



HeiQ Viroblock NPJ03 – Certificates of competence

Proved efficacy and confirmed safety

June 2020

**SWISS
TECH
INSIDE**



Certificate overview

1) Antimicrobial Tests

1) AATCC 100 (Staphylococcus aureus and Candida albicans)

2) Antiviral Tests

1) ISO 18184 (H3N2 Human Influenza A)

2) ISO 18184 (Corona Virus 229E)

3) SARS-CoV-2

4) ISO 20743 with Sendai Virus

3) Skin Compability Tests

1) Human Patch Test

2) Extractable Study: Dynamic airflow conditions

3) Cytotoxicity

4) Listings

1) Oeko-Tex

2) ZDHC- Gateway

3) Bluesign

4) INCI cosmetic grade ingredient

5) USDA (pending)

5) Registrations



Antimicrobial activity of treated textiles

- AATCC TM 100



Determination of antimicrobial activity - AATCC 100

 Situ Biosciences LLC <i>passion for science™</i>	Product Test Laboratory 2141 Foster Ave. Wheeling IL 60090 www.situbiosciences.com 1 - 847 - 483 - 9950	Quality Control Biodegradation Antimicrobials
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Customer Report

Wednesday, October 07, 2015

Project Title

Antimicrobial Testing

ID

0915-BOY-01 -- 1

Entry Date 9/24/2015

Project Summary

The **AATCC TM 100** test method is designed to measure the antimicrobial properties of textile or absorbent material incubated with selected microorganisms. The basis of the test methods is the incubation of the microorganism inoculum in contact with the test sample for a duration of up to 24 hours without drying. Following this exposure, the inoculated microorganisms are recovered and the concentration of the organisms is determined. *Candida albicans* was tested according to the standard method, culturing *C. albicans* prior to testing was conducted as required by the organism.

The antimicrobial performance is determined by comparison of the recovered organisms from the test samples at time 0, and treated material after selected time points and is reported as a percent value relative to the control sample material.



Determination of antimicrobial activity - AATCC 100

Result Table *

Test Method AATCC 100 Assessment of Antibacterial Finishes on Textile Materials

Sample # 1 TBD Fabric

	Interval	Result
Inoculum <i>C. albicans</i> (10231)		
<i>Notes Section</i>		
replicate 1	24 hr	99.68 % Reduction
replicate 2	24 hr	99.91 % Reduction
replicate 3	24 hr	99.86 % Reduction
Inoculum <i>S. aureus</i> (6538)		
<i>Notes Section</i>		
replicate 1	24 hr	99.99 % Reduction
replicate 2	24 hr	99.99 % Reduction
replicate 3	24 hr	99.99 % Reduction



Antiviral Activity of textile products

- ISO 18184, ISO 20743
(modif. for sendai virus)



Determination of antiviral activity - ISO 18184

Nonwoven* material for disposable masks treated with HeiQ Viroblock NPJ03:

ID	Agent	Log reduction	% reduction
LS20-00319-6	H3N2 (Human Influenza A)	4.72	99.99%

The HeiQ ViroblockNPJ03 treated nonwoven material shows **excellent antiviral efficacy!**





Determination of antiviral activity - ISO 18184



广东省微生物分析检测中心

GUANGDONG DETECTION CENTER OF MICROBIOLOGY
分析检测报告
REPORT FOR ANALYSIS



报告编号 (Report No.): 2020FM03839R06 校验码 (Verification Code): 40562378

样品名称 Name of Sample	LS20-00319-6	检测类型 Test Type	委托检测
委托单位 Applicant	瑞士海屹科材料有限公司上海代表处	地址 Address	上海市徐汇区裕德路 168 号徐汇商务大厦 2011
样品来源 Sample Source	委托方送检	样品数量 Sample Quantity	1 片 1 PIECE OF FABRIC SAMPLE
样品规格和批号 Spec and Lot No of Sample	NONWOVEN MATERIALS TREATED WITH VIRICIDAL ZINC VIBROBLOCK 20, FA2040	样品状态和特性 State and Characteristic	片状
接样日期 Sample Received Date	2020-03-03	检测完成日期 Completion Date	2020-04-01
检测依据和方法 Test Standard and Method	ISO 18184:2014		
检测项目 Item Tested	抗病毒活性 ANTIVIRAL EFFICACY		
检测结论 Test Conclusion	该样品所检项目的实测数据见本检测报告续页。 PLEASE FIND IN FOLLOWING PAGES THE TEST RESULT.		
备注 Remarks	生产厂家: 瑞士海屹科材料有限公司 (由委托方提供)		



制表: 吴秋芬
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Approver

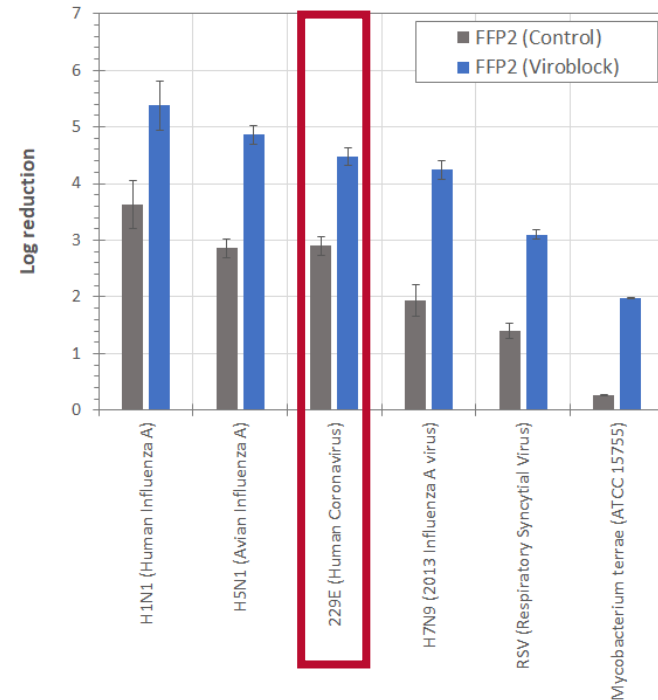
报告编号 (Report No.): 2020FM03839R06

NAME OF VIRUS 病毒名称	EXPERIMENT ID 实验序号	CONTROL CONDITION AT ZERO HOUR 对照样接种孵育 0h 后 病毒滴度的对数值 (lgTCID ₅₀ /瓶)	CONTROL CONDITION AT 2 HOURS 对照样接种孵育 2h 后 病毒滴度的对数值 (lgTCID ₅₀ /瓶)	FABRIC SAMPLE AT 2 HOURS 试样接种孵育 2h 后病 毒滴度的对数值 (lgTCID ₅₀ /瓶)
INFLUENZA H3N2 甲型流感病毒 H3N2 MDCK 细胞	1	6.63	6.42	<1.8
	2	6.59	6.50	<1.8
	3	6.59	6.63	<1.8
lgTCID ₅₀ /瓶 平均数 AVERAGE		6.60	6.52	<1.8
抗病毒活性值 LOG REDUCTION	>4.72			
抗病毒活性率 (%) % REDUCTION	>99.99			



Determination of antiviral activity - ASTM F2101

Study ID	Agent	Log reduction			% reduction	
		Control	HeiQ Viroblock	Δ *	Control	HeiQ Viroblock
798-110	H1N1 (Human Influenza A)	3.63	5.38	>50x	99.9766 %	99.9996 %
798-111	H5N1 (Avian Influenza A)	2.86	4.86	100x	99.862%	99.999%
798-112	229E (Human Coronavirus)	2.90	4.48	>30x	99.874%	99.997%
798-114	H7N9 (2013 Influenza A)	1.93	4.24	>200x	98.825%	99.994%
798-115	RSV (Respiratory Syncytial Virus)	1.40	3.10	>50x	96.02%	99.92%
798-116	Mycobacterium terrae (ATCC 15755)	0.26	1.98	>50x	45.05%	98.95%



HeiQ Viroblock FFP2 masks* show **greatly (>30 times)** improved reduction in virus infectivity.

Effective against key virus types: H1N1, H5N1, H7N9, Coronavirus (229E), and RSV



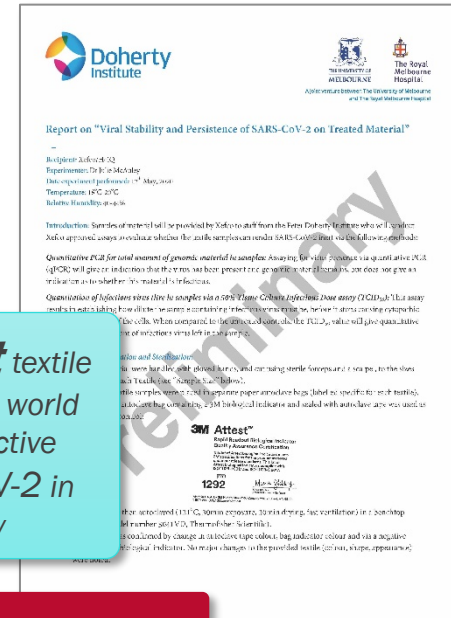
Strong antiviral effect on SARS-CoV-2 (COVID-19)

- 100% polyester woven treated with **HeiQ Viroblock NPJ03**
- Testing against SARS-CoV-2, an enveloped virus from the coronavirus family that causes COVID-19
- Two laboratory test methods were used to assess the residual infectivity of virus remaining on inoculated fabric samples after a contact time of 30 minutes:

Test A	Sample	Avg. Log TCID ₅₀ /ml	Log reduction *	% reduction *
		Inoculum	5.9	
	HeiQ Viroblock treated sample	0.0	5.9	>99.999%

Test B	Sample	Avg. Log TCID ₅₀ /ml	Log reduction *	% reduction *
		Inoculum	5.0	
	HeiQ Viroblock treated sample	1.0	4.0	99.99%

* Reduction relative to inoculum values after 30 minutes

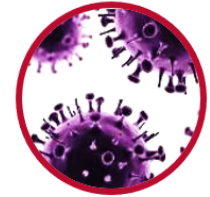


One of the first textile technologies in the world to be proven effective against SARS-CoV-2 in the laboratory

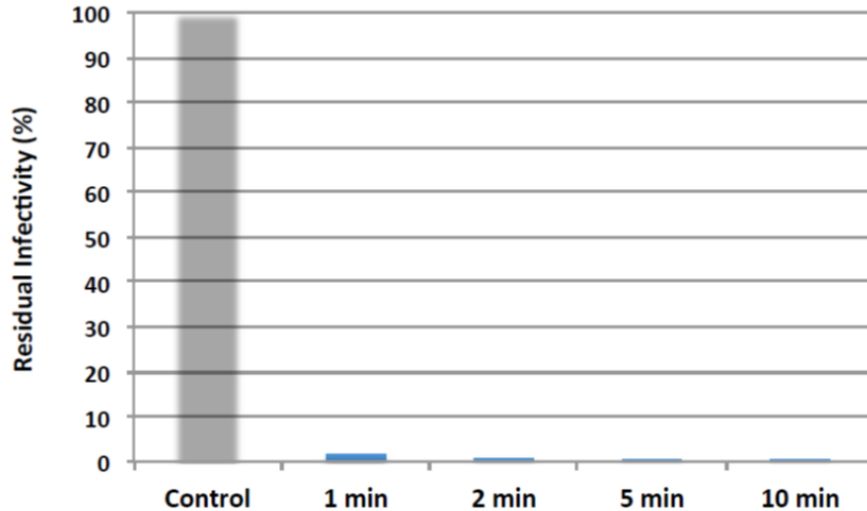
ANTIVIRAL effect demonstrated against **SARS-CoV-2** within **30 minutes**



Instantaneous Antiviral Effect on Sendai Virus



- Nonwoven fabric treated with **HeiQ Viroblock NPJ03**
- The residual virus infectivity tested according to the modified ISO 20743 method (Sendai virus)



Inhibition % --- 98.3 99.2 99.6 100.0

RAPID ANTIVIRAL effect demonstrated within 2 to 5 minutes



Skin compability

- Human Patch Test, Dynamic Airflow Test & Cytotoxicity



Human patch test

HeiQ Viroblock NPJ03 treated fabric:

Human Patch Test

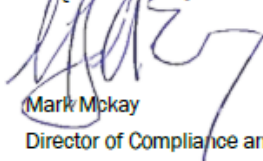
Dear Valued Customer,

By means of this letter we inform you that HeiQ Viroblock NPJ03 treated fabric has been DERMATOLOGICALLY TESTED at Farcoderm srl (in collaboration with the University of Pavia) and demonstrated a perfect skin compatibility.

The subsequent test report sets out that the HeiQ Viroblock NPJ03 treated fabric shows to be **"NON IRRITANT"**.

In reference to the test: "Fabric sample 8" is a polypropylene non-woven fabric sample that was finished with the surface treatment "HeiQ Viroblock NPJ03".

HeiQ Materials AG



Mark McKay

Director of Compliance and Quality



Human patch test



In collaboration with:
University of Pavia
Prof. FULVIO MAZZATECO
Laboratory of Pharmacobiochemistry
Pharmacology and Toxicology Division

REPORT ON A HUMAN PATCH TEST

48 hour closed patch test under occlusion

Skin test to evaluate potential skin irritation after contact with a non-woven fabric

HEIQ MATERIALS AG

FABRIC SAMPLE "8"

Table 1 - Clinical score of skin reactions

No erythema	0
Light erythema (hardly visible)	1
Clearly visible erythema	2
Moderate erythema	3
Serious erythema (dark red with possible formation of light scars)	4
No oedema	0
Very Light oedema	1
Light oedema	2
Moderate oedema (about 1 mm raised skin)	3
Strong oedema (extended swelling even beyond the application area)	4

Table 2 - Classification of the medium irritation index (according to the amended Draize classification).

Mean Irritation Index (IIM)	Product classification
< 0,5	non irritating
from 0.5 to 2.0	slightly irritating
from 2.0 to 5.0	moderately irritating
from 5.0 to 8.0	highly irritating

RESULTS

Summary of the data obtained and evaluation of the product irritation potential

OEDEMA AND ERYTHEMA REACTIONS

Panellist name	Sex	ERYTHEMA 15'	OEDEMA 15'	ERYTHEMA 1h	OEDEMA 1h	ERYTHEMA 24h	OEDEMA 24h
1 D046G	M	0	0	0	0	0	0
2 D004G	F	0	0	0	0	0	0
3 G032T	F	0	0	0	0	0	0
4 P093C	F	0	0	0	0	0	0
5 S030E	F	0	0	0	0	0	0
6 D041L	F	0	0	0	0	0	0
7 S093S	M	0	0	0	0	0	0
8 L025G	M	0	0	0	0	0	0
9 L109C	F	0	0	0	0	0	0
10 P090D	M	0	0	0	0	0	0

MEAN VALUES FOR OEDEMA AND ERYTHEMA

IIM Er 15'	IIM Ed 15'	IIM Er 1h	IIM Ed 1h	IIM Er 24h	IIM Ed 24h
0,00	0,00	0,00	0,00	0,00	0,00



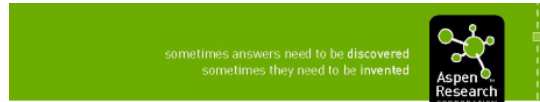
Extractable study: Dynamic airflow condition

3.2 Summary: Extractables study

- Purpose: Assess potential for FFP2 masks treated with Viroblock to release particulates and/or components of the treatment during conditions of dynamic airflow through the mask.
- Testing was conducted using a custom protocol. Test mask samples were mounted and sealed within a test chamber and subject to a constant airflow for a period of 8 hours. Periodic sampling of the air exiting the mask samples were analysed for total particulates and also presence of chemical compounds present in the mask treatment.
- Additional analysis was performed to quantify the presence of chemical compounds in the mask treatment.
- **FFP2 masks treated with Viroblock subject to dynamic airflow conditions over a period of 8 hours did not show release of particulates or chemical compounds into the airstream exiting the mask.**



Extractable study: Dynamic airflow condition



Extractables from Facemasks – Dynamic Flow Conditions

Aspen Project No. A47347

Prepared for

**WuXi, AppTec, Inc.
Janine Viveiros
2540 Executive Dr.
St. Paul, MN 55120**

aspen research corporation
8401 jefferson highway
maple grove, mn 55369

CONFIDENTIAL REPORT

Samples Tested

Sample Description	ARC ID	Date Received	Date(s) Analyzed
Control FFP2 masks, lot VB-DEV-FEB-2013 (4 masks provided)	47347-5	4/1/13	4/9/13 – 4/10/13
Viroblock Test FFP2 masks, lot VB-DEV-7-FEB-2013 (7 masks provided)	47347-6	4/1/13	4/11/13 – 4/15/13

The results presented in this report apply only to the samples tested. Unless noted otherwise, the samples were received in good condition.



Cytotoxicity

3.3 Summary: Cytotoxicity

- Purpose: Assess *in vitro* toxicity of FFP2 masks treated with Viroblock towards mammalian cells.
- Method based on an agarose overlay assay according to ISO 10993-5:2009 ⁶ with L-929 mouse fibroblast cells. Testing conducted under GLP study design and protocol.
- **FFP2 masks treated with Viroblock were concluded to be non-cytotoxic.**

Cytotoxicity



FINAL STUDY REPORT

STUDY TITLE: ISO Agarose Overlay
Using L-929 Mouse Fibroblast Cells

PROTOCOL NUMBER: 140150-17

TEST ARTICLE IDENTIFICATION: FFP2 facemasks
Lot # VB-DEV-7FEB-2013-0

PERFORMING LABORATORY: WuXi AppTec, Inc.
2540 Executive Drive
St. Paul, MN 55120

SPONSOR: VIROBLOCK SA
Chemin des Aulx 18
Plan-les-Quates CH-1228

STUDY NUMBER: 182077

CLIENT MNEMONIC: VRB01

RESULT SUMMARY: The test article is considered **non-cytotoxic** under the conditions of this test.

Table 2: Scoring

Grade	Reactivity	Description of Reactivity Zone
0	None	No detectable zone around or under specimen.
1	Slight	Some malformed or degenerated cells under specimen.
2	Mild	Zone limited to area under specimen.
3	Moderate	Zone extending specimen size up to 1.0 cm.
4	Severe	Zone extending farther than 1.0 cm. beyond specimen.

Table 3: Test Results

Test Article	Cytotoxic Score		
	Plate 1	Plate 2	Plate 3
Test Article	1	1	1
Positive Control	3	3	3
Negative Control	0	0	0
Cell Control	0		

ANALYSIS AND CONCLUSION

The positive control score was '3' and the negative control score was '0' indicating a valid test. The test article was scored at '1' and is considered **non-cytotoxic** under the conditions of this test.



Listings

- Oeko-Tex, Bluesign & ZDHC Gateway



Oeko-Tex

- HeiQ Viroblock NPJ03 is listed for Oeko-Tex

https://www.oeko-tex.com/en/apply-here/active-chemical-products/accepted-acps?tx_solr%5Bq%5D=heiQ

Name of the product	Country	Manufacturer	Type of ACP	Type of Chemical	Product class
HeiQ Viroblock NPJ03	CH	HeiQ Materials AG, Bad Zurzach	Products with biological activity	Auxiliary	I-IV

Product class I: Articles for babies and toddlers

Product class II: Articles with direct contact to the skin

Product class III: Articles without direct contact to the skin

Product class IV: Home textiles



Bluesign

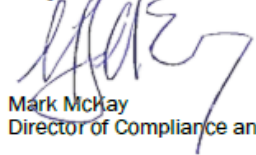
Product: HeiQ Viroblock NPJ03
Status: Filed: In Homologation



HeiQ Materials hereby informs customers that for HeiQ Viroblock NPJ03; whilst bluesign approval is not yet finalised this product is now in the process for homologation according to the bluesign® Criteria.

HeiQ anticipates no adverse issues to arise during this process and will update partners immediately once the assessment is completed and the product gains its official bluesign® approval.

HeiQ Materials AG



Mark McKay
Director of Compliance and Quality

HeiQ Materials AG is a bluesign® System Partner



ØZDHC

HeiQ Materials AG hereby declares its commitment to the ØZDHC initiative and our intention to support all our clients in adherence to the **Roadmap to Zero Discharge of Hazardous Chemicals**.

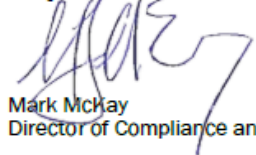
Manufacturing Restricted Substances List (MRSL), version 2, Jan 2020.

Declaration

Product: HeiQ Viroblock NPJ03

With regards to the Manufacturing Restricted Substances List; HeiQ Materials AG can state that provided the above product is applied and used according to our recommendations it may be used for manufacture of textiles and articles, which will meet the criteria for compliance with the ZDHC MRSL 2020 limits and restrictions. Listing in the ZDHC Gateway is pending.

HeiQ Materials AG



Mark McKay
Director of Compliance and Quality





INCI cosmetic grade ingredient



Via N.Sauro, 11 (Loc. Ponte Giurino)
24030 BERBENNO (BG) - Italy
tel +39 035-4195181 fax + 39 035-4824837
info.spe@specialities.it
C.F., p.Iva e Reg.Imp. BG 02310010166
REA n.279484 – Cap.Soc.€ 100.000,00 i.v.
Codice SDI : W7YVJK9



Berbenno, 25 June 2020

HeiQ Materials AG
Ruetistrasse 12
8952 Schlieren (Zurich)
Switzerland

Ref: VIROBLOCK NP J03 – INCI COMPONENTS

We declare that all the components of the product VIROBLOCK NP J03 are included in the INCI database.
The documentation is available for specific requests.

Belli Fabrizio

- All components of HeiQ Viroblock NPJ03 are included in INCI () database
- HeiQ Viroblock NPJ03 is 100% made of cosmetic ingredients



Bio-based ingredients (USDA application pending)



Beta Analytic
TESTING LABORATORY

Beta Analytic Inc
4905 SW 74 Court
Miami, Florida 33155
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2005-Accredited Testing Laboratory

Summary of Results - % Biobased Carbon Content
ASTM D6866-20 Method B (AMS)

Certificate Number: 449044501200110513
Validation: *Chris Patrick*

Submitter	Raso Renzo
Company	HeiQ Materials AG
Date Received	June 18, 2020
Date Reported	June 24, 2020
Submitter Label	HeiQ Viroblock NPJ03

RESULT: 72 % Biobased Carbon Content (as a fraction of total organic carbon)

Laboratory Number	Beta-561206
Percent modern carbon (pMC)	71.54 +/- 0.2 pMC
Atmospheric adjustment factor (REF)	100.0; = pMC/1.000



Package received - labeling COC



View of content (1mm x 1mm scale)



Representative sample analyzed (1mm x 1mm scale)

Disclosures: All work was done at Beta Analytic in its own chemistry lab and AMS. No subcontractors were used. Beta's chemistry laboratory and AMS do not react or measure artificial C 14 used in biomedical and environmental AMS studies. Beta is a C14 tracer-free facility. Validating quality assurance is verified with a Quality Assurance report posted separately to the web library containing the PDF downloadable copy of this report.

Precision on the RESULT is cited as +/- 3% (absolute). The cited precision on the analytical measure (pMC) is 1 sigma (1 relative standard deviation). The reported result only applies to the analyzed material. The accuracy of the RESULT relies on the measured carbon in the analyzed material having been in recent equilibrium with CO2 in the air and/or from fossil carbon (from living more than 40,000 years ago such as petroleum or coal). The RESULT only applies to relative carbon content, not to relative mass content. The RESULT is calculated by adjusting pMC by the applicable "Atmospheric adjustment factor (REF)" cited in this report.

- HeiQ Viroblock NPJ03 is 72% bio-based
- USDA bio-preferred label, application pending

RESULT: 72 % Biobased Carbon Content (as a fraction of total organic carbon)



Registrations

US EPA

- 49403-38-81446
- 85249-1-81446

EU BPR

- N-91819 (D)

US FDA

FFR Respirators

- HVP-FFP2-01

<https://www.fda.gov/media/136702/download>

Produktdatenblatt

Datenblatt: Meldung eines Biozid-Produktes nach ChemBiozidMeldeV

Unter Zugrundelegung der von Ihnen gemachten Angaben wurde Ihnen eine mit "N" beginnende Registriernummer zugewiesen. Alle in dem Biozid-Produkt "HeiQ Viroblock NPJ03" enthaltenen Wirkstoffe sind für die gewähltn/Produktart/en in Anhang II der Delegierten Verordnung (EU) Nr. 1062/2014 gelistet. Ohne vorherige Zulassung darf dieses Biozid-Produkt gemäß § 28 Absatz 8 des Chemikaliengesetzes, sofern die weiteren Voraussetzungen ebenfalls erfüllt sind, bis zur Entscheidung der Genehmigung des/der Wirkstoffe auf dem Markt bereitgestellt werden, längstens jedoch bis zum 31. Dezember 2024. Der aktuellen Status der maximalen Verkehrsfähigkeit (ChemBiozidmeldeV) Ihres Biozidproduktes wird Ihnen unter „gemeldetes Biozid-Produkt“ angezeigt.

GEMELDETES BIOZID-PRODUKT

Handelsname:	HeiQ Viroblock NPJ03
Registriernummer:	N-91819
Meldedatum:	04.05.2020
Maximale Verkehrsfähigkeit (ChemBiozidMeldeV):	31.12.2024 [Das Biozidprodukt kann für die Dauer des Genehmigungsverfahrens des Wirkstoffs bzw. des letzten zu genehmigenden Wirkstoffs ohne Zulassung auf dem Markt bereitgestellt werden.]
Hinweis:	
Aktiv:	<input checked="" type="checkbox"/>

WIRKSTOFFE (ANHANG II)

Wirkstoffname	Reaktionsmasse von Titandioxid und Silberchlorid
CAS-Nr.	
EC-Nr.	
PT	9
Produktart	Schutzmittel für Fasern, Leder, Gummi und polymerisierte Materialien

<https://www.baua.de/DE/Biozid-Meldeverordnung/Produktverwaltung/ProduktDetails...> 04/05/2020

BAnA - Biozidmeldeverordnung – Details zum Produkt - Bundesanstalt für Arbeitssch... Page 2 of 2

ACCEPTED FOR REGISTRATION
June 18, 2020 Doc. Id 568170

New York State Department of Environmental Conservation
Division of Field & Hazardous Materials
Pesticide Product Registration

HeiQ Viroblock NPJ03

An antimicrobial additive designed to withstand high temperatures in the manufacture of yarns, filaments, fibers, fiber masterbatches, textile finishes, textile coatings and knitted, woven or nonwoven textile fabrics, intended for commercial and industrial use, in manufacturing, formulating and fabricating of treated article products specified in the use directions.

Active ingredients: Silver *	19.3 %
Other ingredients:	80.7 %
TOTAL:	100.0 %

* includes particles in the size range between 1 and 100 nm.

KEEP OUT OF REACH OF CHILDREN
CAUTION
PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS AND DOMESTIC ANIMALS
Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through skin. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

WORKER PROTECTION
HeiQ Viroblock NPJ03 is packaged in water-soluble packets, which when used correctly, qualify as a closed loading system. Handlers handling this product while it is enclosed in intact water-soluble packets may elect to wear reduced personal protective equipment (PPE) of long-sleeved shirt, long pants, shoes, and socks. Handlers shall exercise care to avoid tearing or puncturing the packaging and releasing HeiQ Viroblock NPJ03 powder. Because there is a chance that accidental release of HeiQ Viroblock NPJ03 powder may occur, handlers should have ready access to additional PPE including a NIOSH approved full-face respirator with high-efficiency or P100 filters or cartridges, gloves, and overalls or a Tyvek® suit during powder handling. The gloves shall be chemically resistant to all of the components of the textile fiber master batch or coating formulations to which HeiQ Viroblock NPJ03 is added.

FIRST AID
IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
IF INHALED: Move the person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.
IF ON SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on product, use, etc. call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to fish, aquatic invertebrates, and birds. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

DIRECTIONS FOR USE
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
This product may not be used for any applications involving food contact, food packaging, or drinking water.
HeiQ Viroblock NPJ03 is an antimicrobial additive for commercial and industrial use. It is designed to be incorporated into materials and intermediate polymer and coating solutions during the manufacturing process to impart durable antimicrobial and preservative activity to manufactured products. The product suppresses the growth of odor, stain, discoloration, degradation or contamination-causing microbes. If microbial activity in the manufacturing product could lead to unpleasant odors, discoloration, deterioration or contamination of the product, then such claims may be made for the manufactured product. Manufactured products incorporating HeiQ Viroblock NPJ03 may not make any public health claims relating to antimicrobial activity unless first obtained an EPA registration for the manufactured product. When incorporated into treated articles, HeiQ Viroblock NPJ03 does not protect users of any such manufactured product or others against food-borne or disease-causing bacteria, viruses, pests or other disease-causing organisms. HeiQ Viroblock NPJ03 does not protect users of any such manufactured product or others against food-borne or disease-causing bacteria, viruses, pests or other disease-causing organisms.

HeiQ Viroblock NPJ03 may be used in materials and intermediate polymer and coating and finishing solutions that may be incorporated into the treated article listed below. For coating and finishing-type applications using solutions, the final textile article may contain a maximum of 0.001% (by weight) of silver. For all other applications, the final textile article may contain from 0.001% to 0.01% (by weight) of silver. Contact HeiQ, Inc., 10000 Acton Avenue, Acton, MA 01701 for additional details of HeiQ Viroblock NPJ03 for individual finished products.



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