

**Lewatit® GF 101** is a strongly acidic, macroporous, polymer-based resin in spherical bead form, with sulfonic acid groups. It is ideally suited as a heterogeneous catalyst for organic reactions. A large pore structure, high degree of crosslinking and good mechanical stability enable this catalyst to be used in polar and non-polar media.

**Lewatit® GF 101** is particularly suitable for the reduction of free fatty acids in triglycerides prior to transesterification to biodiesel. The free fatty acids are removed through esterification with methanol or ethanol to the corresponding esters.

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.

## Common Description

Delivery form	H <sup>+</sup>
Functional group	Sulfonic
Matrix	Styrenic
Structure	Macroporous
Appearance	Beige, opaque

## Specified Data

Uniformity coefficient		max.	1.6
Range of size for >90 vol% of all beads		mm	0.4 - 1.25
Effective size	d10	mm	0.50 - 0.62
Total capacity (dry resin)		min. eq/kg	4.7

This document contains important information  
and must be read in its entirety.

### Typical Physical and Chemical Properties

Bulk density for shipment	(+/- 5%)	g/L	710
Density		approx. g/mL	1.16
Water retention (delivery form)		approx. weight %	58-63
Stability temperature range		°C	1-130
Storage temperature range		°C	-20 - +40

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## 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.

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