

TYPE

Polyurethane dispersion with low viscosity, free of organic solvents and emulsifiers

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.

FORM OF DELIVERY (f.o.d.)

40 % in water (40WA)

Neutralizing agent

1.7 % N,N-dimethyl ethanolamine, as salt

TENTATIVE PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	100 - 1000
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pH-Value DIN ISO 976

pH-value (10 %)		7,2 - 9,1
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Acid Value DIN EN ISO 2114

acid value (non volatile matter)	[mg KOH/g]	22 - 33
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Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 1 g)	[%]	38,5 - 41,5
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Not continually determined:

Hydroxyl Value DIN 53240

hydroxyl value approx. (solid matter content)	[mg KOH/g]	170
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Colour / Appearance VLN 250

colour	colourless to yellowish
appearance	clear to opaque

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 AND USE

DAOTAN TW 7000 is a polyurethane dispersion, which dries at room temperature without further coalescing agents or additives to clear, crack-free, water-resistant and highly flexible films. The dispersion has a high shear stability and a good pigment compatibility.

Coatings based on DAOTAN TW 7000 provide properties like

- excellent elasticity at contemporary high hardness
- very good adhesion to plastics substrates (ABS, PC, PP [flam.], PVC, PPSU)
- very high film hardness
- extremely high water and chemical resistance
- for high gloss monocoats (piano coatings)
- very good yellowing and chalking resistance.

Due to this properties DAOTAN TW 7000 is specifically recommended for plastic coatings (primer, basecoats, monocoats) for automotive interior/exterior industry, utility vehicles, for foil-coatings as well as for general industry (e.g. household articles). The adhesion to each plastic substrate requires individual investigation.

For curing forced drying with HDI based isocyanates as well as water dilutable melamine resins like CYMEL® 327 or CYMEL 385 are recommended.

Due to its polymeric design and morphology, DAOTAN TW7000 can be used for formulation of digital printing inks providing quick drying, fast re-dissolution and excellent adhesion to non-polar substrates.

STORAGE

It is important to protect DAOTAN TW 7000 from frost; at low temperatures it has to be stored under frostproof conditions.

We firmly recommend to check the resin for its homogeneity. Even during the guaranteed storage time amorphous precipitations may appear occasionally.

The amorphous precipitations can be re-dissolved by storage of the resin at 60 °C during 48 hours, however. The in such a way reconditioned resin must be checked for complete homogeneity and must then be used instantly to make a basecoat with it, before the precipitations appear again. In our tests we did never get film defects with a resin which was reconditioned in such a way.

SHELF LIFE

Standard Shelf Life is 180 days from the date of manufacturing.
For products still in allnex possession allnex may extend the expiration date of a batch upon re-testing by QC.

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.