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	VQ90-40NT-H000-E4N9
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.
Adress	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 (ammonia, diammineplatinum(II) nitrite)**

Hazard statements

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

Precautionary statements

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.
UFI code	VQ90-40NT-H000-E4N9	
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 Mixure

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: 215-647-6		Aquatic acute 1	H400
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 %			
Diammineplatinum(II) nitrite	7 ≤ C ≤ 10	Expl. Div. 1.1	H201
CAS 14286-02-3		Eye Dam. 1	H318
EC 238-203-3		Explosive when dry	EUH001
Reach nr. Exempt due to quantity			
ATE: not applicable			
M factor: not applicable			

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.

Reccomendation:

- **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**

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_2, 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

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 containement 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/m3 or 20 ppm (gaseous state)
STEL (short term) 36 mg/m3 or 50 ppm (gaseous state)
DNEL
Workers
Systemic effects for long-term exposure – inhalation: 47.6 mg/m3
Systemic effects for short-term exposure – inhalation: 47.6 mg/m3
Local effects for long-term exposure – inhalation: 14 mg/m3
Local effects for short-term exposure – inhalation: 36 mg/m3
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/m3

Systemic effects for short-term exposure – inhalation: 23.8 mg/m3
Local effects for long-term exposure – inhalation: 2.8 mg/m3
Local effects for short-term exposure – inhalation: 7.2 mg/m3
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

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 prodoucts

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

Respiratory or skin sensitization	Respiratory tract irritation
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
(STOT) single exposure	Respiratory tract irritation
(STOT) repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazards	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

Substance: Diammineplatinum(II)nitrite
No available data

12.2 Persistence and degradability 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

ADR/ADN/RID/IMDG/ICAO-IATA: Corrosive liquid, basic, inorganic n.o.s. (ammonia in solution)

14.3 Transport hazard class

ADR/ADN/RID/IMDG/ICAO-IATA: Class:	8
ADR/ADN/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/ADN/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 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**
Reg. (CE) 1907/2006/CE Reach	YES
Reg. (CE) 1272/2008 CLP and subsequent amendements	YES
Reg. (CE) 2037/2000 "Substances that deplete the ozone layer"	NO
Reg. (CE) 850/2004 "Persistent organic pollutants"	NO
Reg. (CE) 689/2008 "Export and import of hazardous chemicals''	NO
Substance listed in Annex I of Dir. 2012/18/EU cd Seveso	YES
Directive 81/2008 Consolidated Act on protection of health and work safety	YES
Directive 2014/103/UE "Adr"	YES
Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)	NO
Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List	NO
Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List https://echa.europa.eu/it/substances-restricted-under-reach	Limited use 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
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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
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