

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

Version: **GHS 2.0 en**

Replaces version of: 2021-03-22

Version: (GHS 1)

date of compilation: 2019-07-05

Revision: 2024-03-03

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

1.1 Product identifier

Identification of the substance

Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

Article number

3274

CAS number

6018-89-9

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

Relevant identified uses:

Laboratory and analytical use
Laboratory chemical

Uses advised against:

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-stuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 Westmead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.11	Acute toxicity (inhal.)	4	Acute Tox. 4	H332
3.4R	Respiratory sensitisation	1	Resp. Sens. 1	H334
3.4S	Skin sensitisation	1	Skin Sens. 1	H317

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate $\geq 97,5$ %, extra pure

article number: 3274

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.5	Germ cell mutagenicity	2	Muta. 2	H341
3.6	Carcinogenicity	1A	Carc. 1A	H350i
3.7	Reproductive toxicity	1B	Repr. 1B	H360D
3.9	Specific target organ toxicity - repeated exposure	1	STOT RE 1	H372

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS07, GHS08



Hazard statements

H302+H332	Harmful if swallowed or if inhaled
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350i	May cause cancer by inhalation
H360D	May damage the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

Precautionary statements

Precautionary statements - prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Precautionary statements - disposal

P501	Dispose of contents/container to industrial combustion plant
------	--

For professional users only

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Nickel (II) acetate tetrahydrate
Molecular formula	$C_4H_6NiO_4 \cdot 4 H_2O$
Molar mass	248.8 g/mol
CAS No	6018-89-9

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth with water (only if the person is conscious). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

After eye contact: Irritant effects,
Following skin contact: Localised redness, oedema, pruritis and/or pain, Allergic reactions,
Following ingestion: Nausea, Vomiting, Gastrointestinal complaints,
Following inhalation: Cough, pain, choking, and breathing difficulties

4.3 Indication of any immediate medical attention and special treatment needed

none

Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂), Metal oxide smoke, toxic

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use extractor hood (laboratory). Provision of sufficient ventilation. Avoid exposure. Avoid dust formation.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Ceiling-C [mg/m ³]	Notation	Source
AU	nickel, soluble compounds		WES	0.1			Ni	WES

Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

Ni Calculated as Ni (nickel)

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	0.05 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	104 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	0.05 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	1.6 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
DNEL	0.44 µg/cm ²	human, dermal	worker (industry)	chronic - local effects

Environmental values

Relevant PNECs and other threshold levels

End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	7.1 µg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	8.6 µg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	0.33 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	109 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	109 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	29.9 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate $\geq 97,5$ %, extra pure

article number: 3274

- **material thickness**

>0,3 mm

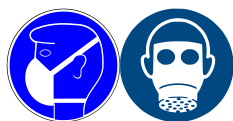
- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	crystalline
Colour	light green
Odour	like: - Acetic acid
Melting point/freezing point	50 – 110 °C (Release of crystal water)
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	>50 °C (Release of crystal water)
pH (value)	not applicable
Kinematic viscosity	not relevant
<u>Solubility(ies)</u>	
Water solubility	177 g/l at 20 °C
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	not relevant (inorganic)
Vapour pressure	not determined

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Density and/or relative density

Density

1.74 g/cm³

Relative vapour density

Information on this property is not available.

Particle characteristics

No data available.

Other safety parameters

Oxidising properties

none

9.2 Other information

Information with regard to physical hazard classes:

hazard classes acc. to GHS
(physical hazards): not relevant

Other safety characteristics:

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong alkali, Strong acid

10.4 Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: >50 °C.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed. Harmful if inhaled.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	550 mg/kg	rat	anhydrous	ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate $\geq 97,5$ %, extra pure

article number: 3274

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

May cause cancer by inhalation.

Reproductive toxicity

May damage the unborn child.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Hazard category	Target organ	Exposure route
1	several organs	if exposed

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, nausea, gastrointestinal complaints

• If in eyes

slightly irritant but not relevant for classification

• If inhaled

May produce an allergic reaction, cough, Dyspnoea

• If on skin

May produce an allergic reaction, pruritis, localised redness

• Other information

Other adverse effects: Irreversible damage to internal organs

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Nickel (II) acetate tetrahydrate $\geq 97,5$ %, extra pure

article number: 3274

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	15.3 mg/l	fish	ECHA	96 h
EC50	685.8 µg/l	aquatic invertebrates	ECHA	48 h
ErC50	263 µg/l	algae	ECHA	72 h

Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
EC50	33 mg/l	microorganisms	ECHA	30 min

12.2 Persistence and degradability

Theoretical Oxygen Demand (without nitrification): 0.4501 mg/mg

Theoretical Oxygen Demand (with nitrification): 0.4501 mg/mg

Theoretical Carbon Dioxide: 0.7074 mg/mg

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

BCF	45 (ECHA)
-----	-----------

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Do not empty into drains.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H11 Toxic (Delayed or chronic)

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

UN RTDG	UN 3077
IMDG-Code	UN 3077
ICAO-TI	UN 3077

14.2 UN proper shipping name

UN RTDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
ICAO-TI	Environmentally hazardous substance, solid, n.o.s.
Technical name	Nickel (II) acetate tetrahydrate

14.3 Transport hazard class(es)

UN RTDG	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

UN RTDG	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

hazardous to the aquatic environment

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

14.8 Information for each of the UN Model Regulations

Transport informationNational regulationsAdditional information(UN RTDG)

UN number	3077
Class	9
Environmental hazards	Yes Hazardous to the aquatic environment
Packing group	III
Danger label(s)	9 Fish and tree



Special provisions (SP)	274, 331, 335, 375 UN RTDG
Excepted quantities (EQ)	E1 UN RTDG
Limited quantities (LQ)	5 kg UN RTDG
Emergency Action Code	2Z

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Particulars in the shipper's declaration	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (Nickel (II) acetate tetrahydrate), 9, III
Marine pollutant	yes (hazardous to the aquatic environment), (Nickel (II) acetate tetrahydrate)
Danger label(s)	9, "Fish and tree"



Special provisions (SP)	274, 335, 966, 967, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Particulars in the shipper's declaration	UN3077, Environmentally hazardous substance, solid, n.o.s., (Nickel (II) acetate tetrahydrate), 9, III
Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	9, "Fish and tree"

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274



Special provisions (SP)	A97, A158, A179, A197, A215
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is listed.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
JP	CSCL-ENCS	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
VN	NCI	substance is listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TCSI	Taiwan Chemical Substance Inventory

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	EC number: 206-761-7	CAS number: 6018-89-9	yes
2.1		Classification acc. to GHS: change in the listing (table)	yes

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure.	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
11.1		Acute toxicity: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic): change in the listing (table)	yes
14.1	UN number: 3077	UN number	yes
14.1		UN RTDG: UN 3077	yes
14.1		IMDG-Code: UN 3077	yes
14.1		ICAO-TI: UN 3077	yes
14.2	UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	UN proper shipping name	yes
14.2		UN RTDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	yes

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.2		IMDG-Code: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	yes
14.2		ICAO-TI: Environmentally hazardous substance, solid, n.o.s.	yes
14.3	Transport hazard class(es): class 9 hazard - miscellaneous dangerous substances and articles	Transport hazard class(es)	yes
14.3	Class: 9 (miscellaneous dangerous substances and articles) (environmentally hazardous)		yes
14.3		UN RTDG: 9	yes
14.3		IMDG-Code: 9	yes
14.3		ICAO-TI: 9	yes
14.4	Packing group: III (substance presenting low danger)	Packing group	yes
14.4		UN RTDG: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.6	Special precautions for user: Provisions for dangerous goods (ADR) should be complied within the premises.	Special precautions for user: There is no additional information.	yes
14.8	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)		yes
14.8	UN number: 3077		yes
14.8	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.		yes
14.8	Particulars in the transport document: UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (Nickel (II) acetate tetrahydrate), 9, III, (-)		yes
14.8	Class: 9		yes
14.8	Classification code: M7		yes
14.8	Packing group: III		yes
14.8	Danger label(s): 9 + "fish and tree"		yes

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8		Danger label(s): change in the listing (table)	yes
14.8	Environmental hazards: yes (hazardous to the aquatic environment)		yes
14.8	Special provisions (SP): 274, 335, 375, 601		yes
14.8	Excepted quantities (EQ): E1		yes
14.8	Limited quantities (LQ): 5 kg		yes
14.8	Transport category (TC): 3		yes
14.8	Tunnel restriction code (TRC): -		yes
14.8	Hazard identification No: 90		yes
14.8	Emergency Action Code: 22		yes
14.8	UN number: 3077		yes
14.8	Class: 9		yes
14.8	Packing group: III		yes
14.8	Acute toxicity: oralLD50550 mg/kg rat ECHA	Transport informationNational regulationsAdditional information(UN RTDG)	yes
14.8	Aquatic toxicity (chronic): ErC508,363 µg/l fish ECHA40 d LC50≤144 µg/l aquatic invertebrates ECHA21 d EC50≤108 µg/l aquatic invertebrates ECHA21 d EbC506.2 µg/l aquatic invertebrates ECHA30 d NOEC0.057 mg/l fish ECHA32 d LOEC0.12 mg/l fish ECHA32 d growth (EbCx) 10%404.3 µg/l aquatic invertebrates ECHA10 d	UN number: 3077	yes
14.8		Class: 9	yes
14.8		Environmental hazards: Yes Hazardous to the aquatic environment	yes
14.8		Packing group: III	yes
14.8		Danger label(s): 9 Fish and tree	yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Special provisions (SP): 274, 331, 335, 375 UN RTDG	yes

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: 3274

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.8		Excepted quantities (EQ): E1 UN RTDG	yes
14.8		Limited quantities (LQ): 5 kg UN RTDG	yes
14.8		Emergency Action Code: ZZ	yes
14.8	Marine pollutant: yes (P) (hazardous to the aquatic environment)	Marine pollutant: yes (hazardous to the aquatic environment), (Nickel (II) acetate tetrahydrate)	yes
14.8	UN number: 3077		yes
14.8	Class: 9		yes
14.8	Packing group: III		yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Danger label(s): change in the listing (table)	yes
14.8	Special provisions (SP): A97, A158, A179, A197	Special provisions (SP): A97, A158, A179, A197, A215	yes
15.1	Safety, health and environmental regulations/ legislation specific for the substance or mixture	Safety, health and environmental regulations/ legislation specific for the substance or mixture: There is no additional information.	yes
15.1	National inventories: Substance is listed in the following national inventories:		yes
15.1		National inventories: change in the listing (table)	yes
15.1		National regulations(Australia)	yes
15.1		Australian Inventory of Chemical Substances(AICS): Substance is listed.	yes
15.1		Other information: Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.	yes
15.1		National inventories	yes
15.1		National inventories: change in the listing (table)	yes

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate $\geq 97,5$ %, extra pure

article number: **3274**

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EmS	Emergency Schedule
ErC50	\equiv EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Nickel (II) acetate tetrahydrate ≥97,5 %, extra pure

article number: **3274**

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.