

STYACRYL NMS 1021

Polymer Emulsion

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TDS EU/EN

Characteristic

Styacryl NMS 1021 is APEO free, UV and self-crosslinking aqueous copolymer emulsion based on Acrylics (Meth acrylic) acid esters and Styrene.

Stabilization

Polymeric Surfactant, not migrated

General Features

Styacryl NMS 1021 is raw material for the coatings industry, including:

- △ Gloss varnish
- △ Clear coatings
- △ Not pigmented coatings

Advantages

- ❖ High outdoor durability
- ❖ High gloss form
- ❖ Very good scratch & block resistance
- ❖ Superior Alkali Resistance
- ❖ Lower water uptake

Physical Properties

Supply Specification	Method *	Unit	Value
Solids content (130 °C , 30min)	ISO 3251	%	49±1
Brookfield viscosity (25 °C, 4/20)	ISO 2555	mPa.s	7500 ±5000
pH value	ISO 976		7.0-9.0

Film Properties

Further Typical Properties	Method *	Unit	Value
Particle size		µm	100
Minimum film forming temperature	ISO 2115	°C	12
Glass transition temperature	ISO 16805	°C	20
Appearance of the film	Hard ,flexible, clear and tack free		

*According to this standard.

Usage

Styacryl NMS 1021 dries at temperatures higher than approx. 12 °C to form crack-free films with high elasticity, high alkali resistance and small water absorption. Because of the medium MFFT of the dispersion, only low amounts of coalescing agents are necessary in paint formulations (Texanol show good result) . When applying pigmented gloss paints in thick coatings or on highly porous substrates it is advisable to use sufficient amounts of propylene glycol to prolong the open time. An over dosage may however have an adverse effect on the wet adhesion. Salts of low molecular weight polyacrylic acids work well as dispersing agents, sometimes in combination with suitable wetting agents (for example Disperbyk 190) . Depending on the nature of the pigments and extenders, the required quantity is in range between 0.1 and 0.4 % active substance of dispersing agent relative to the pigment/extender mixture. To obtain high gloss values of the dried paint film it is necessary to use a mill base. The addition of suitable associative acrylic PU thickeners imparts rheological properties to gloss paints similar to those of conventional alkyd paints. Many commercially available defoamers can be included in order to prevent excessive foaming in the paints.

Trials must be carried out to determine the most suitable grades.

Preservation and Storage

The dispersion contains some initial preservatives to prevent attack by microorganisms. In order that the product is also sufficiently protected against microbial contamination during further storage in opened drums, tanks or other storage facilities a suitable preservative should be added despite our preliminary preservation measures and the tanks and pipe work should be kept adequately clean. Emulsion has minimum shelf life of 6 months from the dispatch date, provided the product is at temperatures between 5 °C and 25° C, avoiding frost and direct sunlight. Furthermore, it must be ensured that already opened drums and containers are always tightly closed. For bulk storage, additional conditions like the addition of preservatives or frequent stirring are technically applicable and recommended. To remove any skins or lumps that could have been formed during longer storage of the dispersion due to its film forming nature a filtration or sieve process is recommendable before further processing. The technical data ascertained by our quality control laboratory at the time of product release may vary according to the storage time and storage conditions and may deviate from the original values.

Product Safety and Environmental Protection

The usual protective measures employed during the handling of aqueous polymer emulsions should be observed. Further product safety information can be obtained from our material safety data sheet which is available on request.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. However, we do not assume any liability whatsoever for the accuracy or completeness of the information herein. It should therefore not be constructed as an expressed or implied warranty of specific properties of the products or the suitability for a particular use. Any existing industrial property rights must be observed. The quality of our products is governed by our General Conditions of Sale. In every case we urge and recommend that purchasers before using any product in full-scale production make their own test to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operating conditions