

**Safety data sheet**  
**According to Regulation n. 1907/2006 and Regulation 878/2020**  
**Pt (II) diamino dinitrite in ammonia**



Revision n. 5 – 15.10.2024  
 Replaces revision n 4 – 03.07.2023

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

Commercial name Pt (II) diamino dinitrite in ammonia  
 Product code 113  
 UFI code FYQ5-50GV-T00Y-X7SR  
 Registration number Exempt under Article 6(1)

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

Intended uses Industrial use. Additive for galvanic baths  
 Advised against uses None in particular

**1.3 Details of the supplier of the safety data sheet**

Name FAGGI ENRICO S.P.A.  
 Address Via Majorana, 101/103 50019 Sesto Fiorentino FI  
 Telephone number 055311861  
 Fax number 055311791  
 Competent person responsible for the safety data sheet lorenzo.magaldi@faggi.it

**1.4 Emergency telephone number**

111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales (NHS Direct Wales)

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture according to Regulation (EC) n. 1272/2008**

Hazard classes	Category codes	Hazard statements
Skin Corrosive	1B	H314
Eye Dam.	1	H318
STOT SE	3	H335
Aquatic acute	1	H400

**2.2 Label elements**

**Pictograms**



**Signal words**

**DANGER**

**Hazard statements**

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
<b>Precautionary statements</b>	
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of 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.

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**UFI code** P273 Avoid release to the environment.  
 FYQ5-50GV-T00Y-X7SR

**2.3 Other hazards** It does NOT contain PBT / vPvB substances according to Regulation (EC) 1907/2006, annex XIII.  
 It does NOT contain substances that interfere with the endocrine system in accordance with Regulation (EC) 1907/2006 art.59 paragraph 1 and in accordance with the criteria established in Regulation (EU) 2017/2100 and Regulation (EU) 2018/605.

**3. COMPOSITION INFORMATION ON INGREDIENTS**

**3.2 Mixture**

Product identifier	Concentration %	Classification	
		Hazard classes	Hazard statements
<b>Ammonia</b> CAS 1336-21-6 EC: 215-647-6 INDEX 007-001-01-2 REACH n. 01-2119488876-14-XXXX ATE: not applicable M factor acute toxicity: 1 M factor chronic: not applicable Specific limits: STOT SE 3; H335: C ≥ 5 %	15 ≤ C ≤ 25	Skin corr. 1 B STOT SE 3 Aquatic acute 1	H314 H335 H400
<b>Diammineplatinum(II) nitrite</b> CAS 14286-02-3 EC 238-203-3 Reach nr. Exempt due to quantity ATE: not applicable M factor: not applicable	7 ≤ C ≤ 10	Expl. Div. 1.1 Eye Dam. 1 Explosive when dry	H201 H318 EUH001

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

Inhalation	If the person has fainted, keep him stable on his side during transport.
Ingestion	Drink plenty of water and stand in a well-ventilated area. Seek immediate medical attention. Do not induce vomiting.
Skin contact	Wash immediately with soap and water and rinse thoroughly.
Eye contact	Wash with running water for several minutes holding the eyelids wide open and consult your doctor. Do not use eye drops and ointments.

**Recommendation:**

- **Need to see a doctor immediately** YES
- **Possibility of delayed effects following exposure** YES
- **Move the exposed individual from the place of exposure to the open air** YES
- **Remove the clothing and shoes of the exposed individual** YES
- **How to handle contaminated clothing** With gloves
- **For those providing first aid, wear PPE** YES

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

Causes serious eye damage. It can irritate the respiratory tract. Causes severe burns. It can cause heartburn in the mouth, throat and stomach. Harmful if swallowed

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

In case of skin contact, ingestion or inhalation, call a physician immediately.

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media:** CO<sub>2</sub>, powder or water spray extinguishers.  
Extinguish large fires with water spray or alcohol-resistant foam.

**Non suitable extinguishing media:** None.

**5.2 Special hazards arising from the substance or mixture**

In a fire or if heated, a pressure increase will occur, and the container may burst. Possible formation of ammonia vapors

**5.3 Advice for firefighters**

Isolate the area by removing all people in case of fire.  
Prevent the water used to extinguish the fire from flowing into the sewer, groundwater or surface water.

Normal fire-fighting clothing, such as self-contained open-circuit compressed air breathing apparatus (EN137), flame retardant suit (EN469), flame retardant gloves (EN659) and firefighter boots (HOA29 or A30)

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment, and emergency procedures**

**6.1.1. For non-emergency personnel**

Move away from the contaminated area immediately and keep upwind.

**6.1.2. For emergency responders**

Use :  
Chemical risk gloves compliant with EN420 EN374 standards  
Splash goggles compliant with Directive 89/686 / EEC and standard EN166: 2001  
Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6 standard  
Mask with K-type filters compliant with EN14387: 2004 + A1: 2008

**6.2 Environmental precautions**

Evacuate the dangerous area and minimize the affected area by containing the leak. Collect the material and store it in a suitable container pending disposal. Do not allow the spill to reach sewers or natural water courses and if it was not possible to immediately notify the competent authorities.

**6.3 Methods and material for containment and cleaning up**

**6.3.1. Advice to contain a spill**

Limit the spreading with sand, bentonite or similar. Do not use sawdust or other flammable materials.

**6.3.2. Advice to clean-up a spill**

Wash the area with plenty of water.

**6.3.3 Any other information**

None

**6.4 Reference to other sections**

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None

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### 7.1.1. *Raccomentations to manipulate the substance or the mixture in a safe manner, such as containment measures and prevention of fire and aereosol and powders formation*

Use substance only with adequate ventilation and aspiration and with emergency eye wash nearby.

#### 7.1.2. *General recommendation on work hygiene*

Do not eat, drink, or smoke in work areas; wash hands thoroughly after use and remove contaminated clothing and protective equipment before entering areas where you eat.

### 7.2. Conditions for safe storage, including any incompatibilities

#### 7.2.1. *Risk management associated with explosive atmospheres, corrosive conditions, flammability hazards, incompatible substances or mixtures, evaporative conditions, potential ignition sources*

Keep in sealed and labeled containers, separately or only with other oxidizing substances and away from sources of heat and ignition.

#### 7.2.2. *Control of weather conditions, ambient pressure, temperature, sunlight, humidity, and vibration*

Store in the original container protected from direct sunlight in a dry, cool and well-ventilated area.

#### 7.2.3. *Conditions for keeping substances / mixtures intact*

Opened containers should be resealed and kept upright

#### 7.2.4. *Advice regarding the ventilation, specific design for storage rooms or vessels, quantity limits under storage conditions, packaging compatibilities*

Use ADR approved packaging and store them in a containment basin equal to the capacity of the packaging with greater volume in rooms without sewage.

### 7.3. Specific end use(s)

Industrial use. Additive for galvanic baths

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### **SUBSTANCE: AMMONIA**

(Annex XXXVIII Legislative Decree 81/06)

#### **EU OEL:**

TWA (8h) 14 mg/m<sup>3</sup> or 20 ppm (gaseous state)

STEL (short term) 36 mg/m<sup>3</sup> or 50 ppm (gaseous state)

#### **DNEL**

##### **Workers**

Systemic effects for long-term exposure – inhalation: 47.6 mg/m<sup>3</sup>

Systemic effects for short-term exposure – inhalation: 47.6 mg/m<sup>3</sup>

Local effects for long-term exposure – inhalation: 14 mg/m<sup>3</sup>

Local effects for short-term exposure – inhalation: 36 mg/m<sup>3</sup>

Systemic effects for long-term exposure – dermal: 6.8 mg/kg body weight per day

Systemic effects for short-term exposure – dermal: 6.8 mg/kg body weight per day

Local effects for Long-term exposure – dermal: moderate risk (no threshold derived)

Local effects for short-term exposure – dermal: moderate risk (no threshold derived)

Eye hazards: moderate risk (no threshold derived)

##### **General population**

Systemic effects for long-term exposure – inhalation: 23.8 mg/m<sup>3</sup>

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Systemic effects for short-term exposure – inhalation: 23.8 mg/m<sup>3</sup>  
Local effects for long-term exposure – inhalation: 2.8 mg/m<sup>3</sup>  
Local effects for short-term exposure – inhalation: 7.2 mg/m<sup>3</sup>  
Systemic effects for long-term exposure – dermal: 6.8 mg/kg body weight per day  
Systemic effects for short-term exposure – dermal: 6.8 mg/kg body weight per day  
Local effects for long-term exposure – dermal: moderate risk (no threshold derived)  
Local effects for short-term exposure – dermal: moderate risk (no threshold derived)  
Systemic effects for long-term exposure – oral: 6.8 mg/kg body weight per day  
Systemic effects for short-term exposure – oral: 6.8 mg/kg body weight per day  
Eye hazards: moderate risk (no threshold derived)

**PNEC**

Freshwater: 0.001 mg/l (Anhydrous ammonia)  
Marine water: 0.001 mg/l (Anhydrous ammonia)  
Soil: 0.022 mg/kg dry soil

**SUBSTANCE: DIAMMINEPLATINUM(II) NITRITE**

**DNEL**

No data available up to now

**PNEC**

No data available up to now

**8.2. Exposure controls**

**8.2.1.**

***Appropriate engineering controls***

Periodically carry out personal environmental sampling and clinical examinations.

**8.2.2.**

***Individual protection measures, such as personal protective equipment***

**Eye/face protection**

Protective equipment for the eyes compliant with Directive 89/686 / EEC and standard EN166: 2001

**Skin protection (hands)**

Chemical risk gloves compliant with EN420 EN374 standards.  
Material: latex, nitrile rubber  
Thickness: 0.4 mm  
Breakthrough time: > 240 min

**Skin protection (body)**

Protective and antacid clothing compliant with UNI EN 13034: 2006 type 6 standards

**Respiratory protection**

Mask with B, P2 or ABEK P3 filters or self-contained breathing apparatus

**Thermal hazards**

Protective clothing compliant with UNI EN ISO 11612: 2009 A1-B1-C1-E1

**8.2.3.**

***Environmental exposure controls***

Maintain suction in all environments where silver nitrate is used, using localized collection and ambient air exchange systems. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use air recirculation suction systems. Avoid any spill into the environment.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

Physical state

Liquid

Colour

Pale yellow

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Odour	Ammonia-like
Melting point/freezing point	No available data
Boiling point or initial boiling point and boiling range	> 80 °C
Flammability	Non-flammable
Lower and upper explosion limit	Non-explosive
Flash point	Non-flammable
Auto-ignition temperature	Non-flammable
Decomposition temperature	Not applicable
pH	8-5 – 9.5 at 20 °C
Kinematic viscosity	No available data
Solubility	Fully miscible in water
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure	635 hPa at 20 °C
Density and/or relative density	1.14 g/ml
Relative vapour density	No available data
Particle characteristics	Not applicable

**9.2. Other information**

None.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

The product has alkaline properties

**10.2 Chemical stability**

The product is stable

**10.3 Possibility of hazardous reactions**

Under normal conditions of use and storage, dangerous reactions are not foreseeable.  
 May react violently with acids and reducing agents to generate heat.

**10.4 Conditions to avoid**

Exposure to sun and heat.

**10.5 Incompatible materials**

Strong acids, reducing agents.

**10.6 Hazardous decomposition products**

Ammonia, nitrogen oxides

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on hazard classes as defined in Regulation (CE) No 1272/2008**

**Acute toxicity**

Substance: ammonia  
 ATE: not applicable

Substance: palladium diamine dinitrite  
 ATE (oral)(rat): 5000 mg/kg bw

**Skin corrosion/irritation**  
**Serious eye**  
**damage/irritation**

Miscela: Based on available data, the classification criteria are not met  
 Corrosive to the skin  
 Risk of serious eye damage

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<b>Respiratory or skin sensitization</b>	Respiratory tract irritation
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met
<b>(STOT) single exposure</b>	Respiratory tract irritation
<b>(STOT) repeated exposure</b>	Based on available data, the classification criteria are not met
<b>Aspiration hazards</b>	Not applicable. Liquid substance.

**11.2 Information on other hazards**  
 None

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Substance: ammonia  
 LC50 – (Pimephales promelas): 0,89 mg/l/96h  
 EC50 (Daphnia magna): 20 mg/l/48h  
 NOEC (chronic - Daphnia magna): 0,79 mg/l

**12.2 Persistence and degradability**

Substance: Diammineplatinum(II)nitrite

No available data

Readily biodegradable in soils and treatment plants

**12.3 Bioaccumulative potential**

Log POW : - 0.64

**12.4 Mobility in soil**

No available data

**12.5 Results of PBT and vPvB assessment**

Not applicable

**12.6 Endocrine disrupting properties**

No known effect

**12.7 Other adverse effects**

No known effect

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

Either the mixture or packages must be sent to approved facilities for the disposal of industrial wastes.

**14. TRANSPORT INFORMATION**

**14.1 UN number or ID number**

3266

**14.2 Official UN shipping name**

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

**14.3 Transport hazard class**

ADR/RID/IMDG/ICAO-IATA: Class:

8

ADR/RID/IMDG/ICAO-IATA: Label:

8

ADR: Tunnel restriction code

(E)

IMDG - EmS:

F-A S-B

**14.4 Packing group**

II

**14.5 Dangers for the environment**

ADR/RID/ICAO-IATA:

YES

IMDG: Contaminante marino:

YES

**14.6 Special precautions for user**

Transport must be carried out by vehicles authorized for the transport of dangerous goods according to the provisions of the current edition of the A.D.R. Agreement. and the applicable

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national provisions. Transport must be carried out in the original packaging and, in any case, in packaging which is made of materials which cannot be attacked by the contents, and which are not likely to generate dangerous reactions. Those responsible for loading and unloading dangerous goods must have received appropriate training on the risks presented by the preparation and on any procedures to be adopted in the event of emergency situations.

**14.7 Maritime transport in bulk according to IMO instruments**

Bulk transport is not foreseen

**15. REGULATORY INFORMATION**

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

**Applicability**

<i>Reg. (CE) 1907/2006/CE Reach</i>	YES
<i>Reg. (CE) 1272/2008 CLP and subsequent amendements</i>	YES
<i>Reg. (CE) 2037/2000 "Substances that deplete the ozone layer"</i>	NO
<i>Reg. (CE) 850/2004 "Persistent organic pollutants"</i>	NO
<i>Reg. (CE) 689/2008 "Export and import of hazardous chemicals"</i>	NO
<i>Substance listed in Annex I of Dir. 2012/18/EU cd Seveso</i>	YES
<i>Directive 81/2008 Consolidated Act on protection of health and work safety</i>	YES
<i>Directive 2014/103/UE "Adr"</i>	YES
<i>Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)</i>	NO
<i>Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List</i>	NO
<i>Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List</i>	Limited use
<a href="https://echa.europa.eu/it/substances-restricted-under-reach">https://echa.europa.eu/it/substances-restricted-under-reach</a>	Item 3 - 75 (check link)

**15.2 Chemical safety assessment**

A chemical safety assessment was not carried out.

**16. OTHER INFORMATION**

**Changes compared to the previous edition**

Changes to sections 1-2-3-8-9-11-12-14-16

**Acronim and abbreviation legend**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

GHS: Globally Harmonized System of Classification and Labeling of Substances

EINECS: European Inventory of Chemical Substances

CAS: Chemical Abstract Service

STA: Acute Toxicity Estimate

PBT: Persistent, Bioaccumulative and Toxic.

vPvB: (very persistent and very bioaccumulative). Very persistent and very bioaccumulative

LD: lethal dose

PNEC: predicted no effect concentration

DNEL: derived no effect level

TLV (ceiling value): threshold limit value

STEL: short-term exposure limit

EU-OEL: European occupational exposure limit

TWA: time-weighted average

EC: effective concentration

NOAEL: no observed adverse effect level

LC: lethal concentration



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NOEC: no observed effect concentration

LOEC: lowest observed effect concentration

Bw: body weight

Koc: organic carbon-water partition coefficient

**Main references and data sources**

ECHA's data bank on registered substances and soon to be registered substances:

<https://chem.echa.europa.eu/>

**Reporting, for mixtures, which methods of evaluating the information were used for the purposes of classification.**

Classification	Classification procedure
Causes severe skin burns and eye damage.	H314 Calculation method
Causes serious eye damage.	H318 Calculation method
May cause respiratory irritation.	H335 Calculation method
Very toxic to aquatic life.	H400 Calculation method

**Adequate training for workers to guarantee the protection of human health and the environment**

Training on the chemical risk ex Directive 81/08 Title IX dangerous substances

Training on PPE