Technical Information

Sanitized® TH 22-27

Hygienic finish for textiles
Mildew- and rot-proof

Fields of application

Mould/ mildew protection of home textiles, technical textiles and heavy fabrics. Rot-proof finish.

Application is possible on all common types of textile fibres and their mixtures except pure polypropylene fibres.

Examples: Home textiles: mattress tickings, shower curtains, inlets of garden furniture.

Heavy fabrics: tents, awnings, sails, belting, construction fabrics or geotextiles and ropes.

Mode of action and advantages

Substrates protected with Sanitized® TH 22-27 are noted for their proven, outstanding skin tolerance and are safe to man and environment

Sanitized® TH 22-27 has a reliable and durable bacteriostatic and fungistatic effect against a large number of grampositive and gramnegative bacteria, yeast, microfungi, mildew/mould and algae.

Its activity on the cell disrupts the metabolic process of unwanted micro-organisms and thus interrupts their ability to function, grow and reproduce.

Taking into account the efficacy of Sanitized® TH 22-27 against microfungi, the food chain for dust mites will be interrupted and consequently the growth of the mite population largely prevented.

Advantages:

- material protection: the development of ugly mould stains is thoroughly banned. Combining with a hydrophobing agent can achieve rot-resistanc
- durability: microbial damage on the fibres is prevented and their functional properties preserved; the useful life of a consumer article is considerably longer
- comfort: treated textiles are protected from developing unpleasant odours and thus offer greater use comfort
- broad spectrum of antimicrobial activity
- suitable for all substrates
- good thermal and chemical stability
- good compatibility with numerous textile chemicals (fluorocarbons, binders, softeners, etc.)
- water-based formulation, free from organic solvents
- free from AOX
-.skin compatibility tested acc. to cytotoxicity test, DIN EN ISO (10993-5) Institute Hohenstein
- accepted for Oeko-Tex Label, Standard 100, Class I-IV
- EPA Reg. No. 3090-221
- Allergy UK approved

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Characteristics

Composition	Pyrithione derivate
Commercial forms	25 kg jerry cans / 150 kg in drums
pH value	8.3 - 9.3 at 20 °C
Ionic character	Non-ionogenic
Density at 20°C	1.05 - 1.13 kg/dm³ at 20°C
Flashpoint	No flashpoint up to boiling point.
Appearance	White to beige dispersion, to be dosed and pumped easily.
Solubility	Can be dispersed in water.
Compatibility*	Principally good compatibility with other products like resins, binder systems, fluorocarbons and other finishing textile chemicals. Exposition to UV rays might lead to yellowing which is mostly temporary. The antimicrobial effect remains fully intact. Colouring effect due to some heavy metalions is possible. Compatibility and effects of specific recipes have to be tested before industrial production.
Fastness*	Fastness to light and perspiration.
Temperature stability	Drying/fixing ideally below 180°C. Thermal treatment to be carried out as carefully as possible.
Ecology	Degradable in biological waste water treatment plants.
Skin tolerance	The concentrated commercial liquid form irritates eyes and skin (wear gloves and eye protection). Ready treated articles, however, have an outstanding skin tolerance. Active substances are also used in cosmetic articles.

*These statements concerning the compatibility and fastness of the finish are indications of the possibilities known to us for the use of our product and reflect the state of our knowledge at the present time. Specific performance parameters for finished material should, in each case, be assessed by the user before commercial application.

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Concentration

Depending on article end use, finish requirements and basic weight of flat fabric unit. The amount is relative to the dry weight of the textile to be treated.

Concentration related to the weight of flat fabric:

m(Textile g/m2)	Usual demand: Ex: Interior textiles	Usual demand combined effects: Ex: Interior textiles	Higher demand: Ex: Exterior textiles	Very high demand: Ex: rot proof
	2227 on its own	2227 in combination	2227 in combination	2227 in combination
80	1.6	1.8	3.0	3.9
100	1.4	1.6	2.6	3.5
120	1.3	1.4	2.4	3.2
150	1.2	1.3	2.2	2.8
200	1.0	1.1	1.9	2.4
240	0.9	1.0	1.7	2.2
250	0.9	1.0	1.7	2.2
280	0.8	0.9	1.6	2.1
300	0.8	0.9	1.5	2.0
350	0.8	0.8	1.4	1.9

Durable rot-proof protection can be achieved by using the higher recommended amount of the product together with a hydrophobing agent and a binder system. Application concentration > 2% can lead to yellowing.

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Padding: *Use concentration in g/l in relation to textile weight*

Application [%]	Liquor pick-up [%]								
	40	50	60	70	80	90	100	110	120
	g/l Bath concentration								
0.8	20.0	16.0	13.3	11.4	10.0	8.9	8.0	7.3	6.7
1.0	25.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3
1.2	30.0	24.0	20.0	17.1	15.0	13.3	12.0	10.9	10.0
1.4	35.0	28.0	23.3	20.0	17.5	15.6	14.0	12.7	11.7
1.6	40.0	32.0	26.7	22.9	20.0	17.8	16.0	14.5	13.3
1.8	45.0	36.0	30.0	25.7	22.5	20.0	18.0	16.4	15.0
2.0	50.0	40.0	33.3	28.6	25.0	22.2	20.0	18.2	16.7
2.2	55.0	44.0	36.7	31.4	27.5	24.4	22.0	20.0	18.3
2.4	60.0	48.0	40.0	34.3	30.0	26.7	24.0	21.8	20.0
2.6	65.0	52.0	43.3	37.1	32.5	28.9	26.0	23.6	21.7
2.8	70.0	56.0	46.7	40.0	35.0	31.1	28.0	25.5	23.3

Application

Bath/preparation

- Prepare total quantity of water.
- Add the corresponding amount of wetting agent under stirring .
- Add corresponding additional chemicals, also under stirring.
- Stir Sanitized® TH 22-27 shortly before use.
- Add corresponding amount of undiluted Sanitized® TH 22-27 under stirring.
- Stir once more until a homogeneous distribution in the whole bath is achieved.
- The thus prepared bath should be used up within one day, preserving the homogeneous state.

Padding

The product can be applied at any usual pick-up ratio. Best results are obtained at a slightly acidic pH value. Sanitized® TH 22-27 is not sensitive from acidic to slightly basic pH values.

Foaming

Sanitized® TH 22-27 is applied in the foaming bath according to the instructions for the foaming agent. In order to achieve a good penetration and a homogeneous finish on heavy and mediumweight fabrics the application should be carried out on the fabric in humid state. Initial humidity of 10-30% has proved to be most efficient.

Coating

Sanitized® TH 22-27 can be mixed in coating masses and thus be applied to the substrate. The influence on viscosity should be checked in pre-trials. The concentration should be chosen in relation to the dry weight of the coated textile.

Further treatments

The goods are extracted and dried without rinsing. The thermal exposure during drying and curing should be minimised. Keep the drying time as short and the drying temperature as low as possible. Condensation is not necessary.

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Microbiological Tests

In order to check the antimicrobial effectiveness on the treated textiles, the following test methods are recommended:

Hygiene protection:	Agar diffusion method	bacteria
Material protection:	Agar diffusion method	yeasts, microfungi

Further information on these test methods can be supplied by the local Clariant affiliate

Sanitized® quality seal

With a simple licence agreement we transfer the rights to use the Sanitized® quality seal to you. Only substrates corresponding with the SANITIZED standard are allowed to be distinguished with the quality seal. The Sanitized® seal stands for antimicrobial protection. Dust mite effects have to be mentioned separated from the Sanitized® brand. For details please check Sanitized® standard.

Trademark

Please ask for the detailed SANITIZED documentation „Licence Agreements".

Storage Handling

Storage stability

12 months from delivery in original sealed containers.

Temperature stability

Up to 50°C. Do not expose to frost (aqueous dispersion).

Further safety and ecological data are given in the separate MSDS.

Sanitized® is a trademark which is registered in numerous countries. All statements in communications regarding the technical application of our products refer to the possibilities for their use, as known to us, and reflect the current state of our knowledge.

Due to the numerous possible application variations in the industrial practice and the necessarily limited number of application examples that have been prepared, this information is given without obligation or liability of any kind on our part. Safety data and instructions can be obtained either from the technical information about our products or are available on request.

Before every application of this product it must first be ensured whether its intended use conforms to legal requirements, whether an official notification or registration is required, that there are not undesired effects in the application of the products or use of the treated material and whether any special precautions have to be taken for the protection of the plant personnel or the environment.