

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

Printing date 27.03.2015


Version number 3

Revision: 27.03.2015

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

- **Date of compilation:** 02.10.2012
- **1.1 Product identifier**
- **Trade name:** **Pelox® Passivation Product RP**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:** *Passivating of stainless steel surfaces*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**  
Pelox BioChemie- und Umwelttechnik GmbH & Co. KG  
Langer Acker 22  
D-30900 Wedemark  
Germany  
mail: office@pelox.de  
contact person : Mr. Peter Krämer  
www.pelox.de
- phone: ++49 5130 58 89 0  
fax: ++49 5130 58 89 58
- **E-mail address of the competent person responsible for the Safety Data Sheet:** office@pelox.de
- **Informing department:**  
quality management department  
phone.: ++49 5130 58 89 0  
office hours: Monday-Thursday: 8.00 a.m. - 16.00 p.m / Friday: 8.00 a.m - 13.00 p.m.
- **1.4 Emergency telephone number:** As above or next toxicological information centre.

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  **GHS05 corrosion**
- *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.*
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R35: Causes severe burns.



Xi; Irritant

R41: Risk of serious damage to eyes.

- **Information concerning particular hazards for human and environment:** void
- **Classification system:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **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

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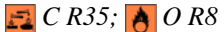

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- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Nitric acid*
- **Hazard statements**  
*H290 May be corrosive to metals.*  
*H314 Causes severe skin burns and eye damage.*
- **Precautionary statements**  
*P260 Do not breathe 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/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.*
- **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 the substances listed below with nonhazardous additions.*

**Dangerous components:**

CAS: 7697-37-2	Nitric acid	20-<25%
EINECS: 231-714-2	 C R35; O R8	
Index number: 007-004-00-1	 Ox. Liq. 3, H272; Met. Corr. 1, H290; Skin Corr. 1A, H314	

- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

**Ingredients according to Regulation (EC) No 648/2004:**

non-ionic surfactants	< 5%
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**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:**  
*Immediately remove any clothing contaminated by the product.*  
*In case of irregular breathing or respiratory arrest provide artificial respiration.*
- **After inhalation:**  
*Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.*  
*In case of unconsciousness bring patient into stable side position for transport.*
- **After skin contact:**  
*Instantly wash with water and soap and rinse thoroughly.*  
*Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.*
- **After eye contact:**  
*Rinse opened eye for several minutes under running water. Then consult doctor.*  
*Remove contact lenses, if present and easy to do.*
- **After swallowing:**  
*Rinse out mouth and then drink plenty of water.*  
*Do not induce vomiting; instantly call for medical help.*
- **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Danger:** *Danger of gastric perforation.*

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

### **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Wear full protective suit.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
If without risk possible, move drums with material away from dangerous area.

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Do not breathe vapour.  
Avoid contact with skin and eyes.
- **6.2 Environmental precautions:**  
Do not allow to enter drainage system, surface or ground water.  
Inform respective authorities in case product reaches water or sewage system.  
Prevent material from reaching sewage system, holes and cellars.
- **6.3 Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Do not allow to dry out.  
Send for recovery or disposal in suitable containers.  
Dispose of the material collected according to regulations.
- **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 information on disposal.

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Do not breathe vapour/spray.  
Avoid contact with skin and eyes.  
Keep containers tightly sealed.  
When diluting, always stir the product into standing water.  
Make sure that all applicable workplace limits are observed.
- **Information about protection against explosions and fires:** Prevent from drying out.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store only in the original container.  
Provide acid-resistant floor.  
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from reducing agents.  
Do not store together with alkalis (caustic solutions).  
Store away from metals.  
Store away from flammable substances.
- **Further information about storage conditions:**  
Store container in a well ventilated position.  
Store in cool, dry conditions in well sealed containers.  
Protect from heat and direct sunlight.  
Store in a locked cabinet or with access restricted to specifically instructed persons.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

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

· **8.1 Control parameters**

- **Components with critical values that require monitoring at the workplace:**

**7697-37-2 Nitric acid**

WEL (Great Britain)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm
IOELV (European Union)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm

**10102-43-9 nitrogen monoxide**

IOELV (European Union)	Long-term value: 30 mg/m <sup>3</sup> , 25 ppm
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· **DNELs**

**7697-37-2 Nitric acid**

Inhalative	DNEL acute / short-term exposure - local effects	1.3 mg/m <sup>3</sup> (general population) 2.6 mg/m <sup>3</sup> (worker)
	DNEL long-term exposure - local effects	1.3 mg/m <sup>3</sup> (worker)
	DNEL long-term exposure - systemic effects	0.65 mg/m <sup>3</sup> (general population)

· **8.2 Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and food.
- Instantly remove any contaminated garments.
- Wash hands during breaks and at the end of the work.
- Use skin protection cream for preventive skin protection.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.
- Do not eat, drink or smoke while working.
- Do not carry cleaning cloths impregnated with the product in trouser pockets.
- **Breathing equipment:** Use breathing protection in case of insufficient ventilation.
- **Recommended filter device for short term use:** Special gas filter NO-P3
- **Protection of hands:** Pelox<sup>®</sup> PVC acid protective gloves

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- **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 safety glasses
- **Body protection:**  
Acid resistant protective clothing  
Body protection must be chosen depending on activity and possible exposure.
- **Limitation and supervision of exposure into the environment**  
Do not allow to enter drainage system, surface or ground water.

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

· <b>Form:</b>	liquid
· <b>Colour:</b>	colourless
· <b>Smell:</b>	light pungent
· <b>Odour threshold:</b>	not determined

· **pH-value:** < 1

##### · Change in condition

· <b>Melting point/Melting range:</b>	not determined
· <b>Boiling point/Boiling range:</b>	not determined

· **Flash point:** not applicable

· **Inflammability (solid, gaseous)** not applicable

· **Ignition temperature:** not determined

· **Decomposition temperature:** Not determined.

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

##### · Critical values for explosion:

· <b>Lower:</b>	not applicable
· <b>Upper:</b>	Not determined.

· **Oxidising properties** not determined

· **Vapor pressure:** Not determined.

· **Density:** not determined

· <b>Bulk density:</b>	not applicable
· <b>Relative density</b>	Not determined.
· <b>Vapour density (AIR = 1):</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

##### · Solubility in / Miscibility with

· **Water:** fully miscible

· **Partition coefficient (n-octanol/water):** Not determined.

##### · Viscosity:

· <b>dynamic:</b>	not determined
· <b>kinematic:</b>	not determined

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## · 9.2 Other information

No further relevant information available.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity see 10.3
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions  
Reacts with metals to form nitrous fumes and hydrogen  
Flammable if water content dries out
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials:  
Alkaline materials  
Reducing agents  
Metals
- 10.6 Hazardous decomposition products:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)

**SECTION 11: Toxicological information**

- 11.1 Information on toxicological effects
- Acute toxicity:

## · LD/LC50 values that are relevant for classification:

**7697-37-2 Nitric acid**

Oral	LDLo	430 mg/kg (human)
Inhalative	LC0/4 h	> 800 mg/l (rat)

- Primary irritant effect:
- on the skin: Strong caustic effect on skin and mucous membranes.
- on the eye:  
Corrosive  
Strong irritant with the danger of severe eye injury.
- Additional toxicological information:  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- Sensitisation No sensitizing effect known.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)  
According to present knowledge no CMR-effects known.

**SECTION 12: Ecological information**

## · 12.1 Toxicity

## · Aquatic toxicity:

**7697-37-2 Nitric acid**

LC50/96 h	72 mg/l (gambusia affinis)
	12.5 mg/l (rainbow trout (oncorhynchus mykiss)) (pH 3,7)
	Literaturangabe

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- **12.2 Persistence and degradability**  
Anorganic product, is not eliminable from water by means of biological cleaning processes.
- **12.3 Bioaccumulative potential** Not bioaccumulative
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Water hazard class 1 (Self-assessment): slightly hazardous for water
- **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** Disposal must be made according to official regulations.
- **European waste catalogue:**  
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

· <b>14.1 UN-Number</b>	UN2031
· <b>ADR, IMDG, IATA</b>	
· <b>14.2 UN proper shipping name</b>	UN2031 NITRIC ACID, MIXTURE
· <b>ADR</b>	NITRIC ACID SOLUTION
· <b>IMDG, IATA</b>	
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR</b>	
	
· <b>Class</b>	8 (C1) Corrosive substances.
· <b>Label</b>	8
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	II
· <b>ADR, IMDG, IATA</b>	
· <b>14.6 Special precautions for user</b>	Warning: Corrosive substances.
· <b>Kemler Number:</b>	80

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· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Transport by post may be prohibited or restricted.
· <b>ADR</b>	
· <b>Excepted quantities (EQ):</b>	E2
· <b>Limited quantities (LQ):</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category:</b>	2
· <b>Tunnel restriction code:</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN2031, NITRIC ACID, MIXTURE, 8, II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:** Directive 96/82/EC does not apply.
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the product.  
H272 May intensify fire; oxidiser.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
.....  
R35 Causes severe burns.  
R8 Contact with combustible material may cause fire.
- **Department issuing MSDS:**  
C.S.B. GmbH Phone: +49 - 2151 - 652086-0  
Düsseldorfer Str. 113 Fax: +49 - 2151 - 652086-9  
47809 Krefeld / Germany
- **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

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*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)*  
*DNEL: Derived No-Effect Level (REACH)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*Ox. Liq. 3: Oxidising Liquids, Hazard Category 3*  
*Met. Corr.1: Corrosive to metals, Hazard Category 1*  
*Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A*  
*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*

· **Sources:** These data are based on information submitted by pre-suppliers.

· **\* Data compared to the previous version altered.**

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