Efka® PL 5381

General

Epoxy plasticizer for the paint industry

- Standard epoxy plasticizer
- Extraction-resistant to cleaning materials and many industrial agents
- Migration resistance is comparable with polymeric plasticizers

Chemical nature

Soybean oil, epoxidized

Properties

Physical form

Light yellow liquid

Technical data
(not supply specification)

Epoxide jay		6.3 – 7.0 %
Acid value	DIN EN ISO 2114	≤ 0.5 mg KOH/g
Iodine value	ISO 3961	≤ 5.0 g I_2 / 100 g
Iodine color	DIN 6162	≤ 3.0
Refractive index	DIN 51423 (20 °C)	1.472 – 1.474
Viscosity, dynmaic	DIN 53015 (2 °C, Höppler)	450 – 600 mPa.s

Application

Efka® PL 5381 does improve the heat, light, weather and oxidation resistance of many plastics and resins, e. g. those based on vinyl compounds like PVC, nitrocellulose products or chlorinated rubber. Provided the exposure conditions are not severe, the use of other stabilizers may sometimes be completely omitted.

Nevertheless, since combinations of metal compounds and Efka® PL 5381 epoxy plasticizer act synergistically to increase the effect and to offer the maximum stabilization, such combinations are frequently used. In these cases the quantity of metal compounds may often be reduced to a quarter.

This results not only in considerable cost savings but offers other technical advantages such as improved transparency, bondability, printability and weldability.

Efka® PL 5381 epoxy plasticizer can react with multifunctional acids to form thermoset resins.

Recommended concentrations

For the fabrication of vinyl resins the addition of 10 – 15 % to the total plasticizer content will generally be sufficient. Only in special cases it is necessary to increase the amount up to 30 %. The often difficult stabilization of phosphate plasticizers is easily controlled by the addition of about 5 % of Efka® PL 5381 epoxy plasticizer. Similar amounts also result in effective protection to chlorinated paraffins in use, storage or during transport.

Storage

It is recommended to protect Efka® PL 5381 from heat and frost. Epoxidized soya bean oils tend to crystallize and solidify at temperatures below 15 °C. This does not affect the quality of the product and can be reversed by heating. Therefore they should be stored at warm and dry conditions, preferably at 20 – 25 °C.

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Validity

This Technical Data Sheet is valid for all versions of the Efka® PL 5381.

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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