

Technical Datasheet

HeiQ Pure TF

High performance antimicrobial finish

Uses

HeiQ Pure TF provides antimicrobial functionality to textiles processed through padding application.

HeiQ Pure TF enables enhanced freshness, odor-free properties as well as greater comfort and protection to textiles.

The product is suitable for both synthetic, cellulosic & lyocell fabrics and their blends. Fabrics containing wool and viscose may interact with the silver in the *HeiQ Pure TF* and therefore show reduced or no antimicrobial effect.

Suitable applications for fabrics treated with *HeiQ Pure TF* are e.g. sportswear, active wear, work wear, lingerie, medical textiles and home textiles.

Benefits

- ✓ Natural active ingredient silver compounded and bonded in a unique form with amorphous silica
- ✓ Reliable antimicrobial performance against all relevant types of bacteria.
- ✓ Best-in-class wash-fastness and durability.
- ✓ Suitable for padding/foulard processes using one-step application.
- ✓ No significant impact on handle.
- ✓ Application compatibility with moisture management and oleo- and hydrophobic chemistry.
- ✓ Environmentally sound technology.
- ✓ Sustainable - better effect for less silver added than competing products.
- ✓ EU BPD, Directive 98/8/EC and REACH compliant
- ✓ Oeko-tex Standard 100, class I – IV listed.
- ✓ Bluesign listed.
- ✓ Unproblematic handling of wastewater for sewage plants.

Application instructions

HeiQ Pure TF can be applied to fabrics using various standard processes in mills:

- ✓ Padding; preferably by dry-on-wet
- ✓ Foaming

For exhaust application HeiQ recommends using *HeiQ Pure EH*.

Advice for best practice

- The *HeiQ Pure TF* product is a dispersion and will show settling after prolonged storage, however solids are easily re-suspendable.
- **Stir the product thoroughly for at least 5 minutes prior to use, using best available mixing equipment.**
- After mixing the product for application, application liquor should be used within 6 hours. Stir application liquor thoroughly prior to use.
- *HeiQ Pure TF* can be used together with other finishing agents in one finishing formulation (e.g. adding softener in same bath as *HeiQ Pure TF*). The compatibility of the *HeiQ Pure TF* with other products has to be tested with each product.
- If other products in the recipe contain anionic chemistry the evaluation of compatibility and effects has to be pretested.

Product data

Property	Value	Range	Units
Product appearance	Brown liquid dispersion	-	-
Active content	450 – 750	-	mg/kg
Density at 20 °C	1.0	± 0.1	g/cm ³
pH	7.0	± 1.0	-
Viscosity	< 1'000	-	mPa·s
Ionogenic character	cationic	-	-

General Product Usage Guidelines

Use biocides with care. Read labels and product information carefully before usage. *HeiQ Pure TF* serves exclusively as protection for textiles and fabrics against microbes. It provides textiles with durable protection against microbes however does not protect the user of the textile against any bacteria. The application and usage of the product onto textiles must adhere to local laws and regulations

Although *HeiQ Pure TF* provides a very broad protection against various organisms, including some that are pathogen, no health claims are made or implied for the *HeiQ Pure TF* product or its applications.

Precautions

Ensure to adhere to the safety precautions described in the MSDS when using the *HeiQ Pure TF*.

Side effects

No side-effects should be expected when using the *HeiQ Pure TF* if professional care is taken and the MSDS guidelines are adhered to.

Wastewater guidelines

Tests in conventional water treatment plants have shown that a concentration of 50 g *HeiQ Pure TF* per liter waste water will not have any impact on wastewater treatment plants. The undiluted form of *HeiQ Pure TF* could potentially be harmful and cause long-term harm to water organisms. Ensure you adhere to all local laws and regulations.

Disposal

HeiQ Pure TF should not be disposed of into the environment in its concentrated form. Waste should be collected and should be disposed of as chemical waste with consideration for local laws and regulations. The original packaging container should not be reused and should also be disposed of properly.

Storage

In order to guarantee the functionality of the product, make sure not to use the product *HeiQ Pure TF* after its expiry date. Optimal storage temperature is 15-25°C (room temperature). Prolonged storage in temperatures exceeding 40°C should be avoided.

Transportation

HeiQ Pure TF is classified as dangerous transportation goods under the classification UN 3082, environmentally hazardous liquid substance, liquid, n.o.s. (silver dispersed), 9, III, (E).

Product application (Padding)

HeiQ Pure TF can be added to a finishing bath typically **with 20 – 40 g/kg fabric (= 2 to 4 % on weight of fabric)**. The compatibility of the *HeiQ Pure TF* with other finishing products should be tested in advance.

Remark: *The final textile article for export to the United States may contain a maximum of 19 ppm by weight of silver which means a maximum HeiQ Pure TF dosage of 3 % on weight of goods (= 30 g/ kg fabric or e.g. 42.5 g/l in case of a pick-up of 70%).*

Guidelines for Optimal Performance and Wash-fastness

In order to achieve guaranteed performance and wash-fastness the following is strongly recommended:

- **No softeners, hydrophilic agents, lubricants** or other finishes can be present on the textile surface before applying the *HeiQ Pure TF*. Any required softeners or other finishes should be applied together with the *HeiQ Pure TF* in one bath.
- Preferably utilize **wet-on-dry** processing.
- Prepare the bath formulation immediately before use and keep the preparation bath under gentle **stirring**. Before taking product from the drum stir thoroughly first for several minutes

Recommended Bath Formulations Padding (Dry-on-Wet processing)

Ingredient:	Supplier	Activity	Fabric pick-up			
			40%	60%	80%	100%
<i>HeiQ Pure TF</i>	HeiQ	Low loading	50 g/L	33 g/L	25 g/L	20 g/L
		High loading	100 g/L	67 g/L	50 g/L	40 g/L
HeiQ Clean NIW	HeiQ	-	0-2 g/L			

ATTENTION;

Statutory provisions and standard regulations must be observed when handling processing agents. For additional detailed information please refer to the product specific Material Safety Data Sheet.

This technical data sheet provides directions for the application possibilities of the HeiQ products. Any influence on dyes, prints and their fastness properties, degree of whiteness, fabric properties, handle, non-slip, seam resistance and material strength, ageing resistance, odor of finished fabric etc. are under the users own responsibility. Due to the many different textile variations HeiQ is not able to submit a general recommendation. The recommendations provided are in line with HeiQ's present state of knowledge and do not provide any guarantee. Therefore initial internal bulk trials are recommended to verify the functionality and are at the user's sole responsibility. The manufacturer is not liable for damages due to improper application or application against explicit recommendations.

Spray application (not product specific)

Aerosols are generated through the spraying technique and may potentially be hazardous. For this reason spray application can only be safely applied if sufficient ventilation is present at the product application site to prevent spreading of the aerosols into the workplace or using a closed system.

IMPORTANT:

The following supersedes Buyer's documents. Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either HeiQ Materials AG, or its appropriate affiliate. HeiQ warrants that at the time and place of delivery all Products sold to Buyer shall conform to the specifications provided to Buyer by HeiQ. While the information and recommendations included in this publication are, to the best of HeiQ's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN (EXCEPT AS SET FORTH ABOVE REGARDING CONFORMANCE WITH SPECIFICATIONS PROVIDED TO BUYER BY HEIQ) IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights. The Product may be or become hazardous. The Buyer should obtain Material Safety Data Sheets and Technical Data Sheets from HeiQ containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product. Buyer is responsible to comply with all applicable governmental laws, regulations and standards relating to the handling, use, storage, distribution, sales and disposal of, and exposure to the Product. Buyer shall also take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product, and the containers or equipment in which the Product may be handled, shipped or stored as well as application laws and regulations for Product. If you have any queries, kindly contact your local HeiQ representative.

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