

Alveofact 45 mg/ml

Powder and solvent for preparation of a suspension

Package leaflet: Information for the user

Alveofact 45 mg/ml powder and solvent for suspension

For use in preterm infants

Phospholipid fraction from bovine lung (surfactant)

Read all of this leaflet carefully before this medicine is used in your child because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or nurse.
- If you notice any side effects in your child, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Alveofact is and what it is used for
2. What you need to know before Alveofact is used in your child
3. How to use Alveofact
4. Possible side effects
5. How to store Alveofact
6. Contents of the pack and other information

1. What Alveofact is and what it is used for

Alveofact is a natural surfactant from bovine lung. This substance reduces the surface tension in the air sacs of the lungs (alveoli). A deficiency of surfactant can cause the alveoli to collapse.

Alveofact is used in preterm infants:

- to prevent respiratory distress syndrome (RDS) when there is a high risk of its development.
- to treat respiratory distress syndrome.

2. What you need to know before Alveofact is used in your child

Alveofact must not be used

- if your child is allergic to phospholipid fraction from bovine lung or any of the other ingredients of this medicine (listed in section 6).

So far there are no known substance-specific contraindications.

Note:

The benefits and risks of Alveofact treatment for congenital infections in preterm infants have not yet been fully examined. The efficacy of surfactant may be reduced in the presence of congenital pneumonia. The lung function may also worsen if at the same time the lungs are underdeveloped (prolonged oligohydramnios (low level of amniotic fluid) from rupture of the membranes, or congenital renal dysfunction).

Warnings and precautions

Preclinical studies have shown that the cells of the body's own immune system (phagocytes, white blood cells) break down fat emulsions. Alveofact can disrupt this system in the presence of pneumonia and/or blood poisoning.

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There have been isolated reports of tracheal tube obstruction from viscous material. The origin and composition of this material are not known. Although there is no concrete evidence of a causal relationship between the use of Alveofact and this life-threatening event, it is important to heed the instructions for use and storage. Aspiration or replacement of the ventilation tube is recommended if there is any suspected obstruction.

Other medicines and Alveofact

So far there are no known substance-specific interactions with other medicinal products.

No negative effects on treatment with Alveofact have been observed after treating the mother with ambroxol concentrate for solution for infusion or glucocorticoids to prevent respiratory distress syndrome.

Pregnancy, breast-feeding and fertility

Not applicable.

Driving and using machines

Not applicable.

Alveofact contains sodium

This medicine contains less than 1 mmol (23 mg) sodium per pre-filled syringe (= single dose), i.e. it is essentially 'sodium-free'.

3. How to use Alveofact

Alveofact must be prepared by a doctor or nurse and delivered to the lungs through a catheter inserted in the windpipe (endotracheopulmonary instillation). Your doctor will decide how much Alveofact to give to your child.

The recommended initial dose is 2.4 ml Alveofact per kg body weight (equivalent to 108 mg total phospholipids per kg body weight).

To prevent respiratory distress syndrome, the first dose of Alveofact should be given within one hour after birth.

To treat respiratory distress syndrome, it is recommended to administer the first dose of Alveofact as quickly as possible following diagnosis.

Depending on the need for ventilation, another one or two doses may be given. The total dose should not exceed 216 mg total phospholipids/kg body weight over the child's first five days of life.

If your child receives more Alveofact than should be given

There are no known cases of overdose to date. In the unlikely event of accidental overdose, it is recommended to extract as much of the applied fluid as possible if the clinical condition deteriorates. Symptomatic treatment should be initiated, if necessary.

If you have any further questions on the use of this medicine, ask your doctor or nurse.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

No substance-specific side effects are to be expected when using the medicinal product as directed.

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Due to the fluid volume, there may be a short-term obstruction of the major respiratory tracts immediately after administering Alveofact. This can be resolved by increasing the inspiratory pressure for 30 to 60 seconds.

Note:

There have been isolated reports of tracheal tube obstruction from viscous material. No evidence has been found of a causal relationship with the use of Alveofact.

There have been reports of bleeding in the brain and lungs, the incidence of which is roughly consistent with reports in the literature for this patient population.

Pre-existing hypersensitivity to protein from bovine lungs is unlikely in preterm infants. In principle, however, this could result in shock-like reactions which will necessitate standard emergency treatment.

Reporting of side effects

If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly to

Germany

Federal Institute for Drugs and Medical Devices, Department of Pharmacovigilance, Kurt-Georg-Kiesinger-Allee 3, 53175 Bonn, Germany, website: <http://www.bfarm.de>

and

Austria

Federal Agency for Safety in Health Care (BASG), Traisengasse 5, 1200 Vienna, Austria, Fax: + 43 (0) 50 555 36207, website: <http://www.basg.gv.at/>

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

5. How to store Alveofact

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label of the vial and the label of the pre-filled syringe of solvent after “Use by” or “EXP”. The expiry date refers to the last day of that month.

Storage conditions

Do not store the powder or solvent above 30°C.

Do not freeze the powder, solvent, or reconstituted suspension.

Information on shelf life after opening or preparation

The ready-to-use suspension can be stored for up to 6 hours at temperatures of up to 25°C or 24 hours at 2°C – 8°C (refrigerated). In this case, gently swirl the vial or pre-filled syringe once prior to use.

Do not throw away any medicines via wastewater. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

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What Alveofact contains

- The active substance is: phospholipid fraction from bovine lung.
One vial of 54 mg powder for 1.2 ml solvent contains 50.76 – 60.00 mg phospholipid fraction from bovine lung (dried mass), equivalent to a content of 66 µmol or 54 mg total phospholipids as freeze-dried (lyophilised) powder.
One vial of 108 mg powder for 2.4 ml solvent contains 101.52 – 120.00 mg phospholipid fraction from bovine lung (dried mass), equivalent to a content of 66 µmol or 108 mg total phospholipids as freeze-dried (lyophilised) powder.
- The other ingredients are: pre-filled syringe of solvent: sodium chloride, sodium hydrogen carbonate, water for injections.

What Alveofact looks like and contents of the pack

Powder in a type I white glass vial with grey rubber stopper and aluminium cuff with a purple (54 mg) or blue (108 mg) tear-off seal [TLS1]. Solvent in a pre-filled white glass syringe [TLS2] with rubber plunger containing 1.2 ml or 2.4 ml. The pack also contains a cannula and vial adapter.

Alveofact is available in packs of:

- 1 vial of 54 mg powder, 1 pre-filled syringe of 1.2 ml solvent, 1 cannula and 1 vial adapter
- 2 vials of 54 mg powder, 2 pre-filled syringes of 1.2 ml solvent, 2 cannulas and 2 vial adapters
- 4 vials of 54 mg powder, 4 pre-filled syringes of 1.2 ml solvent, 4 cannulas and 4 vial adapters
- 1 vial of 108 mg powder, 1 pre-filled syringe of 2.4 ml solvent, 1 cannula and 1 vial adapter
- 2 vials of 108 mg powder, 2 pre-filled syringes of 2.4 ml solvent, 2 cannulas and 2 vial adapters
- 4 vials of 108 mg powder, 4 pre-filled syringes of 2.4 ml solvent, 4 cannulas and 4 vial adapters

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Lyomark Pharma GmbH
Keltenring 17
82041 Oberhaching
Germany
Tel.: +49 89 45080878-0
Fax: +49 89 45080878-50
E-mail: info@lyomark.com

Marketed By:

Name: Bharat Serums & Vaccines Limited
Address: 17th Floor, Hoechst House,
Nariman Point, Mumbai -400021, INDIA
Tel.: +91-22-6656 0900/6656 0980
Fax: +91-22-6656 0980/6656 0903

This leaflet was last revised in September 2020.

The following information is intended for healthcare professionals only:

Instructions for reconstitution of the powder

There are two options:

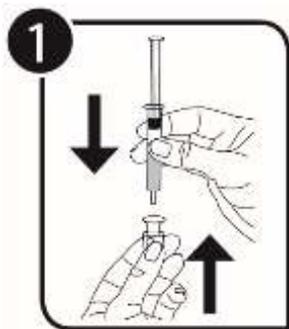
- Option 1 – with vial adapter
- Option 2 – with cannula

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Option 1 – with vial adapter

Remark: The syringe and vial adapter remain connected to the vial throughout the reconstitution procedure and are also used for withdrawing the ready-to-use suspension.

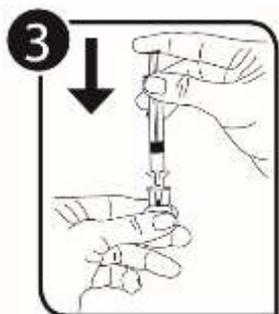


Open the packaging of the vial adapter at the top.

Attach the cone of the syringe to the vial adapter.



Push the vial adapter with syringe firmly onto the rubber stopper of the vial until it clicks into place.



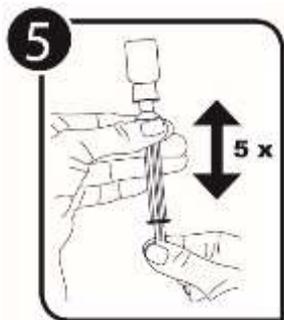
Inject the solvent into the vial.



Then immediately **swirl and shake gently for five seconds.**

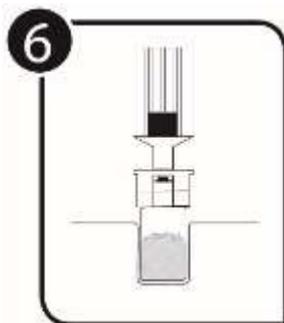
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With the vial inverted, draw the suspension into the syringe then inject it back into the vial.

Repeat this step a total of five times.

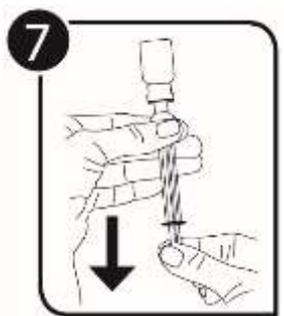


Wait approx. one minute.

The foam and suspension will then have separated.

Recommendation:

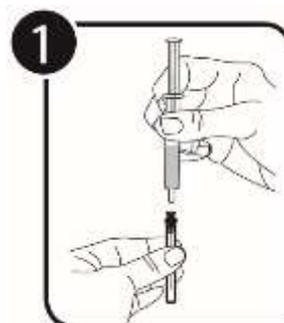
Use the stand included in the pack.



With the vial inverted, draw the suspension into the syringe and remove the syringe ready for administration. Residual foam will remain in the vial.

Option 2 – with cannula

Note: The syringe with vial adapter remains inserted in the vial throughout the reconstitution procedure and is also used for withdrawing the reconstituted suspension.

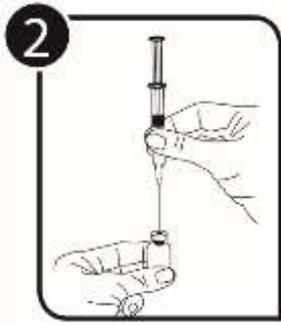


Open the packaging of the cannula at the top.

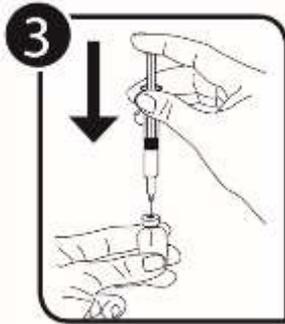
Attach the cone of the syringe to the cannula.

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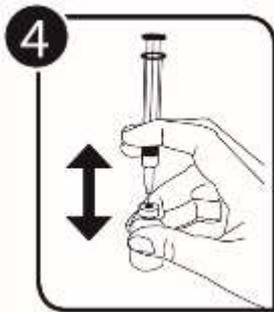
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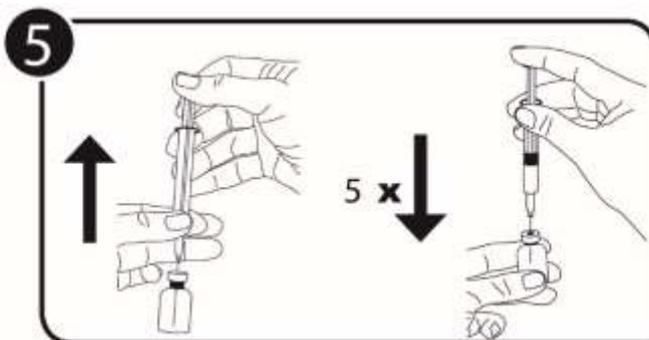
Insert the cannula into the vial through the rubber stopper.



Inject the solvent into the vial.



Then immediately **swirl and shake gently for five seconds.**

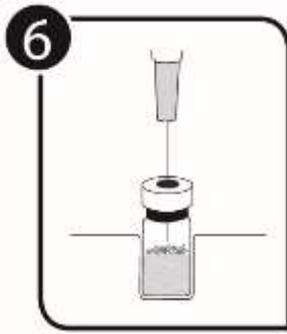


With the vial at an angle, draw the suspension into the syringe then inject it back into the vial.

Repeat this step a total of five times. Then withdraw the cannula from the suspension (but not from the vial) to prevent the suspension from rising into the syringe.

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Wait approx. one minute.

The foam and suspension will then have separated.

Recommendation:

Use the stand included in the pack.



Slowly withdraw the suspension.

Residual foam will remain in the vial.

Pass an appropriately prepared catheter (e.g. umbilical venous catheter or gastric tube) through the in situ ventilation tube and position the opening of the catheter level with the tip of the tube. Using a syringe, inject the single dose endotracheally through this catheter. Then inject some air to ensure that instillation is complete. Reconnect the patient to the ventilation system after removing the catheter.

To ensure that Alveofact is distributed evenly, the patient can be gently rolled to the left and right, in each case for a few seconds.

What you need to know before Alveofact is used

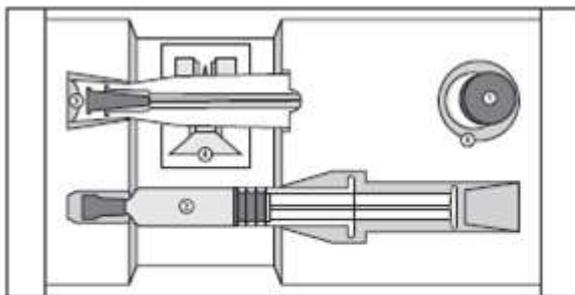
- Any hyperacidification of the blood caused by impaired metabolism or gas exchange should be corrected prior to using Alveofact, as preclinical findings suggest that the efficacy of the product is otherwise compromised.
- Aspirate the trachea thoroughly before each dose to avoid obstruction from mucus and to prevent Alveofact from foaming.
- Before administering Alveofact, check that the delivery catheter is positioned correctly in the tracheal tube.
- Until Alveofact has spread completely across the lungs, coarse inspiratory crackles may be heard over the thorax during the first few minutes after instillation. These are not an indication for tracheal aspiration, which may otherwise be performed at any time.
- There may be a rapid change in the partial carbon dioxide levels during the first few hours after administration of Alveofact. Hence, it is important to avoid – preferably by continuously measuring the partial carbon dioxide and oxygen pressure through the skin or by repeatedly analysing the capillary blood – pronounced changes in the partial carbon dioxide pressure by adjusting the ventilation parameters (peak inspiratory pressure, ventilation frequency).
- To prevent any increase in the risk of retinal damage in preterm infants, it is likewise necessary to ensure, by adjusting the inspiratory oxygen concentration, that the arterial oxygen partial pressure levels do not exceed the target limits.

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- In case of mechanical ventilation with high frequencies (ventilation frequency above 60 per minute, exhalation time under 0.6 seconds) it is essential to ensure a sufficiently long exhalation time after application of Alveofact.
If the ventilation is not adjusted in such a way after administration, pulmonary hyperinflation could slowly increase due to “inadvertent” or “auto-PEEP”:
In case of incomplete passive exhalation, the pressure in the lungs after exhaling remains higher than the setting on the ventilator. The gas volume remaining in the lungs after exhaling normally can therefore be pathologically increased. The peak inhalation pressures required for ventilation must then be inappropriately increased, thus increasing the risk of pressure injury to the lungs.
- If the oxygen requirement under normoventilation exceeds 40%, follow-up doses of Alveofact can be given at intervals of 12 to 24 hours. If the response to the initial dose is inadequate, rapid administration of a second dose (30 to 60 minutes after the first dose) is recommended.
- If there is an acute deterioration in oxygen uptake (increased partial carbon dioxide pressure and decreased partial oxygen pressure), it is advisable to check that the ventilation tube is positioned correctly and not obstructed.
- If using a double-lumen tube or side-port connector to administer Alveofact without interrupting ventilation, the ventilation parameters must be adjusted with particular care.

Alveofact blister pack



- ① Durchstechflasche mit Pulver
- ② Fertigspritze mit Lösungsmittel
- ③ Kanüle (steril verpackt)
- ④ Vial-Adapter (steril verpackt)
- ⑤ Standhalterung für Durchstechflasche

- (1) Vial of powder
- (2) Pre-filled syringe of solvent
- (3) Cannula (in sterile packaging)
- (4) Vial adapter (in sterile packaging)
- (5) Vial stand

The supplied vial adapter is a medical device and therefore carries CE mark 0482.