

DEUTERON XG

Thickening and thixotropic agent for aqueous systems

/ Chemical Description

Anionic heteropolysaccharide (xanthan gum)

/ Physical Data

Deuteron	XG
Bulk density approx.	800 g/l
Viscosity of a 1 % solution approx.	2400 mPa·s
Appearance	cream-colored free-flowing powder



/ Properties

Deuteron XG is a natural biopolymer based on polysaccharides. The average molarity is approximately 2×10^6 g/mol. It is soluble in cold and hot water and yields highly viscous, shear thinning solutions. It is insoluble in most organic solvents. Deuteron XG is fully soluble in water and mixtures of organic liquids with at least 60 % water content. Ethanol content of up to 50 % is also possible.

Deuteron XG is stable in anionic and non-ionic systems. In cationic systems, it is not always compatible.

The solutions are pH and temperature stable. There is almost no change in viscosity from pH 2 - 12. The temperature has relatively less influence on the viscosity of a solution of Deuteron XG.

Deuteron XG prevents settling of pigments and fillers and separation of the liquid phase during storage. Application is made easier through pronounced structural viscosity. The viscosity sinks when the shear force is increased. It rapidly returns to the starting value when the shear force is removed. The product is compatible with most commonly used binders and thickeners used in the coating industry.

/ Application

Deuteron XG is suitable for use as a thickener and stabilising additive for all aqueous coating systems and technical applications such as water-thinnable lacquers, dispersion paints and plasters, glues, printing inks, silicate paints as well as pigments and filler preparations.

/ Dosage

Depending on the requirement 0.1 - 0.5 % calculated based on the water content. Solutions should not contain more than 1 % Deuteron XG. Considerably higher concentrations ensure no homogeneous dispersion.

/ Processing

Due to the rapid hydrating DEUTERON XG tends to form lumps. In order to prevent this, the additive should be added very slowly and evenly. For this reason, high shear force is required. As soon as the viscosity increases, the revolution speed should be continuously reduced in order to prevent the formation of bubbles. Building up the viscosity depends on the agitation time and the shear force.

Deuteron XG can be prepared either as a solution using the water available during the manufacturing process or directly dispersed into the finished product to adjust the viscosity. Good results of incorporation can also be achieved if the required quantity of Deuteron XG is combined with glycol as a 1:1 mixture. The needed time for the maximum viscosity depends on the stirring time and shear force. The maximum viscosity can be reached after approx. 15 - 30 Minutes.

/ Conservation

Solutions of Deuteron XG should be preserved if they are to be stored for more than 24 hours. Compatibility is given with preservatives which are common in the paint industry.

/ Storage conditions

Deuteron XG can be stored for at least 24 months at room temperature and dry conditions. Deuteron XG should be stored cool (max. 30°C) and dry (max. 70 % relative humidity) in closed packages.

/ Package Sizes

Paper bag (25 kg net)

/ Safety Regulations

According to Regulation (EC) No. 1272/2008 Deuteron XG is not classified as a dangerous product and therefore does not need to be labeled.

Due to the fine fractions of the product, measures for dust protection must be heeded and the build up of electrostatic charge must be avoided.

/ Thickening and Thixotropy Agents from our portfolio

Deuteron VT 910
Deuteron VT 920
Deuteron VT 930

Deuteron VT 819
Deuteron SR 28

Deuteron VT 855
Deuteron VT 856

This leaflet intends to give technical advice without warranty and does not claim to be complete.