

TEST REPORT

Applicant: ZETA GROUP (NZ) LTD
27 TIMBERLY ROAD
MANGERE AUCKLAND 2022
NEW ZEALAND

Number: HKGH02823517

Date: Mar 01, 2022

Attn: VALENTINE CHAN

Submitted sample said to be :
Item Name : **Terra Biodegradable Nappies**
Quantity : 13 pieces
Country of Origin : China
Market : New Zealand

For and on behalf of :
Intertek Testing Services HK Ltd.



Cindy I.K. Chan
Vice President



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Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) REACH Regulation (EC) no. 1907/2006, Annex XVII Item 43 & amendment (EC) no. 552/2009 and (EU) no. 2096/2020 - Azocolourants content ∞	Pass
(2) Document and Information review	See comment enclosed
(3) Carcinogenic dyes	See details enclosed
(4) Allergenic disperse dyes	See details enclosed
(5) ISO 14184-1 :2011 - Formaldehyde content	See details enclosed
(6) Pentachlorophenol (PCP) content	See details enclosed
(7) Tetrachlorophenol (TeCP) content	See details enclosed
(8) Trichlorophenol (TriCP) Content	See details enclosed
(9) ISO 11948-1:1996 Urine-absorbing aids - Part 1 : Whole-product testing	See details enclosed
(10) Chlorine Content of Water Extract	See details enclosed

Decision Rule(s):

When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. <https://intertekhk.grd.by/decision-rule-doc>.
If decision rule already inhered in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "∞" was shown as above table.



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(1) Detection Of Amines Derived From Azocolourants and Azodyes

Test Method : By extraction on cut sample according to the below listed test method(s), followed by Gas Chromatographic - Mass Spectrometric (GC-MS) analysis and confirmed by High-Performance Liquid Chromatography / Diode Array Detector (HPLC/DAD) analysis.

EN ISO 14362-1 : 2017 for Textile Material

Method D:

No.	Forbidden Amine	CAS No.	Result (ppm) (1/2/3)
1	4-Aminodiphenyl	92-67-1	N
2	Benzidine	92-87-5	N
3	4-Chloro-o-toluidine	95-69-2	N
4	2-Naphthylamine	91-59-8	N
5	o-Aminoazotoluene	97-56-3	N
6	2-Amino-4-nitrotoluene	99-55-8	N
7	p-Chloroaniline	106-47-8	N
8	2,4-Diaminoanisole	615-05-4	N
9	4,4'-Diaminodiphenylmethane	101-77-9	N
10	3,3'-Dichlorobenzidine	91-94-1	N
11	3,3'-Dimethoxybenzidine	119-90-4	N
12	3,3'-Dimethylbenzidine	119-93-7	N
13	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	N
14	p-Cresidine	120-71-8	N
15	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	N
16	4,4'-Oxydianiline	101-80-4	N
17	4,4'-Thiodianiline	139-65-1	N
18	o-Toluidine	95-53-4	N
19	2,4-Toluylenediamine	95-80-7	N
20	2,4,5-Trimethylaniline	137-17-7	N
21	o-Anisidine	90-04-0	N
22	p-Aminoazobenzene	60-09-3	N

N = Not detected
 Detection limit = 5 ppm
 Requirement = 30 ppm (max.)

ppm = parts per million = mg/kg

- High Performance Liquid Chromatographic (HPLC) analysis was used to confirm any detected amines.
- The test component with p-aminoazobenzene less than detection limit was tested by EN ISO 14362-1 : 2017 for textile material / EN ISO 17234-1: 2015 for leather material.

Method D : Colourant extraction with Xylene as per EN ISO 14362-1 : 2017 Section 10.1



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Tested Components:

- (1) White non-woven fabric (backsheet of nappies).
- (2) White non-woven fabric (lining of nappies).
- (3) White stuffing material (nappies) (internal).

Decision Rule:

∞ : In the case of levels per amine component is equal or smaller than 30 ppm:
 According to the analysis as carried out, azo colorants which can release one or more of certain listed amines by cleavage of their azo group/s were not detected. The tested sample/component were in compliance with requirement.

In the case of levels per amine component is greater than 30 ppm:
 The analytical result suggests that the commodity submitted has been manufactured or treated using azo colorant/s which can release one or more of certain listed amines by cleavage of their azo group/s at levels greater than 30 ppm. The tested sample/component did not comply the requirement.

Date sample received : Dec 29, 2021
 Test Period : Dec 29, 2021 to Jan 04, 2022

(2) Document and Information review

Comment:

Based on the review of the provided information, there was no indication of latex material, lotion or fragrance being used or introduced into the product. Moreover, the inks being used in the product were indicated to be of water-based.

Date information received : Dec 30, 2021 and Jan 18, 2022
 Review period : Dec 30, 2021 to Jan 19, 2022



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(3) Carcinogenic Dyes

Test method: DIN 54231, by High Performance Liquid Chromatographic (HPLC) analysis.

Compounds	Result in ppm
	(1/2/3)
Disperse blue 1	ND
Basic red 9	ND
Acid red 26	ND
Disperse yellow 3	ND
Direct red 28	ND
Direct blue 6	ND
Direct black 38	ND
Disperse orange 11	ND
Basic violet 14	ND

Remark : ppm = parts per million = mg/kg
ND = Not detected
Detection limit = 15 ppm

Tested components :

- (1) White non-woven fabric (backsheet of nappies) .
- (2) White non-woven fabric (lining of nappies) .
- (3) White stuffing material (nappies) (internal) .

Date sample received : Dec 29, 2021
Testing period : Dec 29, 2021 to Jan 04, 2022



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(4) Allergenic Disperse Dyes

Test Method : DIN 54231, by Liquid Chromatography – Mass Spectrometric (LC-MS) analysis.

Compounds	Result in ppm
	(1/2/3)
Disperse blue 1	ND
Disperse blue 3	ND
Disperse blue 7	ND
Disperse blue 26	ND
Disperse blue 35	ND
Disperse blue 102	ND
Disperse blue 106	ND
Disperse blue 124	ND
Disperse orange 1	ND
Disperse orange 3	ND
Disperse orange 37/76	ND
Disperse orange 149	ND
Disperse red 1	ND
Disperse red 11	ND
Disperse red 17	ND
Disperse yellow 1	ND
Disperse yellow 3	ND
Disperse yellow 9	ND
Disperse yellow 23	ND
Disperse yellow 39	ND
Disperse yellow 49	ND
Disperse brown 1	ND

Remark : ppm = parts per million = mg/kg
ND = Not detected
Detection limit = 15 ppm

Tested components :

- (1) White non-woven fabric (backsheet of nappies) .
- (2) White non-woven fabric (lining of nappies) .
- (3) White stuffing material (nappies) (internal) .

Date sample received : Dec 29, 2021
Testing period : Dec 29, 2021 to Jan 04, 2022



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(5) Free Formaldehyde Content

Test Standard : ISO 14184-1:2011

Tested Component	Result in ppm
(1/2/3)	ND

ND = Not Detected
Detection limit = 5 ppm

ppm = parts per million = mg/kg

Tested Components:

- (1) White non-woven fabric (backsheet of nappies).
- (2) White non-woven fabric (lining of nappies).
- (3) White stuffing material (nappies) (internal).

Date sample received : Dec 29, 2021

Test Period : Dec 29, 2021 to Jan 04, 2022



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(6) Pentachlorophenol (PCP) Content

Test Standard : With reference to BVL B 82.02-8:2001 for textiles, BS EN ISO 17070:2015 for leather, PD CEN/TR 14823:2003 for wood, paper and paper board, and followed by Gas Chromatographic - Mass Spectrometry (GC-MS) analysis

Tested Component	Result in ppm
(1/2/3)	<0.05

Remark :
ppm = parts per million = mg/kg

Tested Components :

- (1) White non-woven fabric (backsheet of nappies) .
- (2) White non-woven fabric (lining of nappies) .
- (3) White stuffing material (nappies) (internal) .

Date sample received : Dec 29, 2021
Testing period : Dec 29, 2021 to Jan 04, 2022

(7) Tetrachlorophenols (TeCP) Content

Test Standard : With reference to BVL B 82.02-8:2001 for textiles, BS EN ISO 17070:2015 for leather, PD CEN/TR 14823:2003 for wood, paper and paper board, and followed by Gas Chromatographic - Mass Spectrometry (GC-MS) analysis

Compound	Result (ppm)
	(1/2/3)
Tetrachlorophenols(TeCP) (Sum of all isomers)	<0.05

Remark :
ppm = parts per million = mg/kg

Tested Components :

- (1) White non-woven fabric (backsheet of nappies) .
- (2) White non-woven fabric (lining of nappies) .
- (3) White stuffing material (nappies) (internal) .

Date sample received : Dec 29, 2021
Testing period : Dec 29, 2021 to Jan 04, 2022



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(8) Trichlorophenol (TriCP) Content

Test method: With reference to BVL B 82.02-8:2001 for textiles, BS EN ISO 17070:2015 for leather, PD CEN/TR 14823:2003 for wood, paper and paper board, and followed by Gas Chromatographic - Mass Spectrometry (GC-MS) analysis

Compound	Result (ppm)
	(1/2/3)
Trichlorophenols(TriCP) (Sum of all isomers)	<0.05

Remark :
ppm = parts per million = mg/kg

Tested Components :

- (1) White non-woven fabric (backsheet of nappies) .
- (2) White non-woven fabric (lining of nappies) .
- (3) White stuffing material (nappies) (internal) .

Date sample received : Dec 29, 2021
Testing period : Dec 29, 2021 to Jan 04, 2022



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(9) Performance test of urine-absorbing aids

Test Standard : ISO 11948-1:1996 Urine-absorbing aids - Part 1 : Whole-product testing

Test procedure :

1. The submitted sample was unfolded and conditioned in an atmosphere of 23°C and 50% relative humidity for 24h.
2. The initial weight of the sample was measured and recorded.
3. The sample was tied on a drainage screen and then immersed to a reservoir which contained test liquid (NaCl with concentration 9g/l) with a depth of 100mm.
4. The sample was soaked for 30 minutes and then the drainage screen with the sample were raised up from the reservoir for 5 minutes in order to allow excess test liquid to drain back under gravity.
5. The weight of sample after absorption was measured and recorded and the absorption capacity was calculated.

Number of samples tested : Five (5) pieces.

Result :

Test data :

Specimen	Initial Weight (g)	After Absorption (g)	Absorption capacity (g)
1	32.9	709.7	676.8
2	33.5	715.0	681.5
3	33.7	725.7	692.0
4	33.1	723.9	690.8
5	34.5	739.1	704.6
Average	33.5	722.7	689.1
Standard Deviation	0.6	11.3	10.7

Date sample received : Dec 29, 2021

Testing period : Dec 29, 2021 to Jan 06, 2022



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(10) Chlorine Content of Water Extract

Test Method: DPD Colorimetric method.

Preparation of test article:

2g inner layer of submitted sample was extracted by 100mL water for 2 hours. Chlorine content of water extract was analysed after condition.

Result : Not detected.

Detection Limit: 0.2 mg/L

Date sample received : Dec 29, 2021

Testing period : Jan 05, 2021 to Jan 06, 2022



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End of report

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