TYPE

Waterborne, aliphatic polyurethane dispersion, solventfree

FORM OF DELIVERY (f.o.d.)

35 % in water (35WA)

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

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 - 100

pH-Value DIN ISO 976

pH-value (10 %)	8,3 - 9,5

Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 1 g)	[%]	34 - 36

Not continually determined:

Colour / Appearance VLN 250

colour	colourless to yellowish
appearance	opaque

Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm³]	1,04

Flash Point (CCCFP) ASTM D 6450

flash point	[°C]	> 95

SPECIAL PROPERTIES AND USE

Daotan TW 7090 is a waterborne, aliphatic polyurethane dispersion, free of solvents and emulsifiers. Dried at ambient temperature Daotan TW 7090 yields transparent, crack-free films.
Coatings based on Daotan TW 7090 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 7090 is recommended for waterborne plastic Primers and Basecoats. Moreover Daotan TW 7090 can be used as modifier resin in waterborne OEM Primer Surfacer recipes to improve stone chip resistance properties. For latter application Daotan TW 7090 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 7090 : Cymel 303 = 85 : 15 (calculated on solid resin).

To further improve water- and chemical resistance properties of coatings dried at ambient temperature Daotan TW 7090 can be crosslinked with
- Polyaziridine (e. g. Crosslinker CX-100, Fa. DSM, Netherlands)
- Carbodiimide (e. g. Crosslinker XL-701 or XL-702, Fa. Picassian Polymers, Netherlands)

COMPATIBILITY

Compatibility of Daotan TW 7090 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 6503N lead to excellent results.

SHELFLIFE

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.

STORAGE CONDITIONS

Daotan TW 7090 must be stored in a cool, dry and well ventilated place and the storage containers must be kept tightly closed. Daotan TW 7090 must not freeze, the recommended storage temperature is 5 - 30°C.

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.