

## **63600 - 63663 Water-soluble cellulose ethers, Cellulose glues and thickeners**

Cellulose ethers dissolve in water colloiddally and polydispersely. The level of viscosity is determined by the degree of polymerization. Therefore, the viscosity of a solution increases sharply with increasing concentration. As the temperature increases, the viscosity decreases. The figures indicate the viscosity grades of the different cellulose glue types and correspond to the viscosities of a 2% aqueous solution at 20°C.

Cellulose ethers are soluble in cold water. Highly etherified types are also soluble in some solvent mixtures: hydrogen chlorides and alcohols, e.g. dichloromethane/methanol. The swelling-retarded type (Cellulose K 30000) can be easily dispersed in pH-neutral water without lumps and dissolved with a time delay.

Cellulose ethers are practically germ-free and fairly resistant to microorganisms. However, it is advisable to preserve aqueous solutions if they are to be stored for long periods. The preservative manufacturer's instructions for use should be followed.

For the preparation of aqueous cellulose ether solutions, it has proved expedient to use different processes depending on the type of cellulose glue in question. Some proven procedures are described below, but they must be adapted to the specific conditions. A stirrer or high-speed stirrer should be used to prepare cellulose glue solutions. However, small quantities can also be prepared by stirring by hand.

- **Cellulose ether 63600 - 63650**

The granular types are sprinkled evenly trickling into cold water (usual water hardness, pH value around 7) and dissolved under stirring. It is important that in the first few minutes the added granules are uniformly slurried. With this method of working, the cellulose glue dissolves in the course of about half an hour.

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- **63663 Tylose® MH 30000 YP4**

With this type, it is easy to produce a lump-free solution in cold water (pH 7) due to the surface treatment. The dissolving process can be accelerated if a pH of approx. 8 to 9 is set after dispersing the cellulose glue in water.

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Cellulose glue has a long shelf life in its original packaging, stored in a dry place at normal temperatures. Opened containers should be kept tightly closed, as cellulose glue absorbs water from moist air.