



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.02.2021

Version number 1.2

Revision: 15.02.2021

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

· 1.1 Product identifier

· Trade name: **Patina Schwarz**

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

- Technical function soldering
- Application of the substance / the mixture Surface modifiers

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**
Stannol GmbH & Co. KG
Haberstrasse 24
D-42551 Velbert

+49 (0) 2051 3120 332
sdb@stannol.de

· **Further information obtainable from:** Product Safety Department

· **1.4 Emergency telephone number:**
8:00 am - 5:00 pm (CET) +49 (0) 2051 3120 332

National Poisons Information Service
+44 121 507 4123

Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

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

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· 2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS05 GHS09

· **Signal word** Danger

· Hazard-determining components of labelling:

nitric acid
zinc chloride

· Hazard statements

H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.

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P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a doctor.

P391 Collect spillage.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).

2.3 Other hazards**Results of PBT and vPvB assessment**• **PBT:** Not applicable.• **vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Mixtures**• **Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 7697-37-2	nitric acid	Ox. Liq. 2, H272	2.5-15%
EINECS: 231-714-2		Skin Corr. 1A, H314	
CAS: 7758-99-8	copper(II) sulfate, pentahydrate	Aquatic Chronic 1, H410 (M=10)	2-9%
EINECS: 231-847-6		Acute Tox. 4, H302; Eye Irrit. 2, H319	
CAS: 7646-85-7	zinc chloride	Skin Corr. 1B, H314; Eye Dam. 1, H318	2-9%
EINECS: 231-592-0		Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
		Acute Tox. 4, H302; STOT SE 3, H335	
CAS: 7446-08-4	selenium dioxide	Acute Tox. 3, H301; Acute Tox. 3, H331	≤1%
EINECS: 231-194-7		STOT RE 2, H373	
		Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures**• **General information:** Immediately remove any clothing soiled by the product.• **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.• **After skin contact:** Immediately wash with water and soap and rinse thoroughly.• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.• **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.• **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.• **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**• **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

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- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
CAS: 7697-37-2 nitric acid
WEL (Great Britain) Short-term value: 2.6 mg/m³, 1 ppm
IOELV (EU) Short-term value: 2.6 mg/m³, 1 ppm
CAS: 7646-85-7 zinc chloride
WEL (Great Britain) Short-term value: 2 mg/m³
Long-term value: 1 mg/m³
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not necessary if room is well-ventilated.

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

· Protection of hands:

Protective gloves

Rubber gloves

Synthetic rubber gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties**· General Information****· Appearance:**

Form: Fluid

Colour: Blue

· Odour: Characteristic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not determined.

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- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.

- **Solvent content:**
 - Water:** 80.4 %
 - VOC (EC)** 0.00 %

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
 - CAS: 7646-85-7 zinc chloride**
 - Oral LD50 350 mg/kg (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1760
- **14.2 UN proper shipping name**
- **ADR** 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID), ENVIRONMENTALLY HAZARDOUS
- **IMDG** CORROSIVE LIQUID, N.O.S. (NITRIC ACID, ZINC CHLORIDE), MARINE POLLUTANT
- **IATA** CORROSIVE LIQUID, N.O.S. (NITRIC ACID)
- **14.3 Transport hazard class(es)**
- **ADR, IMDG**



- **Class** 8 Corrosive substances.
- **Label** 8
- **IATA**



- **Class** 8 Corrosive substances.
- **Label** 8

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- **14.4 Packing group**
- **ADR, IMDG, IATA** II
- **14.5 Environmental hazards:** Product contains environmentally hazardous substances: zinc chloride
- **Marine pollutant:** Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)
- **14.6 Special precautions for user** Warning: Corrosive substances.
- **Hazard identification number (Kemler code):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups** Acids
- **Stowage Category** B
- **Stowage Code** SW2 Clear of living quarters.
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **ADR**
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- **Transport category** 2
- **Tunnel restriction code** E
- **IMDG**
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- **UN "Model Regulation":** UN 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID), 8, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
nitric acid
zinc chloride
- **Hazard statements**
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.

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P103	Read carefully and follow all instructions.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H272 May intensify fire; oxidiser.
 - H301 Toxic if swallowed.
 - H302 Harmful if swallowed.
 - H314 Causes severe skin burns and eye damage.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H331 Toxic if inhaled.
 - H335 May cause respiratory irritation.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Product Safety Department
- **Contact:** Hr. Dörr
- **Abbreviations and acronyms:**
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Ox. Liq. 2: Oxidizing liquids – Category 2
 - Acute Tox. 3: Acute toxicity – Category 3
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 - Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 - Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1