



Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Date 2023-12-29

Revision Number 3

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

1.1. Product identifier

Product Code 635730
Product Name Capturem His-Tagged Purification 24-Well Plate
Pure substance/mixture Mixture
Contains Nickel(II) sulfate hexahydrate

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

Identified uses For research use only. Not for use in diagnostic procedures
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

USA:

Takara Bio USA, Inc.
2560 Orchard Parkway
San Jose, CA 95131, USA
Phone: 800.662.2566/888.251.6618
Web: www.takarabio.com

Europe:

Takara Bio Europe S.A.S.
34, Rue de la Croix de Fer
78100 Saint-Germain-en-Laye, France
Phone: +33.1.39.04.68.80
Web: www.takarabio.com

Europe:

Takara Bio Europe AB
Arvid Wallgrens Backe 20,
SE-413 46 Göteborg, Sweden
Phone: +46.31.758.09.00
Web: www.takarabio.com

India:

DSS Takara Bio India Pvt. Ltd.
A-5 Mohan Co-operative Industrial Estate, Mathura Road,
New Delhi 110044, India
Phone: +91.1800.212.4922 (Toll free)
Web: www.takarabio.com

For further information, please contact:

1.4. Emergency telephone number

Emergency telephone In case of emergency, call PERS (Professional Emergency Resource Services)
1-800-633-8253 (US) or 801-629-0667 (international).

Italy	Marco Marano CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA Roma, Piazza Sant'Onofrio,4 00165 0668593726
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin sensitization	Category 1 - (H317)
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2.2. Label elements

Contains Nickel(II) sulfate hexahydrate



Signal word
Warning

Hazard statements

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Nickel(II) sulfate hexahydrate 10101-97-0	< 0.1	No data available	(028-009-00-5)	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Resp. Sens. 1 (H334) Skin Sens. 1 (H317)	Skin Irrit. 2 :: C>=20% Skin Sens. 1 :: C>=0.01% STOT RE 1 ::	1	1

				Muta. 2 (H341) Carc. 1A (H350i) Repr. 1B (H360D) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	C>=1% STOT RE 2 :: 0.1%<=C<1%		
Acrylic acid 79-10-7	< 0.1	No data available	201-177-9 (607-061-00-8)	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Aquatic Acute 1 (H400) Flam. Liq. 3 (H226)	STOT SE 3 :: C>=1%	-	-
Ethyleneimine 151-56-4	< 0.1	No data available	205-793-9 (613-001-00-1)	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Muta. 1B (H340) Carc. 1B (H350) Aquatic Chronic 2 (H411) Flam. Liq. 2 (H225)	-	-	-

Full text of H- and EUH-phrases: see section 16Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Nickel(II) sulfate hexahydrate 10101-97-0	264	No data available	No data available	No data available	No data available
Acrylic acid 79-10-7	193	2000	3.6 2.775	No data available	No data available
Ethyleneimine 151-56-4	15	13	0.225	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion Rinse mouth.

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

Symptoms Itching. Rashes. Hives.

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

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Nickel(II) sulfate hexahydrate 10101-97-0	TWA: 0.01 mg/m ³ TWA: 0.1 mg/m ³ TWA: 0.05 mg/m ³ Sk*	Sa+	TWA: 0.1 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.01 mg/m ³
Acrylic acid 79-10-7	TWA: 29 mg/m ³ TWA: 10 ppm STEL: 59 mg/m ³ STEL: 20 ppm	TWA: 10 ppm TWA: 29 mg/m ³ STEL 20 ppm STEL 59 mg/m ³	TWA: 2 ppm TWA: 6.0 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³ Sk*	TWA: 29 mg/m ³ TWA: 10 ppm STEL: 59 mg/m ³ STEL: 20 ppm	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³
Ethyleneimine 151-56-4	-	Sk*	TWA: 0.0009 mg/m ³ Sk*	TWA: 1.0 mg/m ³	TWA: 0.5 ppm TWA: 0.9 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Nickel(II) sulfate hexahydrate 10101-97-0	-	TWA: 0.05 mg/m ³ Ceiling: 0.25 mg/m ³	TWA: 0.01 mg/m ³ STEL: 0.02 mg/m ³	TWA: 0.1 mg/m ³ S+	TWA: 0.01 mg/m ³ TWA: 0.05 mg/m ³
Acrylic acid 79-10-7	TWA: 29 mg/m ³ TWA: 10 ppm STEL: 59 mg/m ³ STEL: 20 ppm	TWA: 30 mg/m ³ Ceiling: 60 mg/m ³	TWA: 2 ppm TWA: 5.9 mg/m ³ STEL: 20 ppm 1 minute STEL: 59 mg/m ³ 1 minute Sk*	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 2 ppm TWA: 6 mg/m ³ Ceiling: 15 ppm Ceiling: 45 mg/m ³
Ethyleneimine 151-56-4	-	TWA: 1 mg/m ³ Sk* Ceiling: 2 mg/m ³	TWA: 0.5 ppm TWA: 1 mg/m ³ STEL: 1 ppm STEL: 2 mg/m ³ Sk*	-	STEL: 0.5 ppm STEL: 0.89 mg/m ³ Sk*
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Nickel(II) sulfate hexahydrate 10101-97-0	TWA: 0.1 mg/m ³	TWA: 0.03 mg/m ³ Sh+	-	TWA: 1 mg/m ³	TWA: 0.01 mg/m ³ sz+
Acrylic acid	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm

79-10-7	TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 30 mg/m ³	TWA: 30 mg/m ³ Peak: 10 ppm Peak: 30 mg/m ³	TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³
Ethyleneimine 151-56-4	-	-	Sk*	TWA: 0.5 ppm TWA: 0.9 mg/m ³ Sk*	TWA: 0.5 ppm TWA: 0.9 mg/m ³
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Nickel(II) sulfate hexahydrate 10101-97-0	TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³	-	TWA: 0.1 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.1 mg/m ³ J+
Acrylic acid 79-10-7	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 29 ppm TWA: 10 mg/m ³ STEL: 59 ppm STEL: 20 mg/m ³ Sk*	TWA: 2 ppm TWA: 6 mg/m ³ Sk*	TWA: 5 mg/m ³ TWA: 1.7 ppm STEL: 59 mg/m ³ STEL: 20 ppm	TWA: 10 ppm TWA: 29 mg/m ³ Ceiling: 59 mg/m ³ Ceiling: 20 ppm
Ethyleneimine 151-56-4	TWA: 0.05 ppm TWA: 0.1 mg/m ³ STEL: 0.15 ppm STEL: 0.3 mg/m ³ Sk*	-	TWA: 0.05 ppm TWA: 0.088 mg/m ³ STEL: 0.1 ppm STEL: 0.176 mg/m ³ Sk*	TWA: 0.02 mg/m ³	Sk* Ceiling: 0.02 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Nickel(II) sulfate hexahydrate 10101-97-0	-	-	-	TWA: 0.05 mg/m ³ STEL: 0.15 mg/m ³ A+	TWA: 0.25 mg/m ³
Acrylic acid 79-10-7	TWA: 29 mg/m ³ TWA: 10 ppm STEL: 59 mg/m ³ STEL: 20 ppm	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 202 ppm STEL: 59 mg/m ³	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³ A+	TWA: 10 mg/m ³ STEL: 29.5 mg/m ³ Sk*
Ethyleneimine 151-56-4	-	-	TWA: 0.0005 ppm TWA: 0.0009 mg/m ³	TWA: 0.5 ppm TWA: 1 mg/m ³ STEL: 3 mg/m ³ STEL: 1.5 ppm Sk*	TWA: 0.62 mg/m ³ Sk*
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Nickel(II) sulfate hexahydrate 10101-97-0	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ STEL: 0.5 mg/m ³	STEL: 0,05 mg/m ³	-	TWA: 0.1 mg/m ³
Acrylic acid 79-10-7	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 59 mg/m ³ STEL: 20 ppm Sk*	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	TWA: 10 ppm TWA: 29 mg/m ³ Ceiling: 59 mg/m ³	TWA: 29 mg/m ³ TWA: 10 ppm STEL: 20 ppm STEL: 59 mg/m ³ Sk*	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³ Sk*
Ethyleneimine 151-56-4	TWA: 0.05 ppm STEL: 0.1 ppm Sk*	TWA: 0.3 ppm TWA: 0.5 mg/m ³ STEL: 0.5 ppm STEL: 1 mg/m ³ Sk*	TWA: 0.5 ppm TWA: 0.9 mg/m ³ STEL: 2.5 ppm STEL: 4.5 mg/m ³ Sk*	TWA: 0.5 ppm TWA: 0.9 mg/m ³ STEL: 2.0 ppm STEL: 3.6 mg/m ³ Sk*	TWA: 0.2 ppm TWA: 0.36 mg/m ³ Sk*
Chemical name	Sweden		Switzerland	United Kingdom	
Nickel(II) sulfate hexahydrate 10101-97-0	NGV: 0.1 mg/m ³ S+		-	TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ Sk* Sen+	
Acrylic acid 79-10-7	NGV: 10 ppm NGV: 29 mg/m ³ Bindande KGV: 20 ppm Bindande KGV: 59 mg/m ³		TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³ S+	TWA: 10 ppm TWA: 29 mg/m ³ STEL: 20 ppm STEL: 59 mg/m ³	
Ethyleneimine 151-56-4	-		TWA: 0.5 ppm TWA: 0.9 mg/m ³	-	

		Sk*	
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Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Nickel(II) sulfate hexahydrate 10101-97-0	-	Check 7 µg/L (urine - spontaneous urine after end of work day, at the end of a work week/end of the shift) (-)	45 µg/L - urine (Nickel) - after several work shifts	10 µg/L - plasma (Nickel) - at the end of the work shift 8 µg/g Creatinine - urine (Nickel) - at the end of the work shift	-
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Nickel(II) sulfate hexahydrate 10101-97-0	-	-	-	3 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) urine	-
Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII	
Nickel(II) sulfate hexahydrate 10101-97-0	-	3 µg/L (urine - Nickel after several consecutive working shifts)	-	-	

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls**Personal Protective Equipment**

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

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid
Appearance Paper
Color White
Odor Odorless.
Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	None known
Boiling point/boiling range (°C)	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Flash point	No data available	Open cup
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic Viscosity	No data available	None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	No data available	None known
Bulk Density	No data available	
Liquid Density	No data available	
Vapor density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous Decomposition Products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (dermal) 99,999.00 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel(II) sulfate hexahydrate	= 264 mg/kg (Rat)	-	-
Acrylic acid	= 193 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3.6 mg/L (Rat) 4 h = 11.1 mg/L (Rat) 1 h
Ethyleneimine	= 15 mg/kg (Rat)	= 13 mg/kg (Rat)	> 1.8 mg/L (Rat) 30 min

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
Nickel(II) sulfate hexahydrate	Muta. 2
Ethyleneimine	Muta. 1B

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Nickel(II) sulfate hexahydrate	Carc. 1A
Ethyleneimine	Carc. 1B

Reproductive toxicity No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Nickel(II) sulfate hexahydrate	Repr. 1B

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Nickel(II) sulfate hexahydrate	EC50: =0.75mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 2.594 - 3.279mg/L (96h, Pimephales promelas) LC50: 5.79 - 6.54mg/L (96h, Cyprinus carpio) LC50: =47.58mg/L (96h, Cyprinus carpio) LC50: 8.6 - 13.6mg/L (96h, Oncorhynchus mykiss) LC50: =1.28mg/L (96h, Oncorhynchus mykiss)	-	EC50: =1mg/L (48h, Daphnia magna)

		LC50: 32.36 - 41.04mg/L (96h, Poecilia reticulata)		
Acrylic acid	EC50: =0.17mg/L (96h, Pseudokirchneriella subcapitata) EC50: =0.04mg/L (72h, Desmodesmus subspicatus)	LC50: =222mg/L (96h, Brachydanio rerio)	-	EC50: =95mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
Acrylic acid	0.46
Ethyleneimine	-0.36

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Acrylic acid	The substance is not PBT / vPvB
Ethyleneimine	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name No information available
14.3 Transport hazard class(es) Not regulated

14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	No information available
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	No information available
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	No information available
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

TA Luft (German Air Pollution Control Regulation)

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Nickel(II) sulfate hexahydrate	Present	-	Fertility Category 2 Development Category 1B Can be harmful via breastfeeding
Ethyleneimine	Present	Present	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Acrylic acid - 79-10-7	75.	-
Ethyleneimine - 151-56-4	28. 29. 75.	-

Persistent Organic Pollutants

Not applicable

Named dangerous substances per Seveso Directive (2012/18/EU)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Nickel(II) sulfate hexahydrate - 10101-97-0	-	1
Ethyleneimine - 151-56-4	10	20

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment**Chemical Safety Assessment** No information available**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

- H225 - Highly flammable liquid and vapor
H226 - Flammable liquid and vapor
H300 - Fatal if swallowed

- H302 - Harmful if swallowed
- H310 - Fatal in contact with skin
- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H330 - Fatal if inhaled
- H332 - Harmful if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H340 - May cause genetic defects
- H341 - Suspected of causing genetic defects
- H350 - May cause cancer
- H350i - May cause cancer by inhalation
- H360D - May damage the unborn child
- H372 - Causes damage to organs through prolonged or repeated exposure
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA Time weighted average STEL Short term exposure limit
 Ceiling Maximum limit value * Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

- Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGl(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals
- Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- Japan GHS Classification
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 2023-12-29

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet