

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

GELOPLASMA, solution for infusion.

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Modified liquid gelatin*	
amount expressed as anhydrous gelatin	3.0000 g
Sodium chloride	0.5382 g
Magnesium chloride hexahydrated	0.0305 g
Potassium chloride	0.0373 g
Sodium (S)-lactate solution	
amount expressed as sodium lactate	0.3360 g
per 100 ml of solution for infusion	

* partially hydrolysed and succinylated

For the full list of excipients, see section 6.1.

Ionic formula:

Sodium	=	150 mmol/l
Potassium	=	5 mmol/l
Magnesium	=	1.5 mmol/l
Chloride	=	100 mmol/l
Lactate	=	30 mmol/l

Total osmolality: 295 mOsm/kg

pH: 5.8 to 7.0

3. PHARMACEUTICAL FORM

Solution for infusion.

Clear and colourless to slightly yellowish solution.

Total osmolality: 295 mOsm/kg

pH: 5.8 to 7.0

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Emergency treatment of states of shock:

- hypovolemic shock resulting from: haemorrhage, dehydration, capillary leak, burns;
- vasoplegic shock of traumatic, surgical, septic or toxic origin.

Treatment of relative hypovolaemia associated with hypotension in the context of vasoplegia related to the effects of hypotensive drugs, notably during anesthesia

4.2 Posology and method of administration

PosologyThe solution is administered intravenously.

Dosage volume and rate of administration depend upon the individual patient status, circumstances and response to vascular replacement.

Modified liquid gelatin is given by IV infusion (drip infusion). The infusion rate can be increased using a pump.

The dose and infusion rate depend upon the patient's needs and blood volume to be replaced and haemodynamic status of the patient.

The dose administered is 500 to 1000 ml on average (1 to 2 bags), sometimes more.

As a general rule, in adults and children weighing more than 25 kilos, 500 ml (1 bag) is administered at an appropriate rate depending on the status of the patient. The infusion rate can be increased in case of severe haemorrhage.

If there is blood/fluid loss in excess of 1.5 litres in the adult (i.e. greater than 20% of blood volume) blood should usually be administered as well as Geloplasma. The haemodynamic, haematological and coagulation system should be monitored.

Paediatric population

See above.

Method of administration

The solution is administered intravenously.

4.3 Contraindications

This medicine must not be used in the following situations:

- known or suspected hypersensitivity to gelatine solutions;
- predominantly extracellular hyperhydration;
- hyperkalemia;
- metabolic alkalosis;
- end of pregnancy (during labor/delivery): see "Fertility, pregnancy and lactation" section.

4.4 Special warnings and special precautions for use

Warnings

This solution must not be given by intramuscular injection.

This solution may cause metabolic alkalosis because of the presence of lactate ions.

This solution may not have its alkalinizing action in patients with impaired liver function since lactate metabolism may be impaired.

This liquid gelatin solution must not be infused at the same time as blood or its derivatives (packed cells, plasma and plasma fractions) but using two separate infusion systems.

Determination of blood group, irregular antigens and any laboratory blood tests are possible in patients who have received up to 2 litres of liquid gelatin, though interpretation is hampered by haemodilution and it may be preferred to draw the sample for these tests before the infusion of liquid gelatin.

Because of the possibility of allergic (anaphylactic/anaphylactoid) reactions, appropriate monitoring of patient is necessary. In case of an allergic reaction, the infusion must be stopped immediately and appropriate treatment given.

This medicine contains 5 mmol of potassium per litre. Patients with reduced kidney function or patients on controlled potassium diet should take into consideration this information.

This medicine contains 150 mmol of sodium per litre. Patients on controlled sodium diet should take into consideration this information.

Precautions

Use of this solution requires clinical and laboratory monitoring of the patient's status:

- blood pressure, and possibly central venous pressure;
- urine output;
- haematocrit and electrolytes.

Especially in the following situations:

- congestive heart failure;
- pulmonary functional impairment;
- severely impaired renal function;
- oedema with water/salt retention;
- circulatory overload;
- treatment with corticosteroids and their derivatives.
- major coagulation disturbances

The haematocrit should not fall below 25%; in elderly patients it should not fall below 30%. Blood coagulation disorders caused by dilution of coagulation factors should be avoided.

If more than 2,000 to 3,000 ml of Geloplasma are infused pre-and intra-operatively, it is recommended that the serum protein concentration be checked post-operatively, especially if there are signs of tissue oedema.

4.5 Interaction with other medicinal products and other forms of interaction

Concomitant use of other substances by IV administration is inadvisable, since the pharmacokinetics of constituents of mixtures have not been studied.

Since this solution contains potassium, it is preferable to avoid using potassium and medicinal products that may cause hyperkalemia (e.g. potassium sparing diuretics, ACE inhibitors).

4.6 Fertility, pregnancy and lactation

There are limited amount of data from the use of this product in pregnant or lactating women.

Animal studies are insufficient with respect to reproductive toxicity (see section 5.3).

No embryotoxic effect has, however, hitherto been observed, but there is a risk of severe anaphylactic/anaphylactoid reactions, with consequential foetal and neonatal distress secondary to maternal hypotension.

Due to this possible allergic reaction, this medicinal product must not be given to pregnant women at the end of pregnancy.

As with all drugs, the benefits and risks of use should be assessed in the light of the patient's condition: under these circumstances this preparation should only be prescribed when the potential advantage outweighs the potential risk to the foetus. It should not be used for the prophylaxis of hypovolemia during delivery with analgesia or epidural anaesthesia; however it can be used to treat hypovolemia when plasma volume replacement is needed during pregnancy.

It is unknown whether this product/metabolites are excreted in human milk. A risk to the newborns/infants cannot be excluded.

4.7 Effects on ability to drive and use machines

Not applicable.

4.8 Undesirable effects

The undesirable effects are divided into: Very common ($\geq 1/10$), common ($\geq 1/100$ to $< 1/10$), uncommon ($\geq 1/1,000$ to $< 1/100$), rare ($\geq 1/10,000$ to $< 1/1,000$), very rare ($< 1/10,000$), frequency not known (cannot be estimated from the available data)

Undesirable effects observed during the infusion of this product are:

	Rare $\geq 1/10,000$ to $< 1/1,000$	Very rare $< 1/10,000$
Immune system disorders	Anaphylactic shock	
Skin and subcutaneous tissue disorders	Allergic skin reaction	
Vascular disorders		Hypotension

Cardiac disorders		Slowing of heart rate
Respiratory, thoracic and mediastinal disorders		Respiratory difficulties
General disorders and administration site conditions		Fever, chills

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 national reporting system.

For UK via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard.

4.9 Overdose

Higher doses may cause circulatory overload with a significant fall in haematocrit and plasma proteins.

Increased pressure in the pulmonary circulation leads to leakage of fluid into the extravascular space and may cause pulmonary oedema.

If overdose occurs, stop the infusion and give a fast acting diuretic.

In case of overdose, the patient should be treated symptomatically and electrolytes should be monitored.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: BLOOD SUBSTITUTES AND PLASMA PROTEIN FRACTIONS. ATC Code: B05AA.

Modified liquid gelatin in ionic solution similar to that of extracellular fluid, to be used for vascular filling and restoration of water/electrolyte balance.

This solution enables:

- restoration of blood volume, volume by volume, without plasma expansion due to intravascular transfer of interstitial fluids;
- haemodilution with lowering of blood viscosity and improvement of the microcirculation;
- rehydration of the extravascular sector.

This solution contributes in the restoration of ionic balance and the correction of acidosis.

Liquid gelatin also slightly increases urine output.

Liquid gelatin can be used alone, without any need for transfusion, to cover blood loss of 10 to 20% of total blood volume, and substituted for blood for any infusion of limited volume (about 500 ml).

It does not interfere with the determination of blood groups and is neutral regarding clotting mechanisms.

In the presence of heavy bleeding, alternate administration of blood and liquid gelatin ensures adequate haemodilution (restoration of blood volume and maintenance of oncotic pressure).

5.2 Pharmacokinetic properties

The distribution and elimination of modified liquid gelatin administered by intravenous infusion depend upon many factors: particle size, molecular weight, electric charge, volume administered, rate of administration, etc. The presence of low molecular weight substances explains the action on the kidney and increased urine output.

This modified gelatin solution ensures effective vascular filling for four to five hours after its infusion.

Modified liquid gelatin is eliminated quickly (75% in 24 hours), essentially via the kidney.

5.3 Preclinical safety data

Preclinical safety data are limited and provide no additional information.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium hydroxide; succinic anhydride as succinic acid; hydrochloric acid, concentrated; water for injections.

6.2 Incompatibilities

Physical chemical incompatibility with certain antibiotics (chlortetracycline, amphotericin B (IV), oxytetracycline, vancomycin).

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

6.3 Shelf life

2 years for PVC bags.

2 years for **freeflex**bags.

Once opened: use immediately, discard any unused portion.

6.4 Special precautions for storage

Do not store above 25°C.

Do not freeze.

Do not store in a refrigerator

6.5 Nature and contents of container

500 ml plasticized PVC bag, with overwrap.

15 x 500 ml plasticized PVC bag, with overwrap.

20 x 500 ml *freeflex* bag (polyolefine), with overwrap.

6.6 Special precautions for disposal and other handling

Aseptic handling of the solution must be ensured.

Check that the container is intact and the solution clear before use.

Discard any container which is damaged or from which fluid has been removed.

Residual volume of solution left after infusion must never be used again later.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

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13/03/2008

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17/09/2015