



Technical Data Sheet

# DEUTERON ST-L, ST, ST-S, ST-G, ST-M

Duromeric Texturing Agents

**Deuteron**<sup>®</sup>  
ADDITIVES TO YOUR SUCCESS

## ■ Product Characteristic

Deuteron	ST-M	ST-G	ST-S	ST	ST-L
Particle size dv50	approx. 11 µm	approx. 22 µm	approx. 32 µm	approx. 35 µm	approx. 45 µm
Particle size dv90	approx. 19 µm	approx. 34 µm	approx. 46 µm	approx. 53 µm	approx. 72 µm
OH-content	approx. 0.27 %				
Density	approx. 1.47 g/cm <sup>3</sup>				
Appearance	fine white powder				

## ■ Product Description

The Deuteron ST texturing agents are coarse duromeric plastic powders based on PMU (polymethylurea). They can be used as texture- and structuring agents for functional, haptic and decorative effects. The final effect of the surface-texture depends on the applied layer thickness and the ratio of texturing agent to binder. Depending on the dosage, effects ranging from a rough, fragmentary structure with little influence on the gloss to closed particle layers with matt surfaces are possible. PMU based additives are also widely used to boost mechanical stability and protect sensitive matting agents from polishing and scratches.

Depending on the composition of the coating formulation, the structuring agents may tend to separation during storage. Thus, use of anti-settling agents may be necessary.

Because of the high stability of the PMU chemistry Deuteron ST texturing agents can be used in a wide range of different applications including high temperature systems such as can- and coil coatings.

## ■ Applications

Due to the different available particle sizes, exact adjustments to different requirements are possible. The texture agents of the PMU-based Deuteron ST-series are suitable for applications in thin film as well as in thick film applications, either as single additive or in combination. They can be used in solvent-based, solvent-free and in water-based coating systems.



The use of Deuteron PMU based ST-products especially improves performance in:

- ▶ Very low influence on the viscosity
- ▶ High mechanical and chemical resistance
- ▶ High scratch resistance and resistance to polishing
- ▶ Temperature resistant up to 200 °C, short time exposition above 300 °C
- ▶ Pleasant touch feel with fine grades
- ▶ Rough, dry feel with coarser grades
- ▶ Improved blocking resistance
- ▶ Insoluble in solvents commonly used in paints.
- ▶ Biodegradable

## ■ Dosage

1–15 % (calculated on the complete formulation) depending on binder, application and required properties. The quantity used depends on the desired effect. The optimum dosage is to be determined by own tests. It depends strongly on the ratio of the binder solids to the dosage of the texture agents and layer thicknesses of the application.



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## ■ Processing

The duromeric Deuteron ST products are easy to use and typically do not require high shear forces or wetting agents. The products are shear stable but grinding should be avoided.

## ■ Storage Conditions

24 months at room temperature and dry conditions. Storage temperature should not exceed 35 °C.

## ■ Package Sizes

Plastic bags (20 kg net)

## ■ Safety

According to Regulation (EC) No. 1272/2008 Deuteron ST-products are not classified as a dangerous products and therefore does not need to be labelled.

For detailed information please refer to the Safety Data Sheet and Regulatory Information Sheet. The documents are also available on our website:

<https://www.deuteron.com/en/download-center/>

## ■ Deuteron: First class products for the coating industry

Deuteron GmbH successfully develops and sells innovative additives since 1977. Our product range consists of matting agents, anti-static additives, texturing additives, thickeners and UV initiators. In the course of our company history we have become an important partner of the national and international paint, lacquer and coating industry with sales partners around the globe.

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



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