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DEUTERON OG 8820, 8822, 8824

Surface additive for radically curing UV-systems

/ Chemical Description

Polymethyl urea resin / TMPEOTA

/ Physical Data

Appearance	white liquid
Specific Weight	approx. 1,18 g/ml
Solid content	approx. 30 %
Solvent	Ethoxilated trimethylole propane triacrylate (TMPEOTA)
Flash Point	>100 °C



	Particle sizes (approx.)	
	d50	d99
OG 8820	3,5 µm	12,0 µm
OG 8822	2,8 µm	8,0 µm
OG 8824	<2,5 µm	<7,0 µm

/ Properties

Deuteron OG 882x is based on polymethyl urea resin (PMU) as the active ingredient. Features of the duroplastic active ingredient are its high hardness and abrasion resistance. It is resistant to most standard solvents used in coatings and has good thermal stability to over 200 °C. When used as an additive in radically curing coatings systems, Deuteron OG 882x improves the static and dynamic friction of the coatings and provides improved mechanical resistance. Compared to wax-based additives, Deuteron OG 882x does not adversely affect the recoatability recoated. The very fine solid particles (PMU) allows the products to be used in coating systems that are applied as extremely thin films. The gloss reduction is dependant on the type of employed binder, the applied film thickness and the selected dosage. Therefore the reduction in gloss that can be achieved with Deuteron OG 882x can be customised to realise a variety of surface protection and matting objectives.

/ Application

Deuteron OG 882x is intended for application in radiation curing coatings and printing inks. They are particularly recommended for use in systems which require a thin film thickness, e.g. printing inks and overprinting lacquers. The use of Deuteron OG 882x can substantially improve coatings (ranging from silky sheen to matt) which contain silicic acid as a matting agent and possess inadequate surface resistance.

This group of additives is the alternative to wax dispersions with their typical side-effects.

/ Dose

The optimum dosage depends on the employed binder and the required surface properties. The exact dosage should be determined by own trials. Initially an addition of 1,0 % can be used as a starting value.

When a matt finish is desired, the required dosage may be relatively high (> 8 %). It must be considered whether the use of the additive will have the desired effect in systems with a high film thickness. Reason for this doubt is the poor orientation to the surface which is in turn caused by the low shrinkage or lack / evaporation of the reactive thinner.

A prerequisite for use as a matting agent is that the base system possesses the necessary film-forming properties for matting.

The fraction of reactive thinner (TMPEOTA) must be taken into account when preparing the overall formulation and calculating the UV-initiator concentration.

/ Processing

Deuteron OG 882x should be incorporated into the coating system after grinding by stirrer or dissolver. High shear forces can destroy the stabilization against sedimentation. This can lead to settling if the end system was not stabilized sufficiently.

/ Storage conditions

Deuteron OG 882x can be stored in their tightly-sealed original containers at room temperature for at least 6 months. Deuteron OG 882x may show slight serum formation (in this case enrichment of reactive thinner at the surface). This may lead to concentration shifts, among other things. Brief stirring will remedy this.

/ Packaging / container sizes

Metal-can (25 kg net)
Metal-drum (220 kg net)

The metal containers are coated on the inside and outside.

/ Safety Regulations

According to Regulation (EC) No. 1272/2008 Deuteron OG 882x is classified as a dangerous product and therefore needs to be labeled. For more information please consult the safety data sheet.

/ Surface Additives from our portfolio

Deuteron OG 861, 8612, 8614	Deuteron OG 8803, 8805, 8807	Deuteron WS
Deuteron OG 863, 8632, 8634	Deuteron OG 8810, 8812, 8814	
Deuteron OG 8650, 8652, 8654	Deuteron OG 8820, 8822, 8824	
Deuteron OG 8670, 8672, 8674	Deuteron SF 707	

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