



**Product Characteristic**

Deuteron	LE 512	LE 100 LV
Density	approx. 0.96 g/cm <sup>3</sup>	approx. 1.05 g/cm <sup>3</sup>
Viscosity	n. a.	approx. 3500 mPa*s
Melting point	88 °C	n. a.
Acid number	approx. 3 mg KOH/g	approx. 13 mg KOH/g
pH-value	approx. 7.5 (1 % in water)	approx. 8.5 (1 % in water)
Ionogenicity	cationic	cationic
Appearance	yellowish paste	yellowish liquids



**Product Description**

Deuteron LE 512 and Deuteron LE 100 LV are 100 % active conductivity additives based on tetraalkyl-ammonium ethyl sulphate. The use of our anti-static additives allows the adjustment of the surface and volume resistivity in various systems.

The effect of Deuteron's anti-static additives is mainly based on surface migration and the ionic character of the cations.

Deuteron LE 512 is a solid, waxy material that needs to be diluted in a suitable solvent (water, alcohol or polar esters) prior to use. Alternatively, the material can be molten (temperatures between 95 °C and 110 °C) and used directly.

Deuteron LE 100 LV is a liquid product free of any carrier and thus easy to use without adding any potentially undesired solvents to a system.

The products are miscible in all solvent mixtures commonly used in coatings, partly slight turbidity can occur.

**Applications**

Deuteron's antistatic additives are able to achieve resistivity ranges between  $1 \times 10^5$  und  $1 \times 10^9 \Omega$  (100 k $\Omega$  - 1 G $\Omega$ ) – Anti-static properties according to EN ISO 20345.

Anti-static shoes:  $1 \times 10^5$  und  $1 \times 10^8 \Omega$  (100 k $\Omega$  - 100 M $\Omega$ ) (according to EN 61340-4-3)

ESD applications:  $1 \times 10^5$  und  $3,5 \times 10^7 \Omega$  (100 k $\Omega$  - 35 M $\Omega$ ) (according EN 61340-5-1)

The effect of quaternary ammonium compounds is highly influenced by the type of system (resins, additives, pigments, etc.) and by the chosen measurement conditions. For details please refer to our separately available 'Conductivity Agents' brochure.

Fields of application include:

- ▶ Electrostatic adjustment of spray paints
- ▶ PU systems (foam, shoe soles and casting resins)
- ▶ UV and EB curable systems
- ▶ PVC
- ▶ Floor coatings
- ▶ Synergistic wetting agent for carbon blacks, graphite and carbon fibres

**Dosage**

Typical addition level: 0.2 % - 5 %

The exact quantities to be used depend on the system and must be determined individually for the intended application.



Technical Data Sheet

# DEUTERON LE 512, LE 100 LV

Antistatic Additives based on Quaternary Ammonium Compounds

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

## ■ Processing

Deuteron LE 512 can be used to prepare an intermediate by diluting at room temperature in suitable polar solvents or water. Direct processing is only possible after melting. The melting temperature should be in a range of 95 °C - 110 °C and to ensure proper distribution the molten product should be added while stirring.

Deuteron LE 100 LV can be added to the system at any time during the production process or they can be used as post addition additives to further adjust resistivity.

## ■ Storage Conditions

24 months in tightly closed original containers at room temperature.

At low temperatures a viscosity increase or solidification can occur. The product can be regenerated by applying gentle heat. The temperature should not exceed 40 °C.

## ■ Package Sizes

### Deuteron LE 512

Steel drum (25 kg net)

### Deuteron LE 100 LV

Steel drum (25 kg net)

Steel drum (200 kg net)

IBC (900 kg net)

## ■ Safety

According to Regulation (EC) No. 1272/2008 Deuteron products LE 512 and LE 100 LV are classified as dangerous products and therefore 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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