# SUMMARY OF PRODUCT CHARACTERISTICS

## 1. TRADE NAME OF THE MEDICINAL PRODUCT

Ferrograd Tablets

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Dried Ferrous sulfate 325 mg (elemental iron 105 mg).

## 3. PHARMACEUTICAL FORM

Prolonged release, film coated tablets.
Circular, biconvex, red tablet**.**

## 4. CLINICAL PARTICULARS

### 4.1. Therapeutic indications

Prevention and treatment of iron deficiency anaemia.

### 4.2. Posology and method of administration

Adults including the elderly

1 tablet daily. Take before food.

Children

Not recommended for children under 12 years.  Above this age, as for adults.

Method of administration:
The tablets should not be sucked, chewed or kept in the mouth, but swallowed whole with water.

Tablets should be taken before meals or during meals, depending on gastrointestinal tolerance.

### 4.3. Contra-indications

Intestinal diverticular disease or any intestinal obstruction.

Iron preparations are contra-indicated in patients with haemochromatosis and haemosiderosis.

Iron is contra-indicated in patients receiving repeated blood transfusions.

Oral iron preparations are contra-indicated when used concomitantly with parenteral iron therapy.

## 4.4. Special warnings and precautions for use

Ferrograd tablets should be kept out of children's reach. Acute iron poisoning occurs rarely in adults, however it could happen if children swallow this medication.

The label will state 'Important warning: Contains iron. Keep out of the reach and sight of children, as overdose may be fatal'. This will appear on the front of the pack within a rectangle in which there is no other information.

The prolonged release tablet and its inert plastic matrix may cause a safety hazard in some elderly or other patients suffering from delayed intestinal transit.

Iron preparations colour the faeces black, which may interfere with tests used for detection of occult blood in the stools. The guaiac test occasionally yields false positive tests for blood.

Due to the risk of mouth ulcerations and tooth discolouration, tablets should not be sucked, chewed or kept in the mouth, but swallowed whole with water.

Aspiration of iron sulfate tablets can cause necrosis of the bronchial mucosa which may result in coughing, haemoptysis, bronchostenosis and/or pulmonary infection (even if aspiration happened days to months before these symptoms occurred). Elderly patients and patients who have difficulties swallowing should only be treated with iron sulfate tablets after a careful evaluation of the individual patient's risk of aspiration. Alternative formulations should be considered. Patients should seek medical attention in case of suspected aspiration.

## 4.5. Interactions with other medicaments and other forms of interaction

Iron interacts with tetracyclines, magnesium trisilicate, trientine and zinc salts and absorption of all of these agents may be impaired.

Iron inhibits the absorption of tetracyclines from the gastrointestinal tract and tetracycline inhibits the absorption of iron. If both drugs must be given, tetracycline should be administered three hours after or two hours before oral iron supplements.

Concurrent administration of oral iron preparations with antacids, calcium supplements (calcium carbonate or phosphate), tea, coffee, eggs, food or medications containing bicarbonates, carbonate, oxalates or phosphates, milk or milk products, wholegrain breads and cereals and dietary fibre, may decrease iron absorption. Therefore, oral iron preparations should not be taken within one hour before or two hours after ingestion of such items.

Concurrent administration of oral iron preparations may interfere with the oral absorption of some quinolone anti-infective agents (e.g. ciprofloxacin, norfloxacin, ofloxacin), resulting in decreased serum and urine concentrations of the quinolones. Therefore, oral iron preparations should not be ingested with or within two hours of a dose of an oral quinolone.

Iron can decrease gastrointestinal absorption of penicillamines. Therefore, administration should be at least two hours apart if both drugs must be co-administered.

Chloramphenicol may delay response to iron therapy.

## 4.6. Pregnancy and lactation

Ferrograd tablets are inappropriate for use during pregnancy since they do not contain folic acid.

## 4.7. Effects on ability to drive and use machines

None

## 4.8. Undesirable effects

Side-effects reported are similar to those associated with conventional oral iron preparations, i.e. nausea, vomiting, abdominal pain or discomfort, blackening of stools, diarrhoea and/or constipation, but the incidence of side-effects is less owing to the prolonged release nature of the formulation.

Isolated cases of allergic reaction have been reported ranging from rash to anaphylaxis.

Bronchial stenosis (see section 4.4)

Post-marketing: The following ADRs have been reported during post-marketing surveillance. The frequency of these reactions is considered not known (cannot be estimated from the available data).

Gastrointestinal disorders:

mouth ulceration*

* in the context of incorrect administration, when the tablets are chewed, sucked or kept in mouth. Elderly patients and patients with deglutition disorders may also be at risk of oesophageal lesions or of bronchial necrosis, in case of false route.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme Website at: www.mhra.gov.uk/yellowcard

## 4.9. Overdose

Symptoms: Initial symptoms of iron overdosage include nausea, vomiting, diarrhoea, abdominal pain, haematemesis, rectal bleeding, lethargy and circulatory collapse. Hyperglycaemia and metabolic acidosis may also occur. The prolonged release characteristic may delay excessive absorption of iron, and thus allow more time for counter measures to be implemented. However, initial symptoms of overdosage may be absent due to the prolonged release formulation. Therefore, if overdosage is suspected, treatment should be implemented immediately. In severe cases, after a latent phase, relapse may occur after 24-48 hours, manifested by hypotension, coma and hepatocellular necrosis and renal failure.

Treatment: The following steps are recommended to minimise or prevent further absorption of the medication:

*Children*:

1. Administer an emetic such as syrup of ipecacuanha.

2. Emesis should be followed by gastric lavage with desferrioxamine solution (2g/l). This should then be followed by the instillation of desferrioxamine 5 g in 50-100 ml water, to be retained in the stomach. Inducing diarrhoea in children may be dangerous and should not be undertaken in young children. Keep the patient under constant surveillance to detect possible aspiration of vomitus - maintain suction apparatus and standby emergency oxygen in case of need.

3. Unleached tablets are radio-opaque. Therefore, an abdominal x-ray should be taken to determine the number of tablets retained in the stomach following emesis and gastric lavage.

4. Severe poisoning: in the presence of shock and/or coma with high serum iron levels (serum iron >90 µmol/l) immediate supportive measures plus i.v. infusion of desferrioxamine should be instituted. Desferrioxamine 15 mg/kg body weight should be administered every hour by slow i.v. infusion to a maximum 80 mg/kg/24 hours. Warning: hypotension may occur if the infusion rate is too rapid.

5. Less severe poisoning: i.m. desferrioxamine 1 g 4-6 hourly is recommended.

6. Serum iron levels should be monitored throughout.

*Adults:*

1. Administer an emetic.

2. Gastric lavage may be necessary to remove drug already released into the stomach. This should be undertaken using desferrioxamine solution (2g/l). Desferrioxamine 5 g in 50-100 ml water should be introduced into the stomach following gastric emptying. Keep the patient under constant surveillance to detect possible aspiration of vomitus; maintain suction apparatus and standby emergency oxygen in case of need.

3. Unleached tablets are radio-opaque. Therefore, an abdominal x-ray of the patient should be taken to determine the number of tablets retained in the stomach following emesis and gastric lavage. The risk/benefit ratio of x-raying pregnant women must be carefully weighed but should be avoided if possible.

4. A drink of mannitol or sorbitol should be given to induce small bowel emptying.

5. Severe poisoning: in the presence of shock and/or coma with high serum iron levels (>142 µmol/l) immediate supportive measures plus i.v. infusion of desferrioxamine should be instituted. The recommended dose of desferrioxamine is 5 mg/kg/h by slow i.v. infusion up to a maximum of 80 mg/kg/24 hours. Warning: hypotension may occur if the infusion rate is too rapid.

6. Less severe poisoning: i.m. desferrioxamine 50 mg/kg up to a maximum dose of 4 g should be given.

7. Serum iron levels should be monitored throughout.

# 5. PHARMACOLOGICAL PROPERTIES

## 5.1. Pharmacodynamic properties

Iron provided by Ferrograd aids haemoglobin regeneration. Once haemoglobin returns to normal, continuing iron therapy for 3 months will help replenish the iron stores in the body.

## 5.2. Pharmacokinetic properties

Oral iron is absorbed better when administered between meals. However, conventional iron preparations often cause gastric irritation when taken on an empty stomach. Studies with Gradumet iron have indicated that relatively little of the iron is released in the stomach, the major portion being released in the upper intestinal tract. Thus, the possibility of gastric irritation is minimised when iron is administered in the Gradumet form in comparison with conventional iron preparations.

## 5.3. Preclinical safety data

There are no preclinical data of relevance to the prescriber which are additional to that already included in other sections of the SPC.

# 6. PHARMACEUTICAL PARTICULARS

## 6.1. List of excipients

Tablet core:
Methylacrylate methylmethacrylate copolymer,
Lactose,
Povidone,
Magnesium stearate,

Film coating:
Hydroxypropylmethylcellulose,
Ethylcellulose,
Sodium saccharin,
Triethyl citrate,
Sorbitan monooleate,
Castor oil,
Titanium dioxide,
Dye Red FD & C No.3 (E127)
Dye Yellow FD & C No.6 (E110)

## 6.2. Incompatibilities

None.

## 6.3. Shelf life

5 years.

## 6.4. Special precautions for storage

Store in a cool dry place at or below 25ºC.

### 6.5. Nature and contents of container

Ferrograd is supplied in 5 carton packs, each containing 30 (3x10) tablets in a blister (OP), a sample blister of 4 tablets.

### 6.6. Instruction for use/handling

None.

## 7. MARKETING AUTHORISATION HOLDER

TEOFARMA S.r.l.
Via F.lli Cervi n° 8
I-27010 Valle Salimbene (PV)
Italy

## 8. MARKETING AUTHORISATION NUMBER

PL 16250/0002

## 9. DATE OF FIRST AUTHORISATION/RENEWAL OF AUTHORISATION

16/12/88; 18/02/04

## 10. DATE OF (PARTIAL) REVISION OF THE TEXT

05/10/2018