

## Product Characteristic

Deuteron	SF 707	SF 505
Density	approx. 1.47 g/cm <sup>3</sup>	approx. 1.47 g/cm <sup>3</sup>
Particle size dv50	approx. 4.0 µm	approx. 7.0 µm
Particle size dv90	approx. 8.0 µm	approx. 13.0 µm
Particle size dv99	approx. 12.0 µm	approx. 18.0 µm
OH-content	approx. 0.27 %	approx. 0.27 %
Appearance	fine white powder	



## Product Description

Deuteron SF 505 and Deuteron SF 707 are micronized duromeric plastic powders based on PMU (Polymethyl urea). The unique synthesis of Deuteron SF surface additives leads to compact particle structures with high hardness and low COF (coefficient of friction) – this property makes them excellent alternatives to traditional PTFE based additives. Because of their highly compatible chemistry they can be used in a wide variety of different applications and systems.

Deuteron SF products can be used as 1:1 offset to replace PTFE based surface protection additives and waxes.

## Applications

Deuteron SF 505 and Deuteron SF 707 can be used in almost all coating applications ranging from water borne and solvent borne to 100 % systems. They can be used as stand-alone additives or in combination with other materials to further improve their properties.

Deuteron SF 505 and SF 707 are suitable for thin and thick film applications. The use of Deuteron SF additives especially improves the following properties:

- › Reduced COF (coefficient of friction)
- › Scratch and polishing resistance
- › Low impact on the gloss level at low dosages
- › Pleasant surface feel
- › Excellent recoatability
- › Temperature resistant up to over 200 °C, short-time up to over 300 °C
- › Mimic wax effects without negative influence of waxes
- › Less haze and settling compared to PTFE
- › Biodegradable polymer

Please also refer to our separately available technical information 'Alternatives to PTFE'.

## Dosage

Typical addition range: 0.5 % - 4.0 %  
The required dosage level highly depends on the system (e.g. binder type, additives, solvent content, etc.) and application parameters. Thus, it is highly recommended to determine the needed addition level by a practical ladder study.



Technical Data Sheet

# DEUTERON SF 707, SF 505

Halogen-free duromeric plastics with PTFE-similar properties

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

## ■ Processing

The PMU chemistry in general is highly compatible in a wide range of systems. Due to that Deuteron SF additives can be incorporated easily by a high-speed stirrer without the need for specific wetting agents or dispersing aids. They are shear stable in high shear processes but should not be ground in a bead mill.

## ■ Storage Conditions

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

## ■ Package Sizes

Paper bag (25 kg net)

## ■ Safety

According to Regulation (EC) No. 1272/2008 Deuteron SF 505 and Deuteron SF 707 are not classified as dangerous products and therefore need not 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.



DEUTERON GmbH  
In den Ellern 2-4  
28832 Achim, Germany

Phone: +49 (0) 421 48 99 03 -0  
Fax +49 (0) 421 48 99 03 -60

Mail [contact@deuteron.com](mailto:contact@deuteron.com)  
URL [www.deuteron.com](http://www.deuteron.com)

© 10.21 EN  
081-122122