

Efka[®] RM 1900

(old: Rilanit[®] HT Extra)



The Chemical Company

general

Efka[®] RM 1900 is a thickening agent in micronised form for non-aqueous coatings. It is particularly intended for use in paint manufacturing processes involving relatively high working temperatures.

Efka[®] RM 1900 produces very strong thixotropic effects in solvent based coatings. However, the type of solvent is of decisive importance to its thixotropic behavior.

the solvents should mainly consist of mineral spirits and aromatics. A combination with esters, ketones and alcohols is possible up to certain limits.

chemical nature

modified hydrogenated castor oil

Properties

physical form

white, microfine powder

shelf life

Subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 2 years.

typical properties (no supply specification)

solid content	~ 100%
particle size distribution	5 - 9 µm, 99% < 32 µm 100% < 44 µm

Application

Efka[®] RM 1900 extra is suitable as a rheology additive for solvent based and solvent-free systems such as epoxy resin paints, plastisols, caulking compounds, putties and knifing fillers.

the advantage of Efka[®] RM 1900 is that it tolerates relatively high working temperatures which are particularly evident wherever the solvent consists mainly of white spirit.

Efka[®] RM 1900 shows optimum temperature stability in coatings based for instance on air-drying alkyd resins.

however, temperature stability is somewhat lower in systems formulated mainly with aromatic hydrocarbons, such as paints based on chlorinated rubber, polyvinyl copolymers, chlorinated polyethylene, etc.

recommended concentrations

Efka® RM 1900 is preferably processed in high speed grinders. the addition is usually made in powder form, where it is beneficial to predisperse the thickener for approximately five minutes in the solvent-binder mixture, prior to pigment addition.

another method consists of firstly preparing a Efka® RM 1900 paste (i.e. a «pre-gel»). to ensure proper dispersion of the thickening agent, it is essential that:

- certain temperature limits are observed
- sufficient shear forces to ensure adequate dispersion are generated.

stirring alone is not sufficient to achieve adequate homogenization, even if the thickener is added in a pre-gelled form. The shear forces usually generated in dissolvers, pearl mills or similar grinding equipment, are generally sufficient to obtain the degree of dispersion required.

when using the thickener in paints, the solvent of which consists mainly of white spirit, a working temperature of 50 - 60 °C is required. In conjunction with adequate shear, these paints - especially alkyd resin paints - develop an excellent thixotropy within these temperature limits. Short-time exposure to temperatures of approx. 80 - 90 °C will not cause a harmful effect. In systems formulated with Efka® RM 1900 , containing aromatic hydrocarbons such as chlorinated rubber paints, the optimum temperature range is lower, e.g. in the region of 40- 60 °C. Short-time exposure to a temperature of approx. 80 °C will not cause any harmful effect. These properties may vary in individual paint systems and should be tested by the user.

and three parts by weight of xylene (or other higher aromatic solvents) are stirred intensively until a thick paste is obtained. After adding a further four parts by weight of xylene, intensive stirring is continued for approximately 10 minutes.

recommended concentrations

although Efka® RM 1900 should preferably be used as a powder, it may also be processed in the form of a prepared gel. The use of these so-called «pre-gels» can facilitate the dispersion process, but still require high shear to be applied, as well as the above mentioned temperature limits to be observed.

a workable pre-gel was obtained by the following method: One part by weight of Efka® RM 1900 extra and three parts by weight of xylene (or other higher aromatic solvents) are stirred intensively until a thick paste is obtained. After adding a further four parts by weight of xylene, intensive stirring is continued for approximately 10 minutes.

after a maturing time of approximately 12 hours a transparent and homogeneous paste has developed which is also stable after prolonged storage. The amount added lies generally between 0.2 and 2.0%, calculated on the finished paint. The correct After a maturing time of approximately 12 hours a transparent and homogeneous paste has developed which is also stable after prolonged storage. The amount added lies generally between 0.2 and 2.0%, calculated on the finished paint. The correct amount depends on the desired thickness and the general requirements for the coating. It is evident that highly thixotropic paints call for a certain compromise regarding flow properties. Upon request, we will be pleased to provide you with reference formulations.

Safety

When handling these products, 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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