



CARPET PROCESSING

Carpet Dyeing and Printing

Endless possibilities to
optimize your process

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TANATEX Chemicals develops, produces and sells textile processing solutions for high-quality carpets. We provide a full range of products for use in dyeing, screen printing, valve jet printing and finishing of carpets.

TANATEX presents its dyeing and screen printing range especially for carpet processing.

Wetting agents

Penetration problems are common even in goods that are pre-wet with water and/or steamed before dyeing. This is due to the hydrophobic properties of oils and other lubricants applied to the fibre during production and spinning. If these are not removed during pre-treatment, uniform penetration of the pile cannot be guaranteed. **ERKANTOL® NR** and **TANASPERSE® CJ** are well known wetting agents for carpet dyeing and printing application.

Scouring agents

Penetration problems may occur if there is a high concentration of lubricant on the fibre, even if it has been treated with a scouring/wetting agent. **TANATERGE® AL** is a nonionic low-foaming detergent.

Leveling agents for PA and wool carpets

Leveling agents are used to improve the overall quality. Their mode of action varies greatly, depending on ionicity. While non-ionic/weakly cationic products have affinity for the dye, anionic products have affinity for the fibre. They act as a colourless dye during application. TANATEX offers the right product for different applications with its **LEVEGAL®** range.



LEVEGAL® AD is a nonionic, low foaming product, and improves the combinability of dyes (has affinity to anionic dyes). It is recommended for exhaust dyeing with high turbulences as well as continuous and space dyeing.

The nonionic/anionic **LEVEGAL® FTS-K 01** (foaming) is mainly recommended for continuous dyeing processes (has affinity to the PA fibre as well as to the anionic dyes).

Anionic leveling agents such as **LEVEGAL® SER** level out barriness caused by the structure of the fibre and are therefore used on unlevelled yarn qualities with a tendency to cause streaky dyeings (has affinity to PA fibres).

For wool dyeing as well as differential dyeing the use of the amphoteric **AVOLAN® UL 75** is recommended. When dyeing differential carpet, this well-known product results in optimum leveling and differentiation, having no negative influence on light fastness (especially benefit on critical PA yarn).

Anti-frosting agents

Frosting is a risk in all continuous dyeing and printing processes. It is caused by dye liquor sinking from the pile tips into the pile before fixation in the steamer. This reduces the dye concentration on the surface of the fibre and thus the colour strength of the pile tips. Anti-frosting agents prevent this phenomenon. They cause foaming at the start of the steaming and thus convey the dye back to the surface of the fibre (uniform diffusion of the dye from top to the bottom of the pile).

Our **TANALEV®** range offers two anti-frosting agents: **TANALEV® VKU-F**, a nonionic slightly anionic and **TANALEV® AFP**, pure anionic product.

Dispersing agents

A dispersing agent helps to maintain the stability of dye dispersions in continuous and discontinuous processes. **AVOLAN® IW** (Flakes) and **AVOLAN® IW-E liquid** are commonly used to separate anionic and cationic components. **AVOLAN® IS** is applied when dyeing with metal complex dyes.

LEVEGAL® DLP is extremely efficient when dyeing and printing with disperse dyes.

Buffer and acid donors

To set the optimum pH for dyeing, it is advised to add a buffer such as **TANACID® 1115**. The product can be used in exhaust as well as continuous processes.

When applying the pH sliding method in exhaust dyeing, acid donor **TANACID® ADP** guarantees a regular exhaustion of the dyes by starting with a high pH coming to a low end pH. **TANACID® NAC** helps to set an acid pH medium.



Antifoams

A whole range of different antifoams can be offered, based on silicone and also silicone free. The economical silicone based **NOFOME DS** is mainly used in exhaust application.

RESPUMIT NF is a silicone free antifoam with good deaeration properties in exhaust and continuous processes.

NOFOME 1125 is a fine dispersed high-quality silicone based defoamer. Beside the antifoaming properties, **NOFOME AF** has an extremely good deaerating performance which is very helpful for dyeing of velour qualities and heavy looped pile carpet.

Anticrease agents

Anticrease agents are required for open-width dyeing of carpet fabrics on winch becks. Furthermore they are required in rope dyeing of carpets to prevent excessive deformation of the pile.

TANEDE® PRT is an excellent crease inhibitor, having dispersing properties at the same time. The lubricant **TANALUBE® FF** acts also as crease inhibitor. In combination these products ensure excellent physical properties of the carpet by getting good levelness results.

Fixation accelerators

Fixation accelerators are used to increase the dyeing and fixation rate in dyeing and printing.

When dyeing and printing PES, **TANAVOL® PEW 02** is recommended to reach dark shades.

For PAN and CDP (cationic dyeable polyester) dyeing and printing, **TANASSIST ACE Conc.** is recommended to get dye and printing paste stability as well as reaching deep shades.

Resist and displacement printing agents

Anionic resist agents are generally based on syntans which block the amino end groups in the polyamide and thus delay fixation of the dyes.

MESITOL® AS and **MESITOL® HWS liq.** are recommended as resist agents in printing pastes, as well as resist agents for WO/PA blends.

For displacement printing, a cationic auxiliary is used. Displacement printing is based on the fact that anionic dyes have different affinities for polyamide fibres and the fixation of these dyes in the steamer can be more or less prevented by a cationic auxiliary. The cationic **TANASSIST® RDC** is recommended for this displacement application.

All the mentioned auxiliaries are the main focus products used for carpet dyeing and screen printing. Of course TANATEX with the long textile experience can offer much more products normally used for textiles to the carpet industry. On our website you can find the whole range: tanatexchemicals.com



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