Technical Data Sheet

DEUTERON UV RM15

Special Matting Agent for 100 %-UV-Systems

Deuteron®
ADDITIVES TO YOUR SUCCESS

Product Characteristic

Appearance	white dispersion
Reactive thinner	DPGDA / LA
Active content	approx. 20
Density	approx. 0.95 g/cm³
Viscosity	approx. 7000 mPa*s
Particle size dv50	approx. 4 µm
Particle size dv90	approx. 11 µm

Product Description

Deuteron UV RM products are special wax compounds in acrylic monomers designed as matting additives for 100 % UV curable systems. The combination of specialized raw materials and a unique production process enables the matting of difficult to matt 100 % UV curing systems.

The effect of Deuteron UV RM matting additives is based on controlled incompatibility in the surface while the curing process. This leads to a disturbed levelling while the curing takes place and results in microscopic surface structures that contribute to the matting.

Compared to conventional, particle based matting agents the use of Deuteron UV RM products leads to a wider formulation latitude, less impact on viscosity and improved film properties.

Applications

Deuteron UV RM products are suitable for all 100 % UV curable systems independent on the applied film thickness. The products do not work in aqueous or solvent-based formulations or in presence of the most other surface-active substances such as silicone levelling additives, wetting agents or dispersing additives.

The matting performance improves ...

- the lower the viscosity is
- the lower the functionalities of the monomers and oligomers are
- the lower the reactivity is
- the higher the dose/intensity of UV radiation during curing is
- the lower the belt speed is

The use of Deuteron UV RM15 especially improves performance in:

- Matting without large quantities of active substance
- Very low impact on viscosity
- Water repellence
- Smooth / slip surface properties
- Mechanical properties
- No adverse effect on flexibility

Especially α-Hydroxyketones have been proven to be the best suitable initiators for this effect.

Dosage

5 - 15 % (calculated on the complete formulation) depending on binder, application and required properties. The optimum dosage can vary significantly and is highly dependent on the used resins, monomers and initiators. Thus, it is recommended to carry out a ladder study in an additive free system to find the best addition level. Typically, 10 % is a good starting point in a variety of formulations. High addition levels can lead to a reduction of the reactivity.

Technical Data Sheet

DEUTERON UV RM15

Special Matting Agent for 100 %-UV-Systems

Processing

To avoid undesired interactions with other additives, laboratory trials with additive-free lacquers, only monomers and oligomers if possible, should be conducted first.
The incorporation should be done without shear forces only with a stirrer at a late stage of production to avoid foaming. Grinding processes should be avoided.

Storage Conditions

12 months at room temperature and dry conditions.
Storage temperature should not exceed 35 °C. Stir well before use as phase separation can occur while storing.

Package Sizes

Steel drum (25 kg net)
Steel drum (190 kg net)

Safety

According to Regulation (EC) No. 1272/2008 Deuteron UV RM15 is classified as a dangerous Product and therefore needs 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.

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
URL www.deuteron.com

© 10.21 EN
081-122135