

## Product information



### AdBlue®/Urea solution: Frequently asked questions

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- **What is urea solution?**

Urea solution is a mixture of urea (organic compound) and pure demineralized water as defined by the standard ISO 22241. This standard imposes strict manufacturing and storage procedures, which guarantee the purity for proper operation of your machine. In other words, you are obligated to ensure the purity of the urea solution from the time of receipt up until its injection into the specific tank at the machine.

- **What is AdBlue®?**

Registered trademark, a synonym for urea solution.

- **Why do I need urea solution?**

With the use of the urea solution in the SCR (Selective Catalytic Reduction) system of the machine, the exhaust gas emissions standards are satisfied. For this purpose, the urea solution is injected into the SCR system in order to transform the nitrogen oxides (NO<sub>x</sub>), which are harmful pollutants, into water (H<sub>2</sub>O) and nitrogen (N<sub>2</sub>), which are both harmless substances. (The air that we breathe contains more than 75% nitrogen).

- **What are the consequences of using contaminated urea?**

Contamination of the urea solution, for example due to improper storage and / or handling, leads to disruption or even contamination of the SCR system, which is very vulnerable. This contamination can result in non-compliance with anti-pollution standards, impaired operation of your machine and even a complete failure, as well as material damage. Damage resulting from the use of a contaminated urea solution or another unsuitable fluid (does not satisfy standard ISO 22241) is not covered by the manufacturer's warranty.

- **Where should I purchase the urea solution?**

Purchase the urea solution from your Liebherr Service Partner. The solution should have the ISO 22241 certification. In other words, the word AdBlue® or a reference to the standard ISO 22241 should appear on the product packaging.

- **How is the urea solution best used?**

1. Protect your urea solution against all types of contamination such as fuel, oil, grease, water, dust, dirt, metals and detergents.
2. Only use accessories specifically for the urea solution (for example pistol) or for single use (for example canisters, filling tubes, etc.).
3. Keep the AdBlue® equipment clean and free of dust and dirt. Cleaning or flushing with water also helps to prevent the urea solution remains to form crystals when drying.
4. The urea solution should only be poured into the special tank at the machine with a pistol specifically for the urea solution. On Liebherr machines, the tank for the urea solution is located near the fuel tank of the machine and can be easily identified with its blue cap.
5. Do not start the engine if the urea solution was by mistake injected into the diesel tank of the machine or if a fluid, which does not satisfy the standard ISO 22241, was inserted by error in one of the other tanks of the machine.
6. Monitor the filling level of the tank for the urea solution.
7. It is recommended to wear waterproof gloves (see spare part documentation), as well as protective goggles. Slight irritations may occur in contact with the skin. In case of contact with the skin and eyes, rinse thoroughly with water.
8. If the shipping container is damaged, please contact your Liebherr Service Partner from whom you purchased the urea solution.
9. Do not dispose the urea solution into sewerage. Unused / contaminated AdBlue® should be treated as special waste.

- **How should the urea solution be stored?**

1. It is imperative to use the specific equipment for storing and filling the urea solution. This reduces the risks of contamination from the distribution unit (see spare part documentation).
2. The canisters and other containers of the urea solution should be sealed upon receipt.
3. To guarantee the quality and service life, the solution should be stored at a temperature lower than 30° C and greater than -11° C. Direct sunlight should be avoided. The optimal storage life under these conditions is 12 months.
4. The urea solution freezes at a temperature lower than -11° C ; however, without external contamination, the quality is undiminished when it becomes liquid again. The SCR system of the machine is even able to work with a urea solution between -40 and -11° C, a temperature control unit is standard.
5. Do not store the urea near comestibles.
6. The urea solution mainly consists of water and is not flammable. In case of a nearby fire, the IBC urea containers can be cooled with water.

AdBlue®: Registered trademark of the German Association of the Automotive Industry (VDA)