vPvB	vPvB: very persistent and very bioaccumulative substance.

Key literature references and sources for data: European Chemicals Agency (ECHA): Information on Chemicals.

Wording of the H-statements in section 2 and 3

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

Training information: No data available.

Issue Date: 09.10.2019
SDS No.: UN000000000000555899-4012-1-01

Becton, Dickinson and Company
BD, Franklin Lakes, NJ
07417 USA
www.bd.com

Disclaimer:

Disclaimer:
The information contained herein has been obtained from various sources and is believed to be correct as of the date issued. However, neither BD nor any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability for a particular use of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. BD provides SDS in electronic form so the information may be more easily accessed. Due to the possibility of errors during transmission, BD makes no representations as to the completeness or accuracy of the information.