

INOmax (nitric oxide) - Difficulties in closing the cylinder valves after use: precautions for use when disconnecting the cylinders from pressure regulators

Dear Healthcare professional,

Linde Healthcare AB, in agreement with the European Medicines Agency (EMA) and <National Competent Authority>, is providing you with the following important user information:

Summary

- **There have been reports of users not being able to properly close the INOmax® cylinder after opening, when the cylinder is not yet empty (as indicated by the pressure still showing on the regulator).**
- **The estimated defect ratio is 0,17 % of cylinders delivered. The malfunction does not affect the delivery of INOmax to the patient during treatment. Despite the inconvenience to the users, no recall is performed because of risk of shortage of a patient critical medicinal product.**
- **If this occurs, the user may not be able to purge the pressure regulator hose according to the instructions in the user manual, in order to remove the pressure regulator from the cylinder valve. The wash out of NO₂ is not impacted.**
- **Correct administration of INOmax® is not affected by the reported malfunction. No adverse effects in patients treated with malfunctioning INOmax cylinders have been reported.**
- **If such a malfunction occurs, follow the steps outlined below:**
 - Do not interrupt a treatment in progress and continue to use the cylinder until the end of the treatment or until the cylinder is empty (empty cylinders can be closed without any problems).
 - If this should occur when starting therapy, it is recommended to switch to the back-up administration system if possible. If it is not possible to switch to a back-up system you can still start and run the therapy using the cylinder that cannot be properly closed.
 - Never try to remove the pressure regulator from the valve forcibly or use any tools/such as a screwdriver to pry off the regulator as cold burns might occur through contact with the pressure regulator equipment during attempts to disconnect it from the cylinder while the connection is still under pressure.
 - Try to close the INOmax cylinder valve via the INOmeter by applying firm pressure with your hand.
 - If this does not help to close the cylinder valve, contact your Linde representative for further support.
 - Use a back-up administration system as necessary.

Background on the safety concern

Linde has, together with the manufacturer of the cylinder valve, identified the cause for this defect and actions to solve this defect have been implemented.

There is no risk that nitric oxide can leak into the atmosphere / room from cylinders with a defective valve while connected to the regulator. If it is possible to safely disconnect the regulator from the cylinder, make sure to add the cap to the valve outlet as usual.

Reminder of the therapeutic indications for INOmax:

INOmax, in conjunction with ventilatory support and other appropriate active substances, is indicated:

- for the treatment of newborn infants ≥ 34 weeks gestation with hypoxic respiratory failure associated with clinical or echocardiographic evidence of pulmonary hypertension, in order to improve oxygenation and to reduce the need for extracorporeal membrane oxygenation.
- as part of the treatment of peri- and post-operative pulmonary hypertension in adults and newborn infants, infants and toddlers, children and adolescents, ages 0-17 years in conjunction to heart surgery, in order to selectively decrease pulmonary arterial pressure and improve right ventricular function and oxygenation.

Call for reporting

Please continue to report any suspected defective cylinder valves to <insert details of national reporting system>.

Company contact point

If you want further information relating to the above, please contact <insert details of Linde contact person>.

Yours Sincerely

Name

Function

Company

Communication Plan for Direct Healthcare Professional Communication

DHPC COMMUNICATION PLAN	
Medicinal product(s)/active substance(s)	INOmax (nitric oxide)
Marketing authorisation holder(s)	Linde Healthcare AB Rättarvägen 3 169 68 Solna Sweden
Safety concern and purpose of the communication	Difficulties in closing the cylinder valves after use: precautions for use when disconnecting the cylinders from pressure regulators
DHPC recipients	Hospital pharmacists, nursing staff and physicians using INOmax in intensive care units - to be proposed to the National CA
Member States where the DHPC will be distributed	Austria, Czech Republic, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Latvia, Estonia, Netherlands, Norway, Poland, Slovakia, Portugal, Romania, Spain, Sweden, and Republic of Ireland.
Timetable	Date
DHPC and communication plan (in English) agreed by CHMP	12/05/21
Submission of translated DHPCs to the national competent authorities for review	21/05/21
Agreement of translations by national competent authorities	31/05/21
Dissemination of DHPC	03/06/21