

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



Revision n. II dd 21.06.2021  
Replaces revision n I dd 20.12.2020

**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
Registration number	A registration number is not available for this product as it is a mixture.

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

Intended uses	Additive for galvanic baths for industrial use
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** Ph. 0557947819 Poison Control Center of Florence

**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**  
**Hazard statements**

**DANGEROUS**

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

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<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.
	P273	Avoid release to the environment.

**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
Ammonia	15 ≤ C ≤ 25	Skin corr. 1 B	H314
CAS 1336-21-6		STOT SE 3	H335
EC number 231-635-3		Aquatic acute 1	H400
Reach nr. 01-2119488876-14-XXXX			
M factor acute toxicity: 1			
Diammineplatinum(II) nitrite	7 ≤ C ≤ 10	Expl. Div. 1.1	H201
CAS 14286-02-3		Eye Dam. 1	H318
EC 238-203-3			EUH001
Reach nr. Exempt due to quantity			

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#### 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 DPI** YES

##### 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

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**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**

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 aerosol 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***

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

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

Store at temperatures below 15 ° C and away from sunlight.

**7.2.4. Conditions for keeping substances / mixtures intact**

Keep in a cool and dry place

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

Storage rooms must be ventilated and closed.

**7.3. Specific end use(s)**  
Industrial use.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

ECTLV TWA 0,01 mg/m<sup>3</sup>  
OEL (IT) TWA 0,01 mg/m<sup>3</sup>  
DNEL e PNEC : N.D.

**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**

<b>Eye/face protection</b>	Protective equipment for the eyes compliant with Directive 89/686 / EEC and standard EN166: 2001
<b>Skin protection (hands)</b>	Gloves compliant with EN420 E374 standards
<b>Skin protection (body)</b>	Protective and antacid clothing compliant with UNI EN 13034: 2006 type 6 standards
<b>Respiratory protection</b>	Mask with B, P2 or ABEK P3 filters or self-contained breathing apparatus
<b>Thermal hazards</b>	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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

Physical state	Solid powder
Colour	dark brown
Odour	Odorless
Melting point/freezing point	The substance does not melt but decomposes
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosion limit	Not explosive
Flash point	Not inflammable
Auto-ignition temperature	Not inflammable
Decomposition temperature	230 - 280 ° C
pH	Not applicable
Kinematic viscosity	Not applicable
Solubility	Insoluble in water
Partition coefficient n-octanol/water (log value)	Insoluble in n-octanol
Vapour pressure	Not applicable
Density and/or relative density	7.2 g / cm <sup>3</sup>
Relative vapour density	Not applicable
Particle characteristics	Particle size D <sub>10</sub> : 2.2 µm Particle size D <sub>50</sub> : 3.9 µm Particle size D <sub>90</sub> : 6.8 µm

**9.2. Other information**

None.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

The product has oxidizing characteristics. It can decompose slowly when exposed to sunlight with the formation of metallic Ag.

**10.2 Chemical stability**

The product is stable

**10.3 Possibility of hazardous reactions**

Risk of explosion with aluminum in the form of dust, ammonia, ethyl alcohol, hydrazines, sodium, organic nitro compounds, carbon monoxide

Risk of ignition or formation of flammable gases or vapors with:

sulfur, hydrogen sulphide, selenium, sulphides, phosphorus, combustible substances.

Exothermic reaction with magnesium.

**10.4 Conditions to avoid**

Heating

**10.5 Incompatible materials**

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See point 10.3

**10.6 Hazardous decomposition products**

None

**11. TOXICOLOGICAL INFORMATION**

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

<b>Acute toxicity</b>	DNEL (Derived No Effect Level) 0.107 mg/m <sup>3</sup> LD50 (orale) <b>Effect level</b> > 10000 mg/kg bw LC50 (inalazione) (male and female rats; 4 h) > 750 µg/m <sup>3</sup> LD50 (derma) > 2000 mg/kg
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met
<b>Serious eye damage/irritation</b>	Corrosive to the eyes
<b>Respiratory or skin sensitization</b>	Based on available data, the classification criteria are not met
<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>	Target organs: eyes, skin
<b>(STOT) repeated exposure</b>	Target organs: skin
<b>Aspiration hazard</b>	Mucosal irritation

**11.2 Information on other hazards**

The main ailment due to poisoning from silver and its salts is called argyria: it usually appears following the intake of silver for long periods (months) and appears as a skin alteration that permanently colors the skin blue, usually not has other associated disorders and is therefore a substantially aesthetic problem.

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

PNEC aqua (freshwater) 0.04 µg/L

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	PNEC aqua (marine water) 0.86 µg/L
	PNEC STP 0.025 mg/L
	PNEC sediment (freshwater) 438.13 mg/kg sediment dw
	PNEC sediment (marine water) 438.13 mg/kg sediment dw
	PNEC soil 1.41 mg/kg soil dw
	LC50 96 h (fish) 1.2 µg/L
	The 28 day NOEC (mortality and gr/owth) is 130 µg dissolved Ag/L
<b>12.2 Persistence and degradability</b>	Not degradable
<b>12.3 Bioaccumulative potential</b>	Log Pow = -N / A
<b>12.4 Mobility in soil</b>	BCF = 70
<b>12.5 Results of PBT and vPvB assessment</b>	Scientifically not justified studies
<b>12.6 Endocrine disrupting properties</b>	Not PBT nor vPvB
<b>12.7 Other adverse effects</b>	None known
<b>13. DISPOSAL CONSIDERATIONS</b>	
<b>13.1 Waste treatment methods</b>	

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

<b>14. TRANSPORT INFORMATION</b>	
<b>14.1 UN number or ID number</b>	UN 1479
<b>14.2 UN proper shipping name</b>	Oxidising solid, n.o.s.
<b>14.3 Transport hazard class(es)</b>	5.1
<b>14.4 Packing group</b>	II
<b>14.5 Environmental hazards</b>	YES
<b>14.6 Special precautions for user</b>	Not applicable
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable

<b>15. REGULATORY INFORMATION</b>		
<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>		<b>Applicability</b>
<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



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**15.2 Chemical safety assessment**

A chemical safety assessment was not carried out.

**16. OTHER INFORMATION**

**Changes compared to the previous edition**

Adaptation to current legislation. Amendment to section 14.

**Acronim and abbreviation legend**

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

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstract Service

**Main references and data sources**

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

<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

**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 DPI