

Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Aminoven 25, solution for infusion, bottle

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

1000 ml solution for infusion contains:

Isoleucine 5.20 g
Leucine 8.90 g
Lysine acetate 15.66 g
= Lysine 11.1 g
Methionine 3.80 g
Phenylalanine 5.50 g
Threonine 8.60 g
Tryptophan 1.60 g
Valine 5.50 g
Arginine 20.00 g
Histidine 7.30 g
Alanine 25.00 g
Glycine 18.50 g
Proline 17.00 g
Serine 9.60 g
Tyrosine 0.40 g
Taurine 2.00 g

Total amino acids: 150.00 g/l

Total nitrogen: 25.7 g/l

Total energy: 2520 kJ/l (= 600 kcal/l)

Titrateable acidity: 44 mmol NaOH/l

For a full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Solution for infusion

The solution is clear and colourless to slightly yellow

pH: 5.5 – 6.3

Theoretical osmolarity: 1505 mosm/l

4 CLINICAL PARTICULARS

4.1 Therapeutic Indications

For supply of amino acids as part of a parenteral nutrition regimen.

Aminoven 25 is mainly indicated if during parenteral nutrition therapy the fluid volume has to be restricted.

Amino acid solutions should be administered generally in combination with adequate amounts of energy supplements.

4.2 Posology and method of administration

Posology

The daily requirement of amino acids depends on the body weight and the metabolic conditions of the patient.

The maximum daily dose varies with the clinical condition of the patient and may even change from day to day.

The recommended infusion period is to provide a continuous infusion for at least 14 hours up to 24 hours, depending on the clinical situation. Bolus administration is not recommended.

The solution is administered as long as a parenteral nutrition is required.

Adults

Dosage:

6.7 – 13.3 ml of Aminoven 25 per kg body weight/day (equivalent to 1.0 - 2.0 g amino acids per kg body weight/day) e.g. corresponding to 470 - 930 ml Aminoven 25 at 70 kg body weight/day.

Maximum infusion rate:

0.67 ml of Aminoven 25 per kg body weight/ hour (equivalent to 0.1 g amino acids per kg body weight/hour).

Maximum daily dose:

13.3 ml of Aminoven 25 per kg body weight/day (equivalent to 2.0 g amino acids per kg body weight/day) corresponding to 140 g amino acids at 70 kg body weight.

Paediatric population

No studies have been performed in the paediatric population.

Aminoven 25 is contraindicated in children (see section 4.3).

Children and adolescents (2-18 years of age) are recommended to receive Aminoven 8 or Aminoven 16. For children under 2 years, paediatric amino acid preparations which are formulated to meet their different metabolic needs should be used.

Method of administration

For administration via a central vein as a continuous infusion.

4.3 Contraindications

The administration of Aminoven 25 is contraindicated in children.

As for all amino acid solutions the administration of Aminoven 25 is contra-indicated in the following conditions:

Disturbances of amino acid metabolism, metabolic acidosis, renal insufficiency without haemodialysis or haemofiltration treatment, advanced liver insufficiency, fluid overload, shock, hypoxia, decompensated heart failure.

4.4 Special warnings and precautions for use

Serum electrolytes, fluid balance and renal function should be monitored.

In cases of hypokalemia and/or hyponatremia adequate amounts of potassium and/or sodium should be supplied simultaneously.

Amino acid solutions may precipitate acute folate deficiency. Therefore folic acid should be given daily.

Care should be given if large volumes are infused in patients with cardiac insufficiency.

The choice of a peripheral or central vein depends on the final osmolarity of the mixture. The general accepted limit for peripheral infusion is approx. 800 mosm/l, but it varies considerably with the age and the general condition of the patient and the characteristics of the peripheral veins.

Strict asepsis should be maintained, particularly when inserting a central vein catheter.

Aminoven 25 is for use as part of total parenteral nutrition in combination with adequate amounts of energy supplements (carbohydrate solutions, lipid emulsions), electrolytes, vitamins and trace elements.

4.5 Interaction with other medicinal products and other forms of interactions

No interactions are known to date.
Concerning incompatibilities, see Section 6.2.

4.6 Fertility, pregnancy and lactation

No specific studies have been performed to assess the safety of Aminoven 25 in fertility, pregnancy or lactation. However, clinical experiences with similar parenteral amino acid solutions have shown no evidence of risk during pregnancy or breastfeeding. The risk/benefit relationship should be considered before administering Aminoven 25 during pregnancy or breastfeeding.

4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

None known when correctly administered.

Undesirable effects which occur during overdose (see Section 4.9) are usually reversible and regress when therapy is discontinued. Infusion via peripheral veins in general can cause irritation of the vein wall and thrombophlebitis. Clinical experience is very limited.

Reporting 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 scheme.

By reporting side effects, you can help provide more information on the safety of this medicine.

Ireland

HPRA Pharmacovigilance
Earlsfort Terrace
IRL - Dublin 2
Tel: +353 1 6764971
Fax: +353 1 6762517
Website: www.hpra.ie
e-mail: medsafety@hpra.ie

4.9 Overdose

As with other amino acid solutions shivering, vomiting, nausea, and increased renal amino acid losses can occur when Aminoven 25 is given in overdose or the infusion rate is exceeded. Infusion should be stopped immediately in this case. It may be possible to continue with a reduced dosage.

A too rapid infusion can cause fluid overload and electrolyte disturbances.

There is no specific antidote for overdose. Emergency procedures should be supportive general measures, with particular attention to respiratory and cardiovascular systems. Close biochemical monitoring is essential and specific abnormalities should be treated appropriately.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Amino acids - solution for parenteral nutrition, ATC code: B05B A01

The amino acids contained in Aminoven 25 are all naturally occurring physiological compounds. As with the amino acids derived from the ingestion and assimilation of food proteins, parenterally administered amino acids enter the body pool of free amino acids and all subsequent metabolic pathways.

5.2 Pharmacokinetic properties

The amino acids in Aminoven 25 enter the plasma pool of corresponding free amino acids. From the intravascular space, amino acids reach the interstitial fluid and the intracellular space of different tissues.

Plasma and intracellular free amino acid concentrations are endogenously regulated for each single amino acid within narrow ranges, depending on the age, nutritional status and pathological condition of the patient.

Balanced amino acid solutions such as Aminoven 25 do not significantly alter the physiologic amino acid pool of essential and non-essential amino acids when infused at a constant and slow infusion rate.

Characteristic changes in the physiologic plasma amino acid pool are only foreseeable when the regulative function of essential organs as liver and kidneys is seriously impaired. In such cases special formulated amino acid solutions may be recommended for restoring homeostasis.

Only a small proportion of the infused amino acids is eliminated by the kidneys.

For the majority of amino acids plasma half-lives between 10 and 30 minutes have been reported.

5.3 Preclinical safety data

Preclinical toxicity data are available for single amino acids but are not relevant to mixtures of amino acids in solutions such as Aminoven 25. No preclinical toxicity studies with Aminoven 25 have been carried out. Studies with comparable amino acid solutions have shown no toxic effect.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Glacial acetic acid
Water for injections
Malic acid

6.2 Incompatibilities

Due to the increased risk of microbiological contamination and incompatibilities, amino acid solutions should not be mixed with other medicinal products.

Should it become necessary to add other nutrients, see sections 6.3 c), 6.4, 6.6.

6.3 Shelf life

a) *Shelf-life of the medicinal product as packaged for sale*

Glass bottle: 2 years

b) *Shelf life after first opening the container*

Aminoven 15% should be used with sterile transfer equipment immediately after opening. Any unused solution should be discarded.

c) *Shelf-life after mixing with other components*

In general, TPN admixtures may be stored for a maximum period of 24 hours at 2 to 8°C, unless a longer storage period has been proven. See Section 6.4.

6.4 Special precautions for storage

Keep container in the outer carton.

Do not freeze.

Storage precautions after mixing with other components:

Aminoven 25 may be aseptically admixed with other nutrients as lipid emulsions, carbohydrates and electrolytes. Chemical and physical stability data for a number of admixtures stored at 4°C for up to 9 days are available from the manufacturer upon request.

From a microbiological point of view, TPN admixtures compounded in uncontrolled or unvalidated conditions should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user and should normally be no longer than 24 hours at 2 to 8°C, unless mixing has taken place in controlled and validated aseptic conditions.

6.5 Nature and contents of container

Glass bottles, 250 ml, 500 ml and 1000 ml.

Type II, colourless glass, rubber closure/aluminium cap and outer carton.

Bottle sizes: 10 x 250 ml glass bottle

10 x 500 ml glass bottle

6 x 1000 ml glass bottle

1 x 250 ml glass bottle (sample package).

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

To be used immediately after the container is opened.

For single use only.

Do not use Aminoven 25 after expiry date.

Use only clear, particle-free solutions and undamaged containers.

Discard unused solutions.

Any admixture remaining after infusion must be discarded.

Due to the increased risk of microbiological contamination and incompatibilities, amino acid solutions should not be mixed with other drugs. Should it become necessary to add other nutrients, like carbohydrates, lipid emulsions, electrolytes, vitamins or trace elements to

Aminoven 25 for complete parenteral nutrition, care should be given to aseptic techniques, thorough mixing and, in particular, to compatibility.

Compatibility data are available from the manufacturer for a number of mixtures.

7 MARKETING AUTHORISATION HOLDER

Fresenius Kabi Deutschland GmbH

Else-Kroener Strasse 1

Bad Homburg v.d.H 61352

Germany

8 MARKETING AUTHORISATION NUMBER

PA2059/025/003

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

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10 DATE OF REVISION OF THE TEXT

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