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Reviewed on 10/06/2011

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

- **Product identifier**
- **Trade name: Ferrol N**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Drycleaning
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SEITZ GmbH  
Gutenbergstrasse 3  
65830 Kriftel/ Germany  
seitz@seitz24.com  
www.seitz24.com
- **Information department:**  
CHEM-TEL Inc.  
1305 North Florida Ave  
Tampa Florida 33602
- **Emergency telephone number:** 1-800-255-3924

## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Xn; Harmful  
R22: Harmful if swallowed.  
Xi; Irritant  
R36/38: Irritating to eyes and skin.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been marked in accordance with national laws.  
Observe the general safety regulations when handling chemicals
- **Code letter and hazard designation of product:**  
Xn Harmful
- **Hazard-determining components of labelling:**  
potassium hydrogendifluoride
- **Risk phrases:**  
22 Harmful if swallowed.  
36/38 Irritating to eyes and skin.
- **Safety phrases:**  
2 Keep out of the reach of children.  
20 When using do not eat or drink.  
24/25 Avoid contact with skin and eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
46 If swallowed, seek medical advice immediately and show this container or label.

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- **Hazard description:**
- **WHMIS classification**  
D1B - Toxic material causing immediate and serious toxic effects  
D2B - Toxic material causing other toxic effects



- **Classification system**
- **NFPA ratings (scale 0-4)**



Health = 2  
Fire = 0  
Reactivity = 0

- **HMIS ratings (scale 0-4)**



Health = 2  
Fire = 0  
Reactivity = 0

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous ingredients.

- **CAS-No. Components:**

144-62-7	oxalic acid	< 5%
7789-29-9	potassium hydrogendifluoride	< 1%

### 4 First aid measures

- **Description of first aid measures**
- **General information**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact**  
Immediately wash with water and soap and rinse thoroughly.  
Rub in Ca-gluconate solution or Ca-gluconate gel immediately.  
Seek medical treatment.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide (CO,CO<sub>2</sub>)  
Hydrogen fluoride (HF)  
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Avoid contact with eyes and skin.
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling**  
Keep away from heat and direct sunlight.  
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Unsuitable material for receptacle: glass or ceramic.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
Protect from frost.  
Time of storage: max. 18 month

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- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Avoid contact with the eyes and skin.  
Do not eat, drink, smoke or sniff while working.  
Wash hands before breaks and at the end of work.  
Immediately remove all soiled and contaminated clothing  
Store protective clothing separately.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
Acid resistant gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves**  
Nitrile rubber, NBR  
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 exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Acid resistant protective clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
- **Odor:** Product specific
- **pH-value (100 g/l) at 20°C (68 °F):** ~ 2.5
- **Change in condition**

<b>Melting point/Melting range:</b>	undetermined
<b>Boiling point/Boiling range:</b>	undetermined
- **Flash point:** Not applicable
- **Auto igniting:** Product is not selfigniting.

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|--|---|
| · <b>Danger of explosion:</b>                    | Product does not present an explosion hazard.     |
| · <b>Density at 20°C (68 °F):</b>                | 1.01 g/cm <sup>3</sup> (8.428 lbs/gal) (ISO 2811) |
| · <b>Solubility in / Miscibility with Water:</b> | Easily soluble                                    |
| · <b>Other information</b>                       | No further relevant information available.        |

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Reacts with alkali and metals  
Reacts with strong acids
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None if used as directed.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**7789-29-9 potassium hydrogendifluoride**

Oral	LD50	160 mg/kg (rat)
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**144-62-7 oxalic acid**

Oral	LD50	375 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Cancerogenity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

7789-29-9 | potassium hydrogendifluoride

A4

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **National regulations**

- **Other regulations, limitations and prohibitive regulations**

The product has been designed for professional use only.

- **Please note:**

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyers responsibility to ensure that their activities comply with Federal, State or provincial and local laws. The following specific information is made for the purpose of complying with numerous laws and regulations.

## 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.

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