SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Quatriga Electrolyte Free emulsion for infusion

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Quatriga Electrolyte Free consists of a three chamber bag system. Each bag contains the following partial volumes depending on the five pack sizes.

	493 ml	**986 ml**	**1477 ml**	**1970 ml**	**2463 ml**	**Per 1000 ml**
Amino acid solution	250 ml	500 ml	750 ml	1000 ml	1250 ml	508 ml
Glucose 42%	149 ml	298 ml	446 ml	595 ml	744 ml	302 ml
Lipid emulsion	94 ml	188 ml	281 ml	375 ml	469 ml	190 ml

This corresponds to the following total compositions:

Active ingredients	**493 ml**	**986 ml**	**1477ml**	**1970 ml**	**2463 ml**	**Per 1000 ml**
Alanine	3.5 g	7.0 g	10.5 g	14.0 g	17.5 g	7.1 g
Arginine	3.0 g	6.0 g	9.0 g	12.0 g	15.0 g	6.1 g
Glycine	2.8 g	5.5 g	8.2 g	11.0 g	13.8 g	5.6 g
Histidine	0.8 g	1.5 g	2.2 g	3.0 g	3.7 g	1.5 g
Isoleucine	1.3 g	2.5 g	3.8 g	5.0 g	6.2 g	2.5 g
Leucine	1.9 g	3.7 g	5.6 g	7.4 g	9.4 g	3.8 g
Lysine (as acetate)	1.7 g	3.3 g	5.0 g	6.6 g	8.4 g	3.4 g
Methionine	1.1 g	2.2 g	3.2 g	4.3 g	5.4 g	2.2 g
Phenylalanine	1.3 g	2.6 g	3.8 g	5.1 g	6.4 g	2.6 g
Proline	2.8 g	5.6 g	8.4 g	11.2 g	14.0 g	5.7 g
Serine	1.6 g	3.2 g	4.9 g	6.5 g	8.1 g	3.3 g
Taurine	0.25 g	0.50 g	0.75 g	1.0 g	1.2 g	0.5 g
Threonine	1.1 g	2.2 g	3.3 g	4.4 g	5.4 g	2.2 g
Tryptophan	0.5 g	1.0 g	1.5 g	2.0 g	2.5 g	1.0 g
Tyrosine	0.10 g	0.20 g	0.30 g	0.40 g	0.49 g	0.20 g
Valine	1.6 g	3.1 g	4.6 g	6.2 g	7.6 g	3.1 g
Glucose (as monohydrate)	63 g	125 g	187 g	250 g	313 g	127 g
Soya-bean oil, refined	5.6 g	11.3 g	16.9 g	22.5 g	28.1 g	11.4 g
Medium-chain triglycerides	5.6 g	11.3 g	16.9 g	22.5 g	28.1 g	11.4 g
Olive oil, refined	4.7 g	9.4 g	14.1 g	18.8 g	23.4 g	9.5 g
Fish oil, rich in omega-3-acids	2.8 g	5.6 g	8.4 g	11.3 g	14.0 g	5.7 g

Corresponding to

	493 ml	986 ml	1477 ml	1970 ml	2463 ml	Per 1000 ml
• Amino acids	25 g	50 g	75 g	100 g	125 g	51 g
• Nitrogen	4 g	8 g	12 g	16 g	20 g	8 g
• Carbohydrates						
- Glucose (anhydrous)	63 g	125 g	187 g	250 g	313 g	127 g
• Lipids	19 g	38 g	56 g	75 g	94 g	38 g
• Acetate[1)]	37 mmol	73 mmol	110 mml	147 mmol	183 mmol	74.5 mmol
• Phosphate[2)]	1.4 mmol	2.8 mmol	4.2 mmol	5.6 mmol	6.9 mmol	2.8 mmol
• Energy content						
- total (approx.)	550 kcal 2.3 MJ	1100 kcal 4.6 MJ	1600 kcal 6.7 MJ	2200 kcal 9.2 MJ	2700 kcal 11.3 MJ	1100 kcal 4.6 MJ
- non protein (approx.)	450 kcal 1.9 MJ	900 kcal 3.8 MJ	1300 kcal 5.4 MJ	1800 kcal 7.5 MJ	2200 kcal 9.2 MJ	900 kcal 3.8 MJ

[1)] Contribution from amino acid solution
[2)] Contribution from lipid emulsion

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Emulsion for infusion.

Glucose and amino acid solutions are clear and colourless to slightly yellow and free from particles. The lipid emulsion is white and homogenous.

Osmolality: approx. 1600 mosmol/kg water
Osmolarity: approx. 1300 mosmol/l
pH (after mixing): approx. 5.6

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Parenteral nutrition for adults and children aged 2 years and above when oral or enteral nutrition is impossible, insufficient or contraindicated.

4.2 Posology and method of administration

Posology

The appearance of the product after mixing the 3 chambers is a white emulsion.

The patient’s ability to eliminate lipids and metabolise nitrogen and glucose, and the nutritional requirements should govern the dosage and infusion rate, see section 4.4.

The dose should be individualised to the patient’s clinical condition, body weight (bw), nutritional and energy requirements, adjusting dosage based upon additional oral/enteral intake.

The nitrogen requirements for maintenance of body protein mass depend on the patient’s condition (e.g. nutritional state and degree of catabolic stress or anabolism).

Adults

The requirements are 0.6-0.9 g amino acids/kg bw/day (0.10-0.15 g nitrogen/kg bw/day) in the normal nutritional state or in conditions with mild catabolic stress. In patients with moderate to high metabolic stress with or without malnutrition, the requirements are in the range of 0.9-1.6 g amino acids/kg bw/day (0.15-0.25 g nitrogen/kg bw/day). In some very special conditions (e.g. burns or marked anabolism) the nitrogen need may be even higher.

Dosage:
The dosage range of 13-31 ml Quatriga Electrolyte Free/kg bw/day will provide 0.6-1.6 g amino acids/kg bw/day (corresponds to 0.10-0.25 g nitrogen/kg bw/day) and 14-35 kcal/kg bw/day of total energy (12-27 kcal/kg bw/day of non-protein energy). This covers the need of the majority of the patients. In obese patients the dose should be based on the estimated ideal weight.

Infusion rate:
The maximum infusion rate for glucose is 0.25 g/kg bw/h, for amino acids 0.1 g/kg bw/h, and for lipids 0.15 g/kg bw/h.

The infusion rate should not exceed 2.0 ml/kg bw/h (corresponding to 0.10 g amino acids, 0.25 g glucose and 0.08 g lipids/kg bw/h). The recommended infusion period is 14-24 hours.

Maximum daily dose:
The maximum daily dose varies with the clinical condition of the patient and may even change from day to day. The recommended maximum daily dose is 35 ml/kg bw/day.

The recommended maximum daily dose of 35 ml/kg bw/day will provide 1.8 g amino acids/kg bw/day (corresponding to 0.28 g nitrogen/kg bw/day), 4.5 g glucose/kg bw/day, 1.33 g lipids/kg bw/day and a total energy content of 39 kcal/kg bw/day (corresponding to 31 kcal/kg bw/day of non-protein energy).

Paediatric population

Children (2-11 years)

Dosage:
The dose up to 35 ml/kg bw/day should be regularly adjusted to the requirements of the paediatric patient that varies more than in adult patients.

Infusion rate:
The recommended maximum infusion rate is 2.4 ml/kg bw/h (corresponding to 0.12 g amino acids/kg/h, 0.30 g/glucose/kg/h and 0.09 g lipids/kg/h). At the recommended maximum infusion rate, do not use an infusion period longer than 14 hours 30 minutes, except in exceptional cases and with careful monitoring.

The recommended infusion period is 12-24 hours.

Maximum daily dose:
The maximum daily dose varies with the clinical condition of the patient and may even change from day to day. The recommended maximum daily dose is 35 ml/kg bw/day.

The recommended maximum daily dose of 35 ml/kg bw/day will provide 1.8 g amino acids/kg bw/day (corresponding to 0.28 g nitrogen/kg bw/day), 4.5 g glucose/kg bw/day, 1.33 g lipids/kg

bw/day and a total energy content of 39 kcal/kg bw/day (corresponding to 31 kcal/kg bw/day of non-protein energy).

Adolescents (12-16/18 years)

In adolescents, Quatriga Electrolyte Free can be used as in adults.

Method of administration
Intravenous use, infusion into a central vein.

The five different package sizes of Quatriga Electrolyte Free are intended for patients with high, moderately increased or basal nutritional requirements. To provide total parenteral nutrition, trace elements, electrolytes and vitamins should be added to Quatriga Electrolyte Free according to the patients need.

For instructions on preparation of the medicinal product before administration, see section 6.6.

4.3 Contraindications

- Hypersensitivity to fish-, egg-, soya- or peanut protein or to any of the active substances or excipients listed in section 6.1
- Severe hyperlipidemia
- Severe liver insufficiency
- Severe blood coagulation disorders
- Congenital errors of amino acid metabolism
- Severe renal insufficiency without access to hemofiltration or dialysis
- Acute shock
- Uncontrolled hyperglycaemia
- General contraindications to infusion therapy: acute pulmonary oedema, hyperhydration, and decompensated cardiac insufficiency
- Hemophagocytotic syndrome
- Unstable conditions (e.g. severe post-traumatic conditions, uncompensated diabetes mellitus, acute myocardial infarction, stroke, embolism, metabolic acidosis, severe sepsis, hypotonic dehydration and hyperosmolar coma)
- Infants and children under 2 years of age

4.4 Special warnings and precautions for use

The capacity to eliminate lipids is individual and should therefore be monitored according to the routines of the clinician. This is in general done by checking the triglyceride levels. The concentration of triglycerides in serum should not exceed 4 mmol/l during infusion. An overdose may lead to fat overload syndrome, see section 4.8.

Quatriga Electrolyte Free should be given with caution in conditions of impaired lipid metabolism, which may occur in patients with renal failure, diabetes mellitus, pancreatitis, impaired liver function, hypothyroidism and sepsis.

This medicinal product contains soya-bean oil, fish oil and egg phospholipids, which may rarely cause allergic reactions. Cross allergic reaction has been observed between soya-bean and peanut.

To avoid risks associated with too rapid infusion rates, it is recommended to use a continuous and well-controlled infusion, if possible by using a volumetric pump.

Since an increased risk of infection is associated with the use of any central vein, strict aseptic precautions should be taken to avoid any contamination during catheter insertion and manipulation.

Serum glucose, electrolytes and osmolarity as well as fluid balance, acid-base status and liver enzyme tests should be monitored.

Blood cell count and coagulation should be monitored when lipids are given for a longer period.

Quatriga Electrolyte Free is produced almost electrolyte free for patients with special and/or limited electrolyte requirements. Sodium, potassium, calcium, magnesium and additional amounts of phosphate should be added governed by the clinical condition of the patient and by frequent monitoring of serum levels.

In patients with renal insufficiency, the phosphate intake should be carefully controlled to prevent hyperphosphatemia.

The amount of individual electrolytes to be added is governed by the clinical condition of the patient and by frequent monitoring of serum levels.

Parenteral nutrition should be given with caution in lactic acidosis, insufficient cellular oxygen supply and increased serum osmolarity.

Any sign or symptom of anaphylactic reaction (such as fever, shivering, rash or dyspnoea) should lead to immediate interruption of the infusion.

The lipid content of Quatriga Electrolyte Free may interfere with certain laboratory measurements (e.g. bilirubin, lactate dehydrogenase, oxygen saturation, hemoglobin) if blood is sampled before lipids have been adequately cleared from the bloodstream. Lipids are cleared after a lipid-free interval of 5-6 hours in most patients.

Intravenous infusion of amino acids is accompanied by increased urinary excretion of the trace elements, in particular copper and zinc. This should be considered in the dosing of trace elements, especially during long-term intravenous nutrition.

In malnourished patients, initiation of parenteral nutrition can precipitate fluid shifts resulting in pulmonary oedema and congestive heart failure as well as a decrease in the serum concentration of potassium, phosphorus, magnesium and water soluble vitamins. These changes can occur within 24 to 48 hours, therefore careful and slow initiation of parenteral nutrition is recommended in this patient group, together with close monitoring and appropriate adjustments of fluid, electrolytes, minerals and vitamins.

Quatriga Electrolyte Free should not be given simultaneously with blood in the same infusion set due to the risk of pseudoagglutination.

In patients with hyperglycaemia, administration of exogenous insulin might be necessary.

Paediatric population

Due to composition of the amino acid solution in Quatriga Electrolyte Free it is not suitable for the use in newborns or infants below 2 years of age. There is no clinical experience of the use of Quatriga Electrolyte Free in children (age 2 to 16/18 years).

4.5 Interaction with other medicinal products and other forms of interaction

Some medicinal products, like insulin, may interfere with the body's lipase system. This kind of interaction seems, however, to be of limited clinical importance.

Heparin given in clinical doses causes a transient release of lipoprotein lipase into the circulation. This may result initially in increased plasma lipolysis followed by a transient decrease in triglyceride clearance.

Soya-bean oil has a natural content of vitamin K_1. However, the concentration in Quatriga Electrolyte Free is so low that it is not expected to significantly influence the coagulation process in patients treated with coumarin derivatives.

4.6 Fertility, pregnancy and lactation

There are no data available on exposure of Quatriga Electrolyte Free in pregnant or breast-feeding women. There are no studies available on reproductive toxicity in animals. Parenteral nutrition may become necessary during pregnancy and lactation. Quatriga Electrolyte Free should only be given to pregnant and breast-feeding women after careful consideration.

4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

	Common *≥ 1/100 to < 1/10*	*Uncommon* *≥ 1/1,000 to < 1/100*	*Rare* *≥ 1/10,000 to < 1/1,000*
Cardiac disorders			Tachycardia
Respiratory, thoracic and mediastinal disorders			Dyspnoea
Gastrointestinal disorders		Lack of appetite, nausea, vomiting	
Metabolism and nutrition disorders		Elevated plasma levels of liver enzymes	
Vascular disorders			Hypotension, hypertension
General disorders and administration site conditions	Slight increase in body temperature	Chills, dizziness, headache	Hypersensitivity-reactions (e.g. anaphylactic or anaphylactoid reactions, skin rash, urticaria, flush, headache), heat or cold sensation, paleness, cyanosis, pain in the neck, back, bones, chest and loins.

Should these side-effects occur the infusion of Quatriga Electrolyte Free should be stopped or, if necessary, continued at a reduced dosage.

Fat overload syndrome
Impaired capacity to eliminate triglycerides can lead to “Fat overload syndrome” which may be caused by overdose. Possible signs of metabolic overload must be observed. The cause may be genetic (individually different metabolism) or the lipid metabolism may be affected by ongoing or previous illnesses. This syndrome may also appear during severe hypertriglyceridemia, even at the recommended infusion rate, and in association with a sudden change in the patient’s clinical condition, such as renal function impairment or infection. The fat overload syndrome is characterised by hyperlipemia, fever, lipid infiltration, hepatomegaly with or without icterus, splenomegaly, anemia, leukopenia, thrombocytopenia, coagulation disorder, hemolysis and reticulocytosis, abnormal liver function tests and coma. The symptoms are usually reversible if the infusion of the lipid emulsion is discontinued.

Excess of amino acid infusion
As with other amino acid solutions, the amino acid content in Quatriga Electrolyte Free may cause undesirable effects when the recommended infusion rate is exceeded. These effects are nausea, vomiting, shivering and sweating. Amino acid infusion may also cause a rise in body temperature. With an impaired renal function, increased levels of nitrogen containing metabolites (e.g. creatinine, urea) may occur.

Excess of glucose infusion
If the glucose clearance capacity of the patient is exceeded, hyperglycaemia will develop.

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 [To be completed nationally]

4.9 Overdose

See section 4.8 “Fat overload syndrome”, “Excess of amino acid infusion” and “Excess of glucose infusion”.

If symptoms of overdose of lipids or amino acids occur, the infusion should be slowed down or discontinued. There is no specific antidote for overdose. Emergency procedures should be general supportive measures, with particular attention to respiratory and cardiovascular systems. Close biochemical monitoring would be essential and specific abnormalities treated appropriately.

If hyperglycaemia occurs, it should be treated according to the clinical situation either by appropriate insulin administration and/or adjustment of the infusion rate.

Additionally, overdose might cause fluid overload, electrolyte imbalances and hyperosmolality.

In some rare serious cases, haemodialysis, haemofiltration or haemodiafiltration may be considered.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Solutions for parenteral nutrition.
ATC code: B05BA10

Lipid emulsion
The lipid emulsion of Quatriga Electrolyte Free is composed of Smoflipid and has a particle size and biological properties similar to those of endogenous chylomicrons. The constituents of Smoflipid; soya-bean oil, medium-chain triglycerides, olive oil and fish oil have except for their energy contents, their own pharmacodynamic properties.

Soya-bean oil has a high content of essential fatty acids. The omega-6 fatty acid linoleic acid is the most abundant (approx. 55-60%). Alpha-linolenic acid, an omega-3 fatty acid, constitutes about 8%. This part of the product provides the necessary amount of essential fatty acids.

Medium-chain fatty acids are rapidly oxidised and provide the body with a form of immediately available energy.

Olive oil mainly provides energy in the form of mono-unsaturated fatty acids, which are much less prone to peroxidation than the corresponding amount of poly-unsaturated fatty acids.

Fish oil is characterised by a high content of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). DHA is an important structural component of cell membranes, whereas EPA is a precursor of eicosanoids as prostaglandines, thromboxanes and leucotrienes.

Two studies providing home parenteral nutrition in patients in need of long-term nutrition support have been performed. The primary objective in both studies was to show safety. Efficacy was the secondary objective in one of the studies, which was done in paediatric patients. This study was stratified by age groups (1 month - <2 years, and 2–11 years respectively). Both studies showed that Smoflipid has the same safety profile as the comparator (Intralipid 20%). Efficacy in the paediatric study was measured by weight gain, height, body mass index, pre-albumin, retinol binding protein and fatty acid profile. There was no difference between the groups in any of the parameters except the fatty acid profile after 4 weeks treatment. The fatty acid profile in the Smoflipid patients revealed an increase in omega-3 fatty acids in plasma lipoproteins and red blood cells phospholipids and hence reflects the composition of the infused lipid emulsion.

Amino acids
The amino acids, constituents of protein in ordinary food, are utilised for tissue protein synthesis and any surplus is channelled to a number of metabolic pathways. Studies have shown a thermogenic effect of amino acid infusion.

Glucose
Glucose should have no pharmacodynamic effects apart from contributing to maintain or replete the normal nutritional status.

5.2 Pharmacokinetic properties

Lipid emulsion
The individual triglycerides in Smoflipid have different clearance rate but Smoflipid as a mixture is eliminated faster than long chain triglycerides (LCT). Olive oil has the slowest clearance rate of the components (somewhat slower than LCT) and medium chain triglycerides (MCT) the fastest. Fish oil in a mixture with LCT has the same clearance rate as LCT alone.

Amino acids
The principal pharmacokinetic properties of the infused amino acids are essentially the same as for amino acids supplied by ordinary food. However, the amino acids of dietary protein first enter the portal vein and then the systemic circulation, while intravenously infused amino acids reach the systemic circulation directly.

Glucose
The pharmacokinetic properties of infused glucose are essentially the same as those of glucose supplied by ordinary food.

5.3 Preclinical safety data

Preclinical safety studies with Quatriga Electrolyte Free have not been performed. However, preclinical data for Smoflipid as well as amino acid and glucose solutions of various concentrations reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity and genotoxicity. No teratogenic effects or other embryotoxic injuries could be observed in rabbits with amino acid solutions and are not to be expected from lipid emulsions when giving at the recommended doses as substitution therapy. Nutritional products (amino acid solutions and lipid emulsions) used in replacement therapy at physiological levels are not expected to be embryotoxic, teratogenic, or to influence reproductive performance or fertility.

In a test on guinea pigs (maximisation test) fish oil emulsion showed moderate dermal sensitisation. A systemic antigenicity test gave no indication of evidence of anaphylactic potential of fish oil.

In a local tolerance study in rabbits with Smoflipid a slight, transient inflammation after intra-arterial, paravenous or subcutaneous administration was observed. After intramuscular administration a moderate transient inflammation and tissue necrosis were seen in some animals.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Glycerol
Purified egg phospholipids
all-*rac*-α-Tocopherol
Sodium hydroxide (pH adjuster)
Sodium oleate
Acetic acid, glacial (pH adjuster)
Hydrochloric acid (pH adjuster)
Water for injections

6.2 Incompatibilities

Quatriga Electrolyte Free may only be mixed with other nutritional products for which compatibility has been documented, see section 6.6.

6.3 Shelf life

Shelf life of the medicinal product as packaged for sale
2 years

Shelf life after mixing the chambers of the bag
Chemical and physical in-use stability of the mixed three chamber bag has been demonstrated for 48 hours at 20-25°C. From a microbiological point of view the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user and would normally not be longer than 24 hours at 2-8°C, unless mixing has taken place in controlled and validated aseptic conditions.

Shelf life after mixing with additives
Physico-chemical in-use stability of the mixed three chamber bag with additives (see section 6.6) has been demonstrated for up to 8 days, i.e., 6 days at 2-8°C followed by 48 hours at 20-25°C, including duration of administration. From a microbiological point of view, the product should be used immediately when additions have been made. If not used immediately, the in-use storage time and conditions prior to use are the responsibility of the user and should normally not be longer than 24 hours at 2-8°C, unless addition of supplements has taken place in controlled and validated aseptic conditions.

6.4 Special precautions for storage

Do not store above 25°C. Do not freeze. Store in overpouch.

Shelf life after mixing the chambers of the bag: See section 6.3.
Shelf life after mixing with additives: See section 6.3.

6.5 Nature and contents of container

The container consists of a multichamber inner bag and an overpouch. The inner bag is separated into three chambers by peelable seals. An oxygen absorber is placed between the inner bag and the overpouch. The inner bag is made of a multilayer polymer film, Biofine.

The Biofine inner bag film consists of poly(propylene-co-ethylene), synthetic rubber poly[styrene-block-(butylene-co-ethylene)] (SEBS) and synthetic rubber poly(styrene-block-isoprene) (SIS). The infusion and additive ports are made of polypropylene and synthetic rubber poly[styrene-block-(butylene-co-ethylene)] (SEBS) equipped with synthetic polyisoprene (latex-free) stoppers. The blind port, which is only used during manufacturing, is made of polypropylene equipped with a synthetic polyisoprene (latex-free) stopper.

Pack sizes:

1 x 493 ml, 6 x 493 ml
1 x 986 ml, 4 x 986 ml
1 x 1477 ml, 4 x 1477 ml
1 x 1970 ml, 4 x 1970 ml
1 x 2463 ml, 3 x 2463 ml

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Instructions for use
Do not use if package is damaged. Use only if the amino acid and glucose solutions are clear and colourless or slightly yellow and the lipid emulsion is white and homogenous. The contents of the three separate chambers have to be mixed before use, and before any additions are made via the additive port.

After separation of the peelable seals the bag should be inverted on a number of occasions to ensure a homogenous mixture, which does not show any evidence of phase separation.

Compatibility
Compatibility data are available with the named branded products Dipeptiven, Addamel N/Addaven, Glycophos, Addiphos, Vitalipid N Adult/Infant and Soluvit N in defined amounts and generics of electrolytes in defined concentrations. When making electrolyte additions, the amounts

already present in the bag should be taken into account to meet the clinical needs of the patient. Generated data supports additions to the activated bag according to the summary table below:

Compatibility range stable for 8 days, i.e., 6 days storage at 2 8°C followed by 48 hours at 20-25°C

	Units	**Maximal total contents**				
Quatriga EF bag size	ml	493	986	1477	1970	2463
Additive		**Volume**				
Dipeptiven	ml	0-100	0 - 300	0 - 300	0 - 300	0 - 300
Addaven/Addamel N	ml	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Soluvit N	vial	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Vitalipid N Adult/Infant	ml	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Electrolyte limits[1]		**Amount per bag**				
Sodium	mmol	≤ 75	≤ 150	≤ 225	≤ 300	≤ 375
Potassium	mmol	≤ 75	≤ 150	≤ 225	≤ 300	≤ 375
Calcium	mmol	≤ 2.5	≤ 5	≤ 7.5	≤ 10	≤ 12.5
Magnesium	mmol	≤ 2.5	≤ 5	≤ 7.5	≤ 10	≤ 12.5
Phosphate inorganic (Addiphos) OR Phosphate organic (Glycophos)[2]	mmol	≤ 7.5	≤ 15	≤ 22.5	≤ 30	≤ 37.5
Zinc	mmol	≤ 0.1	≤ 0.2	≤ 0.25	≤ 0.3	≤ 0.35
Selenium	µmol	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1.15

1. includes amounts from all products.
2. Glycophos additions may be doubled with a stability of 7 days, i.e., 6 days storage at 2-8°C followed by 24 hours at 20-25°C

Note: This table is intended to indicate compatibility. It is not a dosing guideline.
For branded products, before prescribing refer to national approved prescribing information.

Compatibility with further additives and the storage time of different admixtures will be available upon request.

Addition should be made aseptically.

For single use only. Any mixture remaining after infusion must be discarded.

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

7. MARKETING AUTHORISATION HOLDER

[To be completed nationally]

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 2007-06-21
Date of latest renewal: 2012-06-21

10. DATE OF REVISION OF THE TEXT

2023-01-27