

TYPE

Waterborne, aliphatic polyurethane dispersion, solventfree

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.)

35 % in water (35WA)

Neutralization agent

approx. 1.0 % triethylamine, as salt

TENTATIVE PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (100 1/s; 23 °C)	[mPa.s]	10 - 60
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Acid Value DIN EN ISO 2114

acid value (non volatile matter)	[mg KOH/g]	15 - 22
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pH-Value DIN ISO 976

pH-value (10 %)		8,5 - 10
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Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 1 g)	[%]	34 - 36
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Not continually determined:

Colour / Appearance VLN 250

colour	whitish
appearance	slightly cloudy

Particle Size VLN 220

particle size (25 °C)	[nm]	< 150
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Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm³]	1,04
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Flash Point (Pensky-Martens) DIN EN ISO 2719

flash point	[°C]	> 94
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SPECIAL PROPERTIES AND USE

DAOTAN TW 6490 is a waterborne, aliphatic polyurethane dispersion, free of solvents and emulsifiers. Dried at ambient temperature DAOTAN TW 6490 yields transparent, crack-free films.

Coatings based on DAOTAN TW 6490 provide properties as:

- very good adhesion to plastic substrates like e.g. ABS, PVC, PC, PMMA
- high elasticity and toughness
- excellent mechanical properties (especially stone chip resistance)
- little yellowing at elevated temperature

Thus DAOTAN TW 6490 is recommended for waterborne plastic Primers and Basecoats. Moreover DAOTAN TW 6490 can be used as modifier resin in waterborne OEM Primer Surfacer recipes to improve stone chip resistance properties. For latter application DAOTAN TW 6490 needs to be crosslinked with melamine resins (preferably HMMM-grades like e. g. CYMEL® 303). Optimum results are obtained by using a blending ratio DAOTAN TW 6490 : CYMEL 303 = 85 : 15 (calculated on solid resin).

To further improve water- and chemical resistance properties of coatings dried at ambient temperature DAOTAN TW 6490 can be crosslinked with

- Polyaziridine (e. g. Crosslinker CX-100, Fa. DSM, Netherlands)
- Carbodiimide (e. g. Picassian XL-701 or XL-702, Fa. Stahl Polymers, Netherlands)

If used in ink receptive primer formulations, DAOTAN TW 6490 provides excellent pigment affinity and high humidity resistance.

COMPATIBILITY

Compatibility of DAOTAN TW 6490 with other resins or additives has to be checked case by case. According to our experience the dispersing additive ADDITOL® VXW 6208 and the leveling and substrate wetting agent ADDITOL VXW 6503 N lead to excellent results.

STORAGE

It is important to protect DAOTAN TW 6490 from frost; at low temperatures it has therefore to be stored under frostproof conditions.

Lowest storage temperature: 5 °C

SHELF LIFE

Standard Shelf Life is 365 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.