Puyang Shengkai Environmental New Material Technology Co., Ltd.
600m North of the Intersection of National Road 106 and Minsheng Road
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HOHENSTEIN
Hohenstein Textile Testing Institute GmbH & Co. KG
Schloss Hohenstein
74357 Bönnigheim
Deutschland

Report no. 22.0002180/1

from 06/05/2022

Your Contact Person	Hua Amanda +86 393 8787195
Order Date	02/03/2022
Period of Testing	06/04/2022 - 14/04/2022

Customer Reference

Certificate number 22.0.06747

Aim of Test	**ECO PASSPORT by OEKO-TEX® Edition 01.2022**
Testing Material	**Textile auxiliaries for dyeing and printing**
Sampling	**The test object was sent to Hohenstein by the client.**

Our Contact Person	Stephen Zhou (Stephen.Zhou@hohenstein.cn) +86 21 2356 8254

Report Approval

This document has been created digitally and is valid without a signature. It has been approved by

Jana Dietrich
(Stv. Teamleiterin OEKO-TEX® | Deputy Team Leader OEKO-TEX®)

Hohenstein Textile Testing Institute · Schloss Hohenstein ·

Summary

Passed ✓

Testing Material

1 Powder; Thiourea Dioxide	
Grouping of chemicals	1.3.24 Reducing agents
Optical property	Opaque
Colour	White
Batch number	41HY22-317
Date of production	2022-3-10

Test Overview

Terms of Use

The results relate only to the samples examined. The measurement uncertainty of the method is already considered while determining limit values, unless otherwise noted. This report must only be reproduced in full and not in extract form. Use of the report in advertising or the publication of free interpretations of the results is only allowed with the express permission of Hohenstein. Only the authorized report is legally binding. The accreditation applies for the methods listed in the annex to the certificate (www.hohenstein.com/en/about-hohenstein/accreditations) – marked [A] in the report.

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List of abbreviations

n.d. = not detectable

LOQ = Limit of quantitation

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Detail Results

Formaldehyde

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
Formaldehyde	n.d.	< 20	< 200
Additional details for this test			

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Total content of (heavy) metals

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
Antimony	< 5	< 5	< 50
Arsenic	< 5	< 5	< 50
Lead	< 5	< 5	< 90
Cadmium	< 5	< 5	< 20
Chromium	15	< 5	< 100
Cobalt	< 5	< 5	< 200
Copper	< 5	< 5	< 250
Nickel	< 5	< 5	< 200
Mercury	< 0.1	< 0.1	< 4.0
Barium	< 5	< 5	< 100
Manganese	< 5	< 5	< 500
Selenium	< 5	< 5	< 20
Zinc	< 5	< 5	< 1500

Additional details for this test

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®
Threshold values for Cr, Co, Cu, Ni, Ba, Mn, Se and Zn do not apply to products containing one of the metals as an inherent part of the molecular structure, (e.g. metal-complex colorants, the double salts of certain cationic dyes or extenders such as barium sulfate).

Polycyclic aromatic hydrocarbons

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
Acenaphthene	n.d.	< 0.50	-
Acenaphthylene	n.d.	< 0.50	-
Anthracene	n.d.	< 0.50	-
Benzo[a]anthracene	n.d.	< 0.50	< 5.00
Benzo[a]pyrene	n.d.	< 0.50	< 5.00
Benzo[e]pyrene	n.d.	< 0.50	< 5.00
Benzo[ghi]perylene	n.d.	< 0.50	-
Benzo[b,k,j]fluoranthene	n.d.	< 0.50	< 5.00
Chrysene	n.d.	< 0.50	< 5.00
Cyclopenta[c,d]pyrene	n.d.	< 0.50	-
Dibenzo[a,h]anthracene	n.d.	< 0.50	< 5.00
Dibenzo[a,e]pyrene	n.d.	< 0.50	-
Dibenzo[a,h]pyrene	n.d.	< 0.50	-
Dibenzo[a,i]pyrene	n.d.	< 0.50	-
Dibenzo[a,l]pyrene	n.d.	< 0.50	-
Fluoranthene	n.d.	< 0.50	-
Fluorene	n.d.	< 0.50	-
Indeno[1,2,3-cd]pyrene	n.d.	< 0.50	-
1-Methylpyrene	n.d.	< 0.50	-
Naphthalene	n.d.	< 0.50	< 10.00
Phenanthrene	n.d.	< 0.50	-
Pyrene	n.d.	< 0.50	-
Sum 24 PAHs	n.d.	-	< 50.00

Additional details for this test

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Result value details:

Benzo[b,k,j]fluoranthene

Benzo[b]fluoranthene, benzo[k]fluoranthene and benzo[j]fluoranthene have not been separated analytically and therefore the calculated value for these substances is given in combination.

Solvent residues

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [%]	**LOQ** [%]	**LV** [%]
1-Methyl-2-pyrrolidone (NMP)	n.d.	< 0.010	< 0.050
N,N-Dimethylacetamide (DMAc)	n.d.	< 0.010	< 0.050
N,N-Dimethylformamide (DMF)	n.d.	< 0.010	< 0.050
Formamide	n.d.	< 0.010	< 0.020

Additional details for this test

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Chlorinated solvents, volatile organic compounds and glycols

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
Dichloromethane	n.d.	< 4.0	< 5.0
Trichloromethane	n.d.	< 4.0	< 10.0
Tetrachloromethane	n.d.	< 4.0	< 10.0
1,1-Dichloroethane	n.d.	< 4.0	< 10.0
1,2-Dichloroethane	n.d.	< 4.0	< 5.0
1,1,1-Trichloroethane	n.d.	< 4.0	< 10.0
1,1,2-Trichloroethane	n.d.	< 4.0	< 10.0
1,1,1,2-Tetrachloroethane	n.d.	< 4.0	< 10.0
1,1,2,2-Tetrachloroethane	n.d.	< 4.0	< 10.0
Pentachloroethane	n.d.	< 4.0	< 10.0
1,1-Dichloroethylene	n.d.	< 4.0	< 10.0
cis-1,2-Dichloroethylene	n.d.	< 4.0	-
trans-1,2-Dichloroethylene	n.d.	< 4.0	-
Sum 1,2-Dichloroethylene	n.d.	-	< 10.0
Trichloroethylene	n.d.	< 4.0	< 10.0
Tetra(per)chloroethylene	n.d.	< 4.0	< 5.0
Sum of the 14 chlorinated solvents	n.d.	-	< 50.0
Methylethylketone	n.d.	< 40.0	< 100.0
Ethylbenzene	n.d.	< 4.0	< 100.0
m-/p-Xylene	n.d.	< 8.0	-
o-Xylene	n.d.	< 4.0	-
Sum Xylene	n.d.	-	< 100.0
Cyclohexanone	n.d.	< 40.0	< 100.0
2-Ethoxyethylacetate	n.d.	< 40.0	< 50.0
1,2,3-Trichloropropane	n.d.	< 40.0	< 100.0
Acetophenone	n.d.	< 4.0	< 100.0
2-Phenyl-2-propanole	n.d.	< 4.0	< 100.0
Bis(2-methoxyethyl) ether	n.d.	< 40.0	< 50.0

	1 [mg/kg]	LOQ [mg/kg]	LV [mg/kg]
Styrene	n.d.	< 4.0	< 100.0
Benzene	n.d.	< 4.0	< 10.0
Toluene	n.d.	< 4.0	< 100.0
2-Ethoxyethanol	n.d.	< 40.0	< 50.0
Ethylene glycol dimethyl ether	n.d.	< 8.0	< 50.0
Methylglycol	n.d.	< 8.0	< 50.0
2-Methoxyethylacetate	n.d.	< 40.0	< 50.0
2-Methoxypropylacetate	n.d.	< 40.0	< 50.0
Triethylene glycol dimethyl ether	n.d.	< 40.0	< 50.0
o-Cresol	n.d.	< 20.0	< 100.0
m-/p-Cresol	n.d.	< 40.0	< 100.0

Additional details for this test

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Result value details:

m-/p-Cresol

m-cresol and p-cresol have not been separated analytically, so that the determined value for these substances is given combined.

Phthalates

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
Benzyl butyl phthalate (BBP)	n.d.	< 50	-
Dibutyl phthalate (DBP)	n.d.	< 50	-
Diethyl phthalate (DEP)	n.d.	< 50	-
Dimethyl phthalate (DMP)	n.d.	< 50	-
Di-(2-ethylhexyl)phthalate (DEHP)	n.d.	< 50	-
Di-(2-methoxyethyl)phthalate (DMEP)	n.d.	< 50	-
Di-C6-8 branched alkylphthalates, C7 rich (DIHP)	n.d.	< 50	-
Di-cyclohexyl phthalate (DCHP)	n.d.	< 50	-
Dihexylphthalates, branched and linear (DHxP)	n.d.	-	-
Di-iso-butyl phthalate (DIBP)	n.d.	< 50	-
Di-iso-hexyl phthalate (DIHxP)	n.d.	< 50	-
Di-iso-octyl phthalate (DIOP)	n.d.	< 50	-
Di-iso-nonyl phthalate (DINP)	n.d.	< 50	-
Di-iso-decyl phthalate (DIDP)	n.d.	< 50	-
Di-n-propyl phthalate (DPrP)	n.d.	< 50	-
Di-n-hexyl phthalate (DHP)	n.d.	< 50	-
Di-n-octyl phthalate (DNOP)	n.d.	< 50	-
Di-n-nonyl phthalate (DNP)	n.d.	< 50	-
Di-n-pentyl phthalate	n.d.	< 50	-
Di-iso-pentyl phthalate	n.d.	< 50	-
Di-pentylphthalates (n-, iso-, or mixed) (DPP)	n.d.	-	-
n-Pentyl-iso-pentyl phthalate (nPIP)	n.d.	< 50	-
Sum phthalates	n.d.	-	< 250
Di-n-undecyl phthalate (DUP)	n.d.	< 50	-

Additional details for this test

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®
Di-C7-11-branched and linear alkylphthalates (DHNUP) are determined by sum of corresponding phthalates.
1,2-Benzenedicarboxylic acid, di-C6-10 alkyl esters are determined by sum of corresponding phthalates.
1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters are determined by sum of corresponding phthalates.

Result value details:

Di-n-undecyl phthalate (DUP)

Di-n-undecyl phthalate (DUP) has no requirements for ECO PASSPORT by OEKO-TEX®.

Siloxanes

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 03.2021

	1 [%]	**LOQ** [%]	**LV** [%]
Octamethylcyclotetrasiloxane (D4)	n.d.	< 0.010	< 0.100
Decamethylcyclopentasiloxane (D5)	n.d.	< 0.010	< 0.100
Dodecamethylcyclohexasiloxane (D6)	n.d.	< 0.010	< 0.100
Additional details for this test			

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Alkylphenols and alkylphenolethoxylates

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 01.2022

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
4-tert-Butylphenol (BP)	n.d.	< 20.0	-
Pentylphenol (PeP)	n.d.	< 20.0	-
Heptylphenol(HpP)	n.d.	< 20.0	-
Octylphenol (OP)	n.d.	< 20.0	-
Nonylphenol (NP)	n.d.	< 20.0	-
Octylphenolethoxylates (OP(EO))	n.d.	< 20.0	-
Nonylphenolethoxylates (NP(EO))	n.d.	< 20.0	-
Sum BP, PeP, HpP, OP, NP	n.d.	-	< 50.0
Sum BP, PeP, HpP, OP, NP, OP(EO), NP(EO)	n.d.	-	< 250.0
Additional details for this test			

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Phenol and chlorinated phenols

The following results were evaluated against the limit values (LV): Threshold values according to ECO PASSPORT by OEKO-TEX®, 01.2022

	1 [mg/kg]	**LOQ** [mg/kg]	**LV** [mg/kg]
2-Chlorophenol	n.d.	< 0.10	-
3-Chlorophenol	n.d.	< 0.10	-
4-Chlorophenol	n.d.	< 0.10	-
Sum Monochlorophenols (MCP)	n.d.	-	< 5.00
2,3-Dichlorophenol	n.d.	< 0.10	-
2,4-/2,5-Dichlorophenol	n.d.	< 0.10	-
2,6-Dichlorophenol	n.d.	< 0.10	-
3,4-Dichlorophenol	n.d.	< 0.10	-
3,5-Dichlorophenol	n.d.	< 0.10	-
Sum Dichlorophenols (DCP)	n.d.	-	< 5.00
2,3,4-Trichlorophenol	n.d.	< 0.10	-
2,3,5-Trichlorophenol	n.d.	< 0.10	-
2,3,6-Trichlorophenol	n.d.	< 0.10	-
2,4,5-Trichlorophenol	n.d.	< 0.10	-
2,4,6-Trichlorophenol	n.d.	< 0.10	-
3,4,5-Trichlorophenol	n.d.	< 0.10	-
Sum Trichlorophenols (TrCP)	n.d.	-	< 2.00
2,3,4,5-Tetrachlorophenol	n.d.	< 0.10	-
2,3,4,6-Tetrachlorophenol	n.d.	< 0.10	-
2,3,5,6-Tetrachlorophenol	n.d.	< 0.10	-
Sum Tetrachlorophenols (TeCP)	n.d.	-	< 0.50
Pentachlorophenol	n.d.	< 0.10	< 0.50
2-Phenylphenol (OPP)	n.d.	< 25	< 100
Phenol	n.d.	< 25	< 100
Additional details for this test			

Parameter hints:

Testing method according to ECO PASSPORT by OEKO-TEX®

Result value details:

2,4-/2,5-Dichlorophenol

2,4-Dichlorophenol and 2,5-Dichlorophenol are not analytically separable, so that the determined value for both substances must be given combined.