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

*Printing date 18.01.2019* *Version number 1* *Revision: 18.01.2019*

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

· **1.1 Product identifier**

· **Trade name:** **Nitric Acid**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Electroplating auxiliary

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Ivoclar Vivadent AG
Bendererstrasse 2
LI-9494 Schaan
PRINCIPALITY OF LIECHTENSTEIN

Tel: +423 235 35 35
Fax: +423 235 33 60

· **Further information obtainable from:**
Regulatory Affairs
sds@ivoclarvivadent.com
· **1.4 Emergency telephone number:** +423 / 235 33 13 (Ivoclar Vivadent AG, LI-9494 Schaan, Liechtenstein)

## SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

| | | |
|---|---|---|
| Met. Corr.1 | H290 | May be corrosive to metals. |
| Skin Corr. 1A | H314 | Causes severe skin burns and eye damage. |
| Eye Dam. 1 | H318 | Causes serious eye damage. |

· **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

· **Signal word** Danger

· **Hazard-determining components of labelling:**
nitric acid
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**

| | |
|---|---|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face 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 POISON CENTER/doctor. |

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· **Additional information:**
EUH071 Corrosive to the respiratory tract.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | | |
|---|---|---|---|
| CAS: 7697-37-2<br>EINECS: 231-714-2 | nitric acid | Ox. Liq. 2, H272; Skin Corr. 1A, H314 | 25-50% |

· **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.
Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Hazards** Danger of gastric perforation.
· **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**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

## SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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· **6.3 Methods and material for containment and cleaning up:**
*Use neutralising agent.*
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*
*Ensure adequate ventilation.*
*Dispose contaminated material as waste according to item 13.*
· **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**
*Only adequately trained personnel should handle this product.*
*Ensure good ventilation/exhaustion at the workplace.*
*Prevent formation of aerosols.*
*For use in dentistry only.*
· **Information about fire - and explosion protection:** *No special measures required.*

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** *Store only in the original receptacle.*
· **Information about storage in one common storage facility:**
*Do not store together with alkalis (caustic solutions).*
· **Further information about storage conditions:**
*Keep container tightly sealed.*
*Protect from heat and direct sunlight.*
· **7.3 Specific end use(s)** *No further relevant information available.*

## SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** *No further data; see item 7.*

· **8.1 Control parameters**

| · **Ingredients with limit values that require monitoring at the workplace:** | |
|---|---|
| **CAS: 7697-37-2 nitric acid** | |
| *WEL* | *Short-term value: 2.6 mg/m³, 1 ppm* |

· **Additional information:** *The lists valid during the making were used as basis.*

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
*Usual hygienic measures for dental practice and dental laboratories.*
*Keep away from foodstuffs, beverages and feed.*
*Wash hands before breaks and at the end of work.*
*Immediately remove all soiled and contaminated clothing*
*Avoid contact with the eyes and skin.*
· **Respiratory protection:**
*Not necessary if room is well-ventilated.*
*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*
· **Recommended filter device for short term use:** *Special gas filter NO-P3*

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· **Protection of hands:**

*Protective gloves (EN 374)*

*After use of gloves apply skin-cleaning agents and skin cosmetics.*

· **Material of gloves**
*Chloroprene rubber, CR*
*Fluorocarbon rubber (Viton)*
*Nitrile rubber, NBR*
*Butyl rubber, BR*
*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Penetration time of glove material**
*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**

*Tightly sealed goggles (EN 166)*

· **Body protection:** *Protective work clothing*

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| · **9.1 Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | *Fluid* |
| **Colour:** | *Yellowish* |
| · **Odour:** | *Product specific* |
| · **Odour threshold:** | *Not determined.* |
| · **pH-value at 20 °C:** | *<1* |
| · **Change in condition** | |
| **Melting point/freezing point:** | *Undetermined.* |
| **Initial boiling point and boiling range:** | *110 °C* |
| · **Flash point:** | *Not applicable.* |
| · **Flammability (solid, gas):** | *Not applicable.* |
| · **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.* |
| · **Density at 20 °C:** | *1.20 - 1.40 g/cm³* |
| · **Relative density** | *Not determined.* |
| · **Vapour density** | *Not determined.* |
| · **Evaporation rate** | *Not determined.* |

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| | |
|---|---|
| · **Solubility in / Miscibility with water:** | Fully miscible. |
| · **Partition coefficient: n-octanol/water:** | Not determined. |
| · **Viscosity:** | |
| **Dynamic:** | Not determined. |
| **Kinematic:** | Not determined. |
| · **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** Stable under normal handling and storage conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with alkali and metals.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** Nitrogen oxides

## SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **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.
· **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:** | |
|---|---|
| **CAS: 7697-37-2 nitric acid** | |
| LC50/48 h | 180 mg/l (crustaceans) (Min.)<br>180 mg/l (crustaceans) (Max.)<br>180 mg/l (crustaceans) (Median) |

· **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:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.

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*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water*
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
· **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.*
*Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.*

· **Uncleaned packaging:**
· **Recommendation:** *Disposal must be made according to official regulations.*
· **Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

## SECTION 14: Transport information

| | |
|---|---|
| · **14.1 UN-Number** | |
| · **ADR/RID/ADN, IMDG, IATA** | *UN2031* |
| · **14.2 UN proper shipping name** | |
| · **ADR/RID/ADN** | *2031 NITRIC ACID solution* |
| · **IMDG, IATA** | *NITRIC ACID solution* |
| · **14.3 Transport hazard class(es)** | |
| · **ADR/RID/ADN** | |

| | |
|---|---|
| · **Class** | *8 (C1) Corrosive substances.* |
| · **Label** | *8* |
| · **IMDG, IATA** | |

| | |
|---|---|
| · **Class** | *8 Corrosive substances.* |
| · **Label** | *8* |
| · **14.4 Packing group** | |
| · **ADR/RID/ADN, IMDG, IATA** | *II* |
| · **14.5 Environmental hazards:** | *Not applicable.* |
| · **14.6 Special precautions for user** | *Warning: Corrosive substances.* |
| · **Danger code (Kemler):** | *80* |
| · **EMS Number:** | *F-A,S-B* |
| · **Segregation groups** | *Acids* |

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| | |
|---|---|
| · **Stowage Category** | D |
| · **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** | Not applicable. |
| · **Transport/Additional information:** | |
| · **ADR/RID/ADN** | |
| · **Limited quantities (LQ)** | 1L |
| · **Excepted quantities (EQ)** | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>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<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · **UN "Model Regulation":** | UN 2031 NITRIC ACID SOLUTION, 8, II |

## SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
· **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.
H314 Causes severe skin burns and eye damage.
· **Classification according to Regulation (EC) No 1272/2008**
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport 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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 2: Oxidizing liquids – Category 2
Met. Corr.1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1