PRODUCT INFORMATION
LEWATIT® HD 50

Lewatit® HD 50 is an ion exchange resin loaded with nutrient substances which are necessary for the nourishment of plants, mainly nitrogen, phosphorus and potassium.

Lewatit® HD 50 is an NPK fertilizer based on ion exchange resin with a long-term effect. It is particularly suited for the continous nourishment of soil-less cultures of ornamental plants (hydroculture).

Lewatit® HD 50 is in compliance with the German Fertilizer Decree 2012.

Lewatit® HD 50 is completely insoluble in water, yet ensures a healthy growth for plants by means of the following exchange processes. Only some of the salts contained in water, such as calcium and magnesium sulphates, are useful for the nourishment of plants. The large majority of these salts, however, cannot be utilized by the plant, and salts may even be harmful.

Lewatit® HD 50 adsorbs these non-useful salts and in return, to release nutrient substances into the water.

Lewatit® HD 50 removes e.g. common salts or calcium carbonate from the water and releases e.g. ammonium nitrate or potassium phosphate in return. In the same way, **Lewatit® HD 50** also provides important trace elements, e.g. iron, manganese, copper, zinc, boron and molybdenum in a ready-to-use form. No matter how large an amount of **Lewatit® HD 50** is, that has been added to the water, the concentration of salts will not increase. While the salts without nutrient value for the plant contained in the water migrate into the water insoluble ion exchange resin, the corresponding amount of nutrient salts is released into solution. The main advantage of **Lewatit® HD 50** is that it continously releases nutrient salts into the water. This release is according to the consumption of the plant. This product thus offers a much wider range of uses than liquid fertilisers for optimum nourishment of plants. According to our experience, 20-30 ml **Lewatit® HD 50** per 0.5 metre of each plant height is sufficient to ensure complete nourishment for 3-4 months. The water which evaporates simply needs to be refilled. After 3-4 months, another 20-30 ml of **Lewatit® HD 50** should be added with the irrigation water to ensure nourishment of the plant for another 3-4 months.

The content of active agents (nutritients) are:

Nitrogen, total (gew% N): min 1.5

Phosphate (gew% P2O5): min 1

Potassium (gew% K2O): min 1.5

Total NPK min 4 gew%

Micronutrients: Traces of copper, molybdenum, manganese, iron, boron, zinc.

The special properties of this product can only be fully utilized if the technology and process used correspond to the current state-of-the-art. Further advice in this matter can be obtained from Lanxess, Business Unit Liquid Purification Technologies.

Specified Data

Range of size for >90 vol% of all beads		mm	0.315 - 1.6
Fines	less than 0.315 mm	max. vol %	5

Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 10%)	g/L	680
Water retention (delivery form)		approx. weight %	50

Operation

Operating pH range	during exhaustion		4 - 6

Additional Information & Regulations

Safety precautions
Strong oxidants, e.g. nitric acid, can cause violent reactions if they come into contact with ion exchange resins.

Toxicity
The safety data sheet must be observed. It contains additional data on product description, transport, storage, handling, safety and ecology.

Disposal
In the European Community Ion exchange resins have to be disposed, according to the European waste nomenclature which can be accessed on the internet-site of the European Union.

Storage
It is recommended to store ion exchange resins at temperatures above the freezing point of water under roof in dry conditions without exposure to direct sunlight. If resin should become frozen, it should not be mechanically handled and left to thaw out gradually at ambient temperature. It must be completely thawed before handling or use. No attempt should be made to accelerate the thawing process.

Packaging
The experience has shown that the packaging stability for reliable resin containment is limited to 24 months under the storage conditions described above. It is therefore recommended to use the product within this time frame; otherwise the packaging condition should be checked regularly.