

PRELIMINARY PRODUCT INFORMATION

TYPE

Aqueous emulsion of an aliphatic urethane-acryl-hybrid, emulsifier free

FORM OF DELIVERY (f.o.d.)

34 % in water (34WA)
(containing also approx. 0.2 % methoxypropanol and approx. 0.7 % dipropylenglycol-dimethylether)

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

0.8 % N,N-dimethyl ethanolamine, as salt

TENTATIVE PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219
dynamic viscosity [mPa.s] 10 - 350
(100 1/s; 23 °C)

pH-Value DIN ISO 976
pH-value 7,3 - 9,0
(10 %)

Non-Volatile Matter DIN 55671
non-volatile matter [%] 33 - 35
(125 °C; 10 min)

Not continually determined:

Colour / Appearance VLN 250
colour colourless to yellowish
appearance opaque

Non-Volatile Matter DIN EN ISO 3251
non-volatile matter [%] 33 - 35
(1 h; 125 °C; 1 g)

Density (Liquids) DIN EN ISO 2811-2
density [g/cm³] 1,04
approx.
(20 °C)

Flash Point (CCCFP) ASTM D 6450
flash point [°C] > 95

SPECIAL PROPERTIES AND USE

Daotan TW 7050 is an acrylic modified high molecular weight polyurethane dispersion. The resin provides shear stability and is free of emulsifiers. Dried at ambient temperature Daotan TW 7050 yields clear and crack-free films without any previous addition of solvents or paint additives.

In conjunction with thickeners (especially layered silicates) Daotan TW 7050 is providing a unique viscosity behavior, i.e. already small additions of thickener cause a significant pseudo-plasticity. Accordingly Daotan TW 7050 is a perfect fit for premium quality, waterborne metallic Basecoat formulations for automotive OEM and VR applications.

These Basecoats are characterized by:

- Excellent thermal yellowing stability up to 200 °C
- outstanding appearance and bright metallic effects
- excellent mechanical properties e.g. stone chip resistance properties
- excellent adhesion to CED as well as ferrous- and non-ferrous metals (aluminum!) in baking enamels (in combination with e.g. Cymel 303 or Cymel 327)
- outstanding wet adhesion even in low bake applications
- excellent adhesion to a wide variety of plastic substrates (isocyanate crosslinked as well as NON crosslinked primer formulations)
- very good outdoor durability

DILUTABILITY

Daotan TW 7050 provides unlimited dilutability with deionized water, compatibility with organic solvents is limited and requires careful pretesting!

STORAGE

At temperatures from 5 °C to 25 °C storage stability packed in original containers amounts to at least 450 days.

It is important to protect Daotan TW 7050 from frost; at low temperatures it has therefore to be stored under frostproof conditions.

Due to the quick physical drying of Daotan TW 7050 it is strongly recommended to filter the product (5 µm filter) prior to use.

DISTINGUISHING FEATURES

Compared to Daotan TW 7061, Daotan TW 7050 has a better ink receptivity leading to sharper print images.

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.