

PRELIMINARY PRODUCT INFORMATION

TYPE

Polyurethane dispersion modified with drying fatty acids

FORM OF DELIVERY (f.o.d.)

42 % in water (42WA)
(containing also approx. 2 % methoxy propoxy propanol)

DEVELOPMENT PRODUCT

This product is serving for trial purposes only. Deviations which might occur during transfer into manufacturing in a commercial scale are possible and do not constitute any material defect.

Neutralization agent

0.4 % ammonia, as salt

Content of fatty acids

approx. 31 % special vegetable fatty acids (as triglycerides)

TENTATIVE PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (10 1/s; 23 °C)	[mPa.s]	500 - 2000
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pH-Value DIN ISO 976

pH-value (10 %)		7,0 - 9,5
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Non-Volatile Matter DIN 55671

non-volatile matter (120 °C; 5 min)	[%]	40,5 - 43,5
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Not continually determined:

Colour / Appearance VLN 250

colour appearance		light brown opaque
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Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 1 g)	[%]	40,5 - 43,5
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Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm³]	1,05
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Flash Point (Pensky-Martens) DIN EN ISO 2719

flash point	[°C]	> 100
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SPECIAL PROPERTIES

Very fast set and through drying. Very high gloss in decorative top coats together with high film hardness and good water and weather resistance. Free of organic amines.

SUGGESTED USES

Daotan TW 6442 is highly recommended as sole binder in very fast drying industrial coatings. Due to their quick drying properties respective paints are predominantly applied by spray methods. Coatings based on Daotan TW 6442 can be used for farm and construction equipment and for other industrial goods.

PROCESSING

Neutralization agent

For sufficient paint stability the pH value should be kept at 7.8 - 8.8 (measured at 10% solids). Any loss of neutralizing agent, e.g. during the grinding stage, needs to be compensated by post-addition of ammonia.

Pigmentation

The utilisation of lead and chromate based pigments such as chrome yellow is not recommended. Furthermore, only pigments with low water soluble content should be used. Strong basic pigments may promote gel formation and storage stability needs to be monitored carefully. The use of rotating ball mills is feasible for pigment grinding. Mill-base temperatures higher than 40 °C should be avoided as this may lead to extended loss of ammonia with the possible consequence of premature paint gelation.

Addition of driers

When using driers in order to further accelerate drying speed their compatibility with the binder needs to be tested carefully. For uniform distribution and for high efficacy driers are preferably added to the mill base. For Daotan TW 6442 drying exclusively with cobalt has proven most effective. In order to prevent skin formation it is recommended to add approx. 1 - 2 % Additol XL 297 (on solid resin).

STORAGE

At temperatures from 5 °C to 25 °C storage stability packed in original containers amounts to at least 365 days.

Synthetic resins containing water may freeze or get inhomogeneous at temperatures below 0 °C. By this, the product will not suffer any damage, but the necessary regeneration requires extended heat treatment at 40 - 50 °C with continuous stirring. It is therefore recommended to ensure frostproof storage of such products.

Lowest storage temperature: - 5 °C

DISTINGUISHING FEATURES

Unlike Daotan TW 1252, Daotan TW 6442 does not contain N-ethyl-2-pyrrolidone (NEP).

REMARK:

Data contained in this publication are based on careful investigations (and are intended for information only). Due to scale up of this product there is not yet sufficient experience concerning serial production. We can therefore not exclude, that based on future knowledge product data and other indicated properties in upcoming Technical Data Sheets will be subject to change. We reserve the right to leave the product name unchanged, even if product data or other indicated properties will vary from the present product info. Regardless of the data contained in this publication any user is obliged to carry out tests under his own responsibility as to the suitability of the product for a particular use and to investigate the possible violation of industrial property rights of third parties. Information is therefore not binding and cannot be construed as guaranteeing specific properties of products. We apply our General Sales Conditions.