B. Braun Vet Care

Solutions for a long life

IV solutions for large and small animals
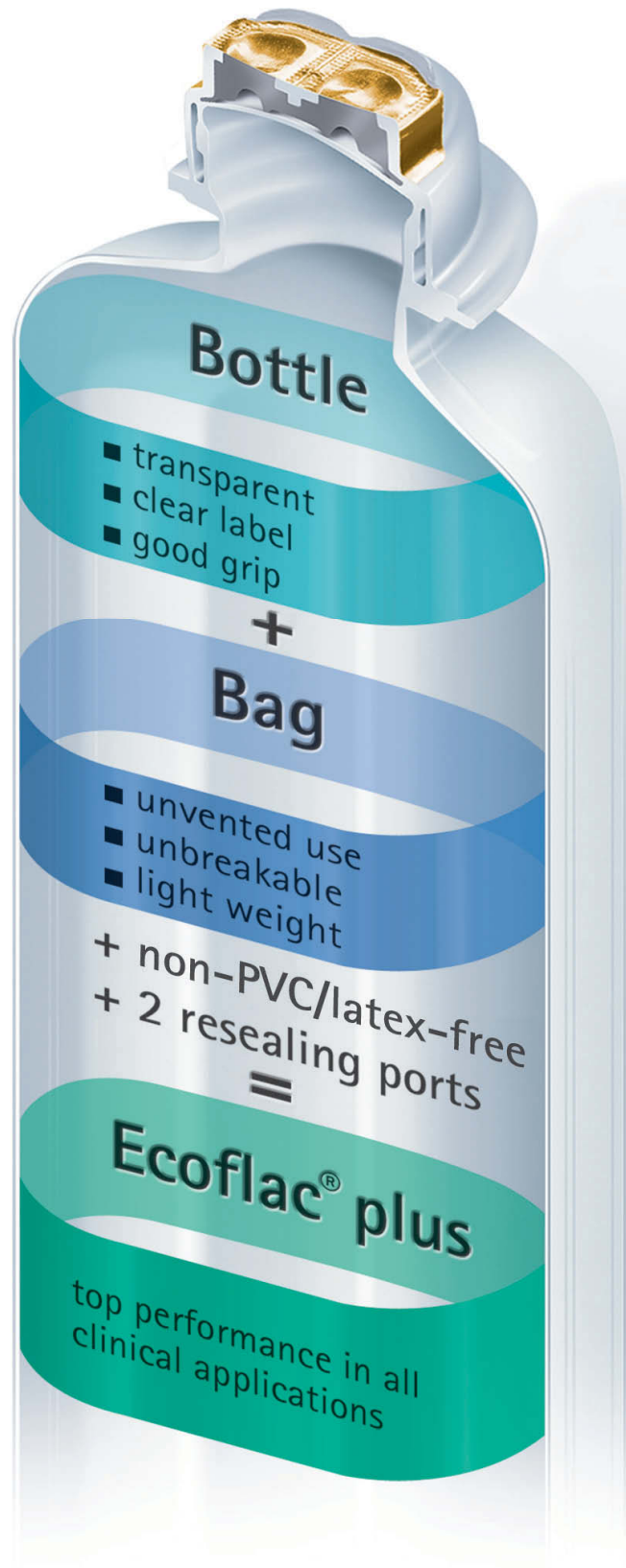

B | BRAUN

SHARING EXPERTISE

High demands – High quality
Infusion container Ecoflac® plus

Ecoflac® plus combines the benefits of a bag with those of a bottle, generating a new performance class that adds safety features to your daily routines.
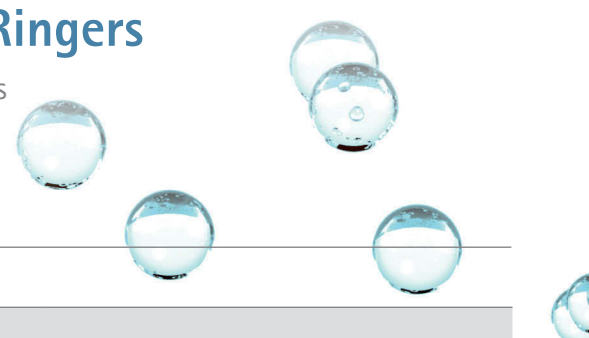
User benefits

- Versatile use in the pharmacy and on the ward

- Reduced risk from needlestick injuries through twin port cap

- PE material compatible with most pharmaceuticals

- Virtually error-resistant usage (e.g. label)

- Convenience in handling

- Break-proof

- Uncomplicated delivery and transport

- Space-saving storage

- 100 % recyclable; ecological and proper disposal

Bottle
- transparent
- clear label
- good grip

+

Bag
- unvented use
- unbreakable
- light weight

+ non-PVC/latex-free
+ 2 resealing ports
=

Ecoflac® plus
top performance in all clinical applications

B. Braun Vet Care Hartmann's Lactated Ringers

Solution for infusion for cattle, horses, sheep, goats, pigs, dogs and cats

Characteristics: Balanced Electrolyte Solution

100 ml Solution contains:

Active substances:
Sodium chloride 0.600 g
Potassium chloride 0.040 g
Calcium chloride dihydrate 0.027 g
Sodium (S)-lactat 0.312 g
(as sodium lactate solution (50 % w/v) 0.624 g)

Electrolyte concentrations (mmol/l):
Sodium 130.49
Potassium 5.37
Calcium 1.84
Chloride 111.70
Lactate 27.84

Theoretical osmolarity: 277 mOsm/l

Titration acidity <1 mmol/l

pH 5.0–7.0

Excipient:
Water for injection, q. s.

Indications

- Isotonic and hypotonic dehydration
- Metabolic acidosis
- Maintenance of extracellular fluid levels
- Electrolyte replacement in burns

User benefits

- Volume and electrolyte replacement
- Treatment of mild to moderate acidosis; stabilisation of blood-pH

Dosage, route and method of application

For intravenous infusion.

The volume and rate of infusion will depend upon the clinical condition, existing deficits of the animal, maintenance needs and continuing losses.

Contraindications

- Alkalosis
- Oedema (hepatic, renal, cardiac)
- Overhydration
- Hyperkalaemia, Hypernatraemia, Hyperlactataemia
- Hepatic insufficiency

Adverse reactions

This product contains calcium, thus an effect on the heart cannot be ruled out.

For animal treatment only. To be supplied only on veterinary prescription.
Withdrawal periods: Meat and offal: 0 days; Milk: 0 hours

Size	Container	B. Braun code	Sales unit
500 ml	Ecoflac® plus	3574070	10 x 500 ml
1000 ml	Ecoflac® plus	3574071	10 x 1000 ml
5000 ml	Ecobag®	FVA07457	2 x 5000 ml

Sodium Chloride 0.9 g / 100 ml B. Braun Vet Care

Solution for infusion for cattle, horse, sheep, goat, pig, dog and cat

Characteristics: Balanced Electrolyte Solution, Carrier Solution

100 ml Solution contains:

Active substance: Sodium chloride 0.9 g	**Electrolyte concentration** (mmol/l): Sodium 154 Chloride 154	**Theoretical osmolarity:** 308 mOsm/l
Excipient: Water for injections		pH value: 4,5 – 7,0

Indications

- States of dehydration and hypovolaemia
- Deficiency of sodium (hyponatraemia) and chloride (hypochloraemia)
- Hypochloraemic alkalosis management
- Vehicle solution for compatible drugs
- External use for wound irrigation and moistening of compresses

User benefits

- For internal and external use
- Fast redistribution into the extracellular area
- Treatment in cases of hypovolaemic shock
- Mixing with many electrolyte solutions and pharmaceuticals

Dosage, route and method of application

For intravenous infusion.

Administration by intravenous route. Topical use for wound irrigation and moistening of compresses.

The dosage and duration of treatment must be adjusted according to the specific fluid and electrolyte requirements under control of a veterinarian to prevent any possible side effects due to overdose.

Contraindications

- Hypertonic dehydration
- Hypernatraemia
- Hyperchloraemia
- Hyperhydration
- Acidosis
- Syndrome of oedema and ascites
- In cases when sodium restriction are indicated

Adverse reactions

Intravenous infusion carries a risk of thrombosis.

For animal treatment only. To be supplied only on veterinary prescription.
Withdrawal periods: Meat and offal: 0 days; Milk: 0 hours

Size	Container	B.Braun code	Sales unit
500 ml	Ecoflac® plus	3574190	10 x 500 ml
1000 ml	Ecoflac® plus	3574200	10 x 1000 ml

Glucose 5 g / 100 ml B. Braun Vet Care

Solution for infusion for cattle, horse, sheep, goat, pig, dog and cat

Characteristics: Carbohydrate Solution, Carrier Solution

100 ml Solution contains:

Active substance:	Excipient:	Theoretical osmolarity:
Glucose monohydrate 5.5 g (equivalent to anhydrous glucose 5.0 g)	Water for injections Caloric value 837 kJ/l = 200 kcal/l	278 mOsm/l pH value 3.5 – 5.5

Indications

- Dehydration in the absence of shock
- Free water replacement
- Hypernatraemia
- Correction of hyperkalaemia
- Transient improvement of hypoglycaemia

User benefits

- Therapy of hypertonic dehydration
- Provides free water for the extra- and intracellular space
- Partial coverage of energy requirements
- Correction of certain electrolyte imbalances

Dosage, route and method of application

For intravenous infusion.

This product should not be administered at a rate in excess of 10 ml / kg / hour, otherwise glycosuria and osmotic diuresis may result.

Infusion rates should be calculated according to the presenting condition, bodyweight and degree of dehydration of the animal being treated. The total fluid volume to be administered should consider existing deficits, maintenance requirements and ongoing losses.

Contraindications

- Hyperglycaemia
- Hypotonic dehydration
- Peripheral oedema caused by reduced intravascular oncotic pressure
- Do not use as a sole source of calorie requirements and/or nutrition

Adverse reactions

Administration of products by intravenous infusion may increase the risk of thrombosis.

For animal treatment only. To be supplied only on veterinary prescription.
Withdrawal periods: Meat and offal: 0 days; Milk: 0 hours

Size	Container	B.Braun code	Sales unit
500 ml	Ecoflac® plus	3574140	10 x 500 ml

B. Braun Vet Care Hypertonic NaCl-Solution (7.5 g / 100 ml)

Solution for infusion for horses, cattle, sheep, goats, pigs, dogs and cats

Characteristics: Hypertonic Electrolyte Solution

100 ml Solution contains:

Active substance: Sodium chloride 7.5 g	**Electrolyte concentrations** (mmol/l)**:** Sodium 1283 Chloride 1283	**Theoretical osmolarity:** 2566 mOsm/l
Excipient: Water for injection		

Indications

- Haemorrhagic shock
- Septic shock
- Endotoxic shock
- Hypovolaemic shock

User benefits

- Small-volume resuscitation
- Rapid intravascular volume expansion
- Helps restore or maintain vital organ functions

Dosage, route and method of application

For intravenous infusion.

3 to 5 ml/kg body weight, administered over a period of maximum 15 minutes (without exceeding a rate of 1 ml/kg body weight/min). Administration of hypertonic sodium chloride should be followed by infusion of isotonic fluids in order to restore the hydration state of the interstitial space.

Contraindications

- Hypertonic Hyperhydration
- Renal insufficiency
- Severe electrolyte disturbances
- Uncontrolled haemorrhage
- Pulmonary oedema
- Retention of water and sodium chloride
- Cardiac insufficiency
- Hypertension
- Hypertonic dehydration

Adverse reactions

An excess of sodium may cause hypokalaemia, which may be aggravated by the existence of continued loss of potassium and hyperchloraemia. Erroneous administration of hypertonic NaCl-Solution to dehydrated animals may increase the existing extracellular hypertonia, with aggravation of existing disorders, and may cause death. Rapid infusion may cause oedema, principally pulmonary oedema, especially in case of concurrent cardiac or renal insufficiency. After rapid administration, hypotension, arrhythmias, haemolysis, haemoglobinuria, bronchoconstriction as well as hyperventilation may occur. Administration into small peripheral veins may cause signs of pain. Infusion of hypertonic sodium chloride may provoke diuresis with formation of hypertonic urine. A risk of thrombosis should be considered.

For animal treatment only. To be supplied only on veterinary prescription.
Withdrawal periods: Meat and offal: zero days; Milk: zero hours

The solution for small-volume resuscitation.

Further reading for the use of hypertonic sodium chloride solutions:

- **Horse** – Traumatic Brain Injury

Rose, R. J. and Hodgson, D. R.: Manual of Equine Practice. Elsevier 2000, 2nd Edition: 530

- **Calve** – Neonatal Diarrhea

Koch, A. and Kaske, M.: Clinical efficacy of intravenous hypertonic saline solution or hypertonic bicarbonate solution
in the treatment of inappetent calves with neonatal diarrhea. J. Vet. Intern. Med., 2008 Jan-Feb; 22(1):202-11

- **Cattle** – Displaced Abomasum

Roloff, N.: Randomised controlled clinical trial about the effects of hypertonic saline solution
on the circulatory system in cows with right displaced abomasum. Diss. vet med, Giessen 2007

- **Dog and Cat** – Traumatic Brain Injury

Sande, A. and West, C.: Traumatic brain injury: a review of pathophysiology and management.
J Vet Emerg Crit Care, 2010 Apr 1; 20(2):177-90

Size	Container	B. Braun code	Sales unit
500 ml	Ecoflac® plus	3574030	10 x 500 ml

Overview – B. Braun Vet Care IV solutions

IV solutions for large and small animals

Type	Product	Na⁺ (mmol/l)	K⁺ (mmol/l)	Ca⁺⁺ (mmol/l)	Mg⁺⁺ (mmol/l)	Cl⁻ (mmol/l)	Phosphate (mmol/l)	Buffer (mmol/l)	Glucose (g/l)	kJ/l	kcal/l	Theor. Osmolarity (mOsm/l)	500 ml	1000 ml	5000 ml
Balanced Electrolyte Solution	0.9 % NaCl-Solution	154	-	-	-	154	-	-	-	-	-	309	X	X	-
	Hartmann´s Lactated Ringers	130.49	5.37	1.84	-	111.70	-	Lactat 27.84	-	-	-	277	X	X	X
Carbohydrate Solution	Glucose 5 %	-	-	-	-	-	-	-	50.0	837	200	277	X	-	-
Hypertonic Electrolyte Solution	7.5 % NaCl-Solution	1283	-	-	-	1283	-	-	-	-	-	2566	X	-	-

Useful handling tips for Ecoflac® plus

1

Opening

Peel off the covering foil of port.

2

Germ-free seal surface

Both ports are germ-free, so there is no need for disinfection.

3

Handling during spiking

When inserting an infusion giving set or a needle into the port, please grip the neck of the Ecoflac® plus container with your other hand to stabilize the container.

4

Using infusion giving sets

All conventional giving sets can be used with Ecoflac® plus. When the giving set is removed, the port on Ecoflac® plus reseals automatically, even after long infusions. Please avoid rotating the spike when piercing the port.

5

No venting required

During infusion, Ecoflac® plus container collapses completely in without any need for ventilation. The venting cap of the giving set remains closed.

6

Suspension

Ecoflac® plus has an integrated suspension loop. If no infusion hook or infusion stand is available, we recommend the suspension hook with loop.

7

Labeling

It´s easy to write on Ecoflac® plus with the Ecopen. The container material, polyethylene (LO-PE), does not allow any solvents to come into contact with the container contents.

8

Disposal

Ecoflac® plus is made of 100 % pure polyolefine (the container of PE, port system of PE and PP), and is completely recyclable. Ecoflac® plus protects our natural resources and our environment.

Pressure Infusion

Air removal

Prior to a pressure infusion, and after inserting the infusion giving set, remove air by applying pressure to the container.

Pressure cuff

After all the air is completely removed, the container is placed in a pressure cuff and the infusion starts under pressure. We recommend that you do not place the container flat in the pressure cuff, but turned 90° (see figure).

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