

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**
Version: **1.0 en**

date of compilation: 2016-10-26

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

1.1 Product identifier

Identification of the substance	Hydrogen hexachloroplatinate(IV) hydrate
Article number	5626
Registration number (REACH)	This information is not available.
Index No	078-009-00-4
EC number	241-010-7
CAS number	26023-84-7

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

Identified uses: laboratory chemical

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

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	(Acute Tox. 3)	H301
3.2	skin corrosion/irritation	(Skin Corr. 1B)	H314
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318
3.4R	respiratory sensitisation	(Resp. Sens. 1)	H334
3.4S	skin sensitisation	(Skin Sens. 1)	H317
4.1C	hazardous to the aquatic environment - chronic hazard	(Aquatic Chronic 2)	H411

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2 Label elements

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

Signal word

Danger

Pictograms



Hazard statements

H301	Toxic if swallowed.
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.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Precautionary statements - prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
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Precautionary statements - response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and 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.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Precautionary statements - storage

P405	Store locked up.
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Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H301	Toxic if swallowed.
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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and 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.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P405	Store locked up.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Hydrogen hexachloroplatinate(IV) hydrate
Index No	078-009-00-4
EC number	241-010-7
CAS number	26023-84-7
Molecular formula	$\text{H}_2 \text{Pt Cl}_6 \cdot x \text{H}_2\text{O}$
Molar mass	409,8 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

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

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin reactions, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Risk of blindness, Gastric perforation, Risk of serious damage to eyes, Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

none

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

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: hydrogen chloride (HCl)

5.3 Advice for firefighters

Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. 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. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices 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.

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

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**

SECTION 7: Handling and storage

7.1 Precautions for safe handling

When diluting/dissolving, always have the water ready first, then slowly stir in the product. Handle and open container with care. Provision of sufficient ventilation.

• Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

Advice on general occupational hygiene

When using do not eat or drink. Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Store locked up.

• Ventilation requirements

Use local and general ventilation.

• 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	Notation	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Source
GB	dust		i	WEL	10		EH40/2005
GB	dust		r	WEL	4		EH40/2005

Notation

i Inhalable fraction

r Respirable fraction

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

8.2 Exposure controls

Individual protection measures (personal protective equipment)



safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

Eye/face protection

Use safety goggle with side protection. Wear face protection.

Skin protection

• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. 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.

• type of material

Butyl caoutchouc (butyl rubber)

• material thickness

0,6 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). P3 (filters at least 99,95 % 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

Appearance

Physical state	solid (powder)
Colour	red brown
Odour	this information is not available
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	<1
Melting point/freezing point	60 °C
Initial boiling point and boiling range	This information is not available.
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	Non-flammable

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

Explosive limits

- lower explosion limit (LEL)
- upper explosion limit (UEL)

this information is not available

this information is not available

Explosion limits of dust clouds

these information are not available

Vapour pressure

This information is not available.

Density

2,431 g/cm³ at 20 °C

Vapour density

This information is not available.

Relative density

Information on this property is not available.

Solubility(ies)

Water solubility

soluble

Partition coefficient

n-octanol/water (log KOW)

This information is not available.

Auto-ignition temperature

Information on this property is not available.

Decomposition temperature

no data available

Viscosity

not relevant (solid matter)

Explosive properties

Shall not be classified as explosive

Oxidising properties

none

9.2 Other information

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: Amines, Bases, Reducing agents, Acids

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause sensitization by skin contact. May cause sensitization by inhalation.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

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

• Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

data are not available

• If on skin

causes severe burns, causes poorly healing wounds

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Endpoint	Value	Species	Source	Exposure time
LC50	2,5 mg/l	fish		96 h

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

12.2 Process of degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 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

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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.

SECTION 14: Transport information

14.1	UN number	2507
14.2	UN proper shipping name	CHLOROPLATINIC ACID, SOLID
	Hazardous ingredients	Hydrogen hexachloroplatinate(IV) hydrate
14.3	Transport hazard class(es)	
	Class	8 (corrosive substances)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	

safety data sheet

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Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**

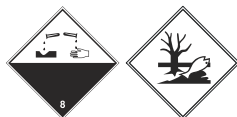
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

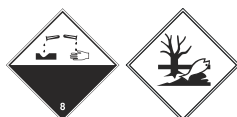
UN number	2507
Proper shipping name	CHLOROPLATINIC ACID, SOLID
Particulars in the transport document	UN2507, CHLOROPLATINIC ACID, SOLID, 8, III, (E), environmentally hazardous
Class	8
Classification code	C2
Packing group	III
Danger label(s)	8 + "fish and tree"



Environmental hazards	yes (hazardous to the aquatic environment)
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2X

• International Maritime Dangerous Goods Code (IMDG)

UN number	2507
Proper shipping name	CHLOROPLATINIC ACID, SOLID
Particulars in the shipper's declaration	UN2507, CHLOROPLATINIC ACID, SOLID, 8, III, MARINE POLLUTANT
Class	8
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	8 + "fish and tree"



Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-B

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: 5626

Stowage category	A
Segregation group	1 - Acids

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

Not listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

Not listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

Not listed.

- **Restrictions according to REACH, Annex XVII**

not listed

- **List of substances subject to authorisation (REACH, Annex XIV)**

not listed

- **Seveso Directive**

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200 500	57)

Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

not listed

National inventories

Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)

15.2 Chemical Safety Assessment

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

safety data sheet

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Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	short-term exposure limit
TWA	time-weighted average
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

Code	Text
H301	toxic 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

safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Hydrogen hexachloroplatinate(IV) hydrate ROTI®METIC 99,995 % (4N5)

article number: **5626**

Code	Text
H411	toxic to aquatic life with long lasting effects

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.