Technical Information

Efka® IO 6783

General	Ionic liquid, conductivity promoter EFKA® IO 6783 is a medium active additive for a variety of physically drying and reactive coatings. It is used to adjust antistatic property of coatings and resistivity in liquid formulations to prevent from static charge build-up or dust attraction during and after the drying process.
Chemical nature	Hydroxy functional, ammonium salt

Properties

Physical form	clear colorless to yellowish liquid
Shelf life	EFKA® IO 6783 should be stored at 10-30°C in its originally sealed containers in a clean and dry environment. If the recommended storage conditions are observed EFKA® IO 6783 has a minimum remaining shelf life of 6 months from date of arrival at customers. EFKA® IO 6783 is slightly hygroscopic. Therefore keep containers tightly closed and avoid handling at high humidity. If possible, exchange air in opened containers by dried air or nitrogen.

Typical properties (Not specifications)

Purity, %	>98
Water content, %	<0.5
Viscosity, mPa.s	1100
Melting point, °C	-20
Color (Gardner)	≤ 6
OH-number, mg KOH/gm	612

Application

Formulation

EFKA® IO 6783 is designed for waterbased and solventbased formulations. It accepts incorporation together with other additives into the mill base or at the end of the production process.

For the conductivity adjustment of liquid coatings regular amounts of EFKA® IO 6783 in clear coats and pigmented paints ranges from 0.5-2.0% calculated on total paint. Depending on pigments and dispersing agent antistatic additive content may vary because of the interaction with pigment surface; the same could happen with mineral matting agents.

In conventional solventbased and high solid 2K PUR systems – taking the high OH number into account – the formulator should calculate the higher need of polyisocyanate. The effect of hygroscopic nature and residual water content in EFKA® IO 6783 on pot life has to be checked.

Like other low molecular weight binders and plasticizers EFKA® IO 6783 may have a softening effect on the final coating. The additive is capable to build three dimensional structures with reduced softening.

Ionic stabilized polymer dispersions can show rheology effects while/after addition of EFKA® IO 6783. The pre-dilution, addition under stirring and use in combination with emulsifying binders improves the storage stability.

Solubility / Compatibility

EFKA® IO 6783 can be formulated with polymer dispersions, polyester, epoxy and acrylate resins. Compatibility with alkyd resins and nitrocellulose is limited. Formulation with VC-copolymers and very hydrophobic resins is not recommended. Many binder combinations result in turbid but stable emulsions.
Because of numerous resins available in the market the formulator needs to carefully check compatibility and storage properties before use.

EFKA® IO 6783 shows excellent acceptance in hydrophilic solvents and diluents like water, methanol, ethanol, Solvenon® PM, glycol ethers and glycol esters, acetone and propylene carbonate. It is not soluble in hydrocarbons and aromatic solvents. There is limited solubility in blends (e. g. ethanol/xylene 7: 3, propylene carbonate/Solvesso® 100 1: 1).

Safety
When handling this product please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note
The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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