



MATERIAL SAFETY DATA SHEET

Date of card preparation: 09.07.2009

Date of card update: 05.12.2011

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

1.1. Product identifier

Liquick Cor-FERRUM mini (catalogue No 3-247)
Liquick Cor-FERRUM 30 (catalogue No 3-257)
Liquick Cor-FERRUM 60 (catalogue No 3-258)
Liquick Cor-FERRUM 500 (catalogue No 3-323)
Liquick Cor-FERRUM „bulk” (catalogue No 3-292)
PRESTIGE 24i LQ FERRUM (Version 24) (catalogue No 4-258)
PRESTIGE 24i LQ FERRUM (Version 36) (catalogue No 4-458)
ACCENT-300 FERRUM (catalogue No 7-358)
ACCENT-200 FERRUM (catalogue No 7-258)
HC-FERRUM (catalogue No 4-558)
1-FERRUM (catalogue No 3-261)
A-400 FERRUM (catalogue No 7-458)
OS-FERRUM (catalogue No 9-416)
BIOLIS 12i FERRUM (catalogue No 4-626)

The sets: Liquick Cor – FERRUM: mini, 30, 60, 500, “bulk”, PRESTIGE 24i LQ FERRUM, HC-FERRUM, ACCENT-300 FERRUM, ACCENT-200 FERRUM, A-400 FERRUM, OS-FERRUM are designed for laboratories in hospitals and outpatient clinics for determining the iron concentrations in blood serum and plasma.

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

Laboratory reagents. For professional use only.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

PZ CORMAY S.A.
ul. Wiosenna 22
05-092 ŁOMIANKI

phone/fax. (0-22) 751 79 10, 751 79 14

between: 8 am and 4 pm

e-mail: msds@cormay.pl

1.4. Emergency telephone number

Emergency telephone number: 112


SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

1-FERRUM; 1-REAGENT, 2-FERRUM; 2-REAGENT

Irritating.
May cause sensitization by skin contact.

2.2. Label elements

<i>Marking:</i>	
 Xi - Irritating	Contains hydroxylamine hydrochloride. Xi - Irritating <i>Risk phrases (R):</i> R 43 – May cause sensitization by skin contact. <i>Safety phrases (S):</i> S 24 – Avoid contact with skin. S 37 – Wear suitable gloves.

2.3. Other hazards

This mixture do not meet the criteria for PBT and vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

1-FERRUM; 1-REAGENT, 2-FERRUM; 2-REAGENT	
Acetic acid	Contains: < 0.6%
CAS number: 64-19-7	
EC number: 200-580-7	
Index number 607-002-00-6	
Registration number: not available	
Classification according to EU Directives 67/548/EEC or 1999/45/EC:	
R 10	
C; R 35	
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:	
Skin Corr. 1A, H314	
Flam. Liq. 3, H226	

<p>hydroxylamine hydrochloride Stężenie: < 2%</p> <p>CAS number: 5470-11-1</p> <p>EC number: 226-798-2</p> <p>Index number 612-123-00-2</p> <p>Registration number: not available</p> <p>Classification according to EU Directives 67/548/EEC or 1999/45/EC:</p> <p>Xn; R22-48/22</p> <p>Xi; R36/38</p> <p>R43</p> <p>N; R50</p> <p>Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:</p> <p>Met. Corr. 1; H290</p> <p>Acute Tox. 4; H302</p> <p>STOT RE 2; H373</p> <p>Eye Irrit. 2</p> <p>Skin Irrit. 2; H319</p> <p>Skin Sens. 1; H315</p> <p>Aquatic Acute 1; H317, H400</p>
3-STANDARD
Contains no hazardous substances in reportable quantities.

The full text of R and H phrases is given in section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

After exposure by respiratory passages: fresh air. Call in physician.

After skin contamination: Wash off with large amount of water. Take off contaminated clothing.

After contamination of eyes: rinse out with plenty of water for at least 15 minutes with the eyelid held wide open.

After consumption: Give the sufferer a lot of water to drink.

If the sufferer feels unwell, consult a doctor/ambulance.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

The mixture is inflammable.

In case of fire use extinguishing media suitable for materials stored in immediate vicinity. Water, CO₂, dry powder can be used as the extinguish medium.

No data about do not recommended extinguishing media.

5.2. Special hazards arising from the substance or mixture

During a fire thermal decomposition of the substances contained in the mixture may occur. As a result of that toxic fumes and gases may be formed, which contain among others: nitrose gases, carbon monoxide, carbon dioxide.

5.3. Advice for firefighters

The rescuers must be equipped with protective clothing and respiratory tract isolating equipment, irrespective of ambient air (in the case of large fire).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Avoid contamination with the preparation.
Notify the neighbourhood of the breakdown.
Do not inhale vapours/ aerosols.
Secure the flow of fresh air into closed rooms.
Avoid contact of the mixture with skin and eyes.
Remove contaminated clothing and wash before reuse.

6.1.2. For emergency responders

Wear protective clothing and rubber gloves.

6.2. Environmental precautions

Dilute with plenty of water. Avoid entering the product into drains, surface water and groundwater, reservoirs and waterways.

6.3. Methods and material for containment and cleaning up

Collect small quantities with the use of an absorbing agent (sand, diatomite, acid binders, universal binders, sawdust), rinse with large amount of water if necessary. Provide material collected for recycling.

6.4. Reference to other sections

Use the control measures and personal protective equipment described in section 8 of this card. The released material to follow the rules described in section 13 of this MSDS - Disposal consideration.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

While working with the preparation, one should use appropriate means of personal protection (see pt. 8).
Avoid contact of the preparation with skin and eyes, as well as inhaling its mists.
Secure efficient local ventilation.

Industrial hygiene:

You must not have meals, drink, or smoke tobacco while working with the preparation, except in places designed for that purpose. Wash your hands after work with the substance carefully with soapy water. Apply skin-protective barrier cream.

7.2. Conditions for safe storage, including any incompatibilities

In accordance with the norms generally accepted for chemicals in laboratories.
Store in original manufacturer containers.
Hermetically closed. In temperature from +2°C to +8°C.
Protect containers from damage.
Keep away from food and animal feed.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contains substances with the applicable occupational exposure limits in the workplace.

Data for acetic acid:

	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m ³	ppm	mg/m ³
Austria	10	25	20	50
Belgium	10	25	15	38
Canada - Québec	10	25	15	37
Denmark	10	25	20	50
European Union	10	25		
France			10	25
Germany (AGS)	10	25	20 (1)	50 (1)
Germany (DFG)	10	25	20	50
Hungary		25		25
Italy	10	25		
Japan				
Poland		15		30
Singapore	10	25	15	37
Spain	10	25	15	37
Sweden	5	13	10	25
Switzerland	10	25	20	50
The Netherlands				
USA - NIOSH	10	25	15 (1)	37 (1)
USA - OSHA	10	25		
United Kingdom	(10)	(25)	(15)	(37)

	Remarks
Austria	Indicative Occupational Exposure Limit Values, proposal [5] (for references see bibliography)
Germany (AGS)	(1) 15 Minutes average value
Germany (DFG)	STV 15 minutes average value
USA - NIOSH	(1) 15 minutes average value
United Kingdom	The UK Advisory Committee on Toxic Substances has expressed concern that, for the OELs shown in parentheses, health may not be adequately protected because of doubts that the limit was not soundly-based. These OELs were included in the published UK 2002 list and its 2003 supplement, but were omitted from editions published from 2005 onwards.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available.

8.2.2. Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

a) Eye / Face protection:

Avoid direct contact of the product with eyes use glasses.

b) skin protection:

- hand protection:

Avoid direct contact of the product with skin, immediately take off clothes soiled with the mixture and wash contaminated skin with soapy water, use personal protective, clothing and gloves:

c) Respiratory protection:

Apply in rooms with efficiently working ventilation, avoid inhaling product mists, respiratory tract-protective agents are not required.

d) Thermal hazards:

Not applicable.

8.2.3. Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

	<u>1-FERRUM</u> <u>1-REAGENT</u>	<u>2-FERRUM</u> <u>2-REAGENT</u>	<u>3-STANDARD</u>
a) Appearance :- -The physical state : -Colour:	<i>clear liquid</i> <i>colourless</i>	<i>clear liquid</i> <i>pale yellow</i>	<i>clear liquid</i> <i>to slightly turbid</i> <i>colourless to slightly</i> <i>yellow</i>
b) Odour:	<i>slight smell of</i> <i>vinegar</i>	<i>slight smell of</i> <i>vinegar</i>	<i>odourless</i>
c) Odour threshold :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
d) pH:	<i>4,5 (25 °C)</i>	<i>4,3 (25 °C)</i>	<i>2</i>
e) Melting point/freezing point	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
f) Initial boiling point and boiling range	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
g) Flash point:	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
h) Evaporation rate:	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
i) Flammability (solid, gas)	<i>not applicable</i>	<i>not applicable</i>	<i>not applicable</i>
j) Upper/lower flammability or explosive limits :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
k) Vapour pressure :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
l) Vapour density :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
m) Relative density:	<i>1.010 g/cm³ (20 °C)</i>	<i>1.012 g/cm³ (20 °C)</i>	<i>1.000 g/cm³ (20 °C)</i>
n) Solubility(ies)	<i>miscible with water</i>	<i>miscible with water</i>	<i>miscible with water</i>
o) Partition coefficient: n-octanol/water	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
p) Auto-ignition temperature	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
q) Decomposition temperature:	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
r) Viscosity :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
s) Explosive properties:	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>
t) Oxidising properties :	<i>no data available</i>	<i>no data available</i>	<i>no data available</i>

9.2. Other information

No other relevant information.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable in conditions provided by the manufacturer.

10.2. Chemical stability

The product is stable when normal handling in accordance with conditions provided by the manufacturer.
Stabilized product.

10.3. Possibility of hazardous reactions

Not known.

10.4. Conditions to avoid

The product is stable in conditions provided by the manufacturer. Avoid light and heating.

10.5. Incompatible materials

Strong oxidizing agents, acids, metals, metal salts.

10.6. Hazardous decomposition products

In the case of fire – nitrose gases, carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

**No data for the mixture. Toxicological problems should not be expected if the product were used and applied appropriately. The product should be handled with the care usual when dealing with chemicals.
The mixture toxicity evaluation is based on evaluation of the toxicity of particular components.**

a) acute toxicity:

Data for acetic acid:

LD₅₀ (oral, rat) – 3,310 mg/kg

LC₅₀ (inhalation, rat) – 11,4 mg/l/4h

LD₅₀ dermal, rabbit) – 1,060 mg/kg

Data for hydroxylamine hydrochloride:

LD₅₀(oral, rat): 141 mg/kg

b) irritation:

No data available.

c) corrosivity:

No data available.

d) sensitisation:

No data available.

e) repeated dose toxicity:

No data available.

f) carcinogenicity:

No data available.

g) mutagenicity:

No data available.

h) toxicity for reproduction:

No data available.

SECTION 12: Ecological information

12.1. Toxicity

Quantitative data on the ecological effect of this mixture are not available. The mixture toxicity evaluation is based on evaluation of the toxicity of particular components.

Data for acetic acid:

Fish toxicity (*Lepomis macrochirus*) LC₅₀ - 75 mg/l/ 96 h

Toxicity to daphnia and other aquatic invertebrates: (*Entosiphon sulcatum*) EC₅₀ - 78 mg/l/ 72 h, (*Daphnia magna*) EC₅₀ - 47 mg/l/ 24 h

Toxicity to algae (*Scenedesmus quadricauda*) IC₅₀ - 4.000 mg/l/ 16 h

Toxicity to bacteria (*Pseudomonas putida*) IC₅₀ - 2.850 mg/l/ 16 h, (*Photobacterium phosphoreum*) IC₅₀ - 11 mg/l/ 15 min.

Data for hydroxylamine hydrochloride:

Fish toxicity (*Leuciscus idus*) LC₅₀: 1-10 mg/l /48 h

Ecological problems should not be expected if you use and apply the product appropriately.

Further ecological data:

Do not allow for penetration into waters, sewage or soil.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Chemical residues, in general, are included into special waste. Disposing of the latter is regulated by appropriate laws and ordinances. We recommend contacting the appropriate authorities, or waste disposal enterprises that will advise you on how to dispose of special waste.

Packing:

Remove in accordance with official regulations. Treat contaminated packages in the same way as the substance itself. If the regulations do not provide otherwise, non-contaminated packages can be treated like household waste or forward them to be utilized.

SECTION 14: Transport information

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

No limits.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

Material Safety Data Sheet was prepared in accordance with:

The EC Directive Nr UE2001/58/WE, the EC Directive Nr 1999/45/EG, the EC Directive 67/548 EEC, EC Directive 88/379/EEC or the EC Directive 91/155/EEC (Dangerous Product Regulations incl. EC Guidelines). Regulation (EC) No 1907/2006 of European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (attachment II)
See Polish regulations.

15.2. Chemical safety assessment

Chemical safety assessment has been no carried out for the product.

SECTION 16: Other information

Relevant R-phrases:

R 10- Flammable.
R 35- Causes severe burns.
R 22- Harmful if swallowed.
R 48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R 36/38 - Irritating to eyes and skin.
R 43- May cause sensitization by skin contact.
R 50- Very toxic to aquatic organisms.
H314 - Causes severe skin burns and eye damage.
H226 - Flammable liquid and vapour.
H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H373 - May cause damage to organs through prolonged or repeated exposure.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H400 - Very toxic to aquatic life.

The foregoing information is based on the present state of our knowledge. It characterizes the product with respect to the appropriate safety measures. They do not guarantee the properties of the product.

We do not take responsibility for damage and losses that may result from inappropriate use of the mixture.

Reason of changes:

Extend the offer.

The format of the MSDS has been changed in accordance with guidelines of the Commission Regulation (EU) No 453/2010.