



March 25, 2011
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IPS FI 00587-11

Report to: Kees Kodde
Greenpeace Netherlands
P.O. Box 3946
1001 AS Amsterdam
Netherlands

Sample identification: 5 packages

Date received: February 28, 2011

Test requested: Fiber Identification, Fiber Analysis with Species Percent

Purchase Order: Wire Transfer

Report of Fiber Analyses

Enclosed are the results of the analyses performed on the samples we received with your Test Services Request Form.

The species percentages are for the respective components only, not for the entire sample.

If you have any questions concerning this work, please do not hesitate to contact us.

Signed Walter J. Rantanen
Walter J. Rantanen
Technical Leader, Fiber Sciences
(920) 749-3040 Ext. 127

WJR/bld

Table 1. Fiber Identification of 1. Transformers / Robot fighters

Only a trace of likely tropical in recycled furnish was detected.

Hardwood bleached kraft – Beech, Populus spp., Alder, Blackgum, Yellow-poplar, Oak, Acacia, Eucalyptus, Cherry, Unknown (Suspected Tropical)
Softwood bleached kraft – [Spruce and/or Hemlock], Hard Pine (Except Red & Scotch), Douglas-fir, [White and/or Red Pine]
Softwood mechanical – [Spruce and/or Hemlock], Hard Pine (Except Red & Scotch)
Hardwood chemimechanical – Populus spp.

Table 2. Fiber Identification of 2. Transformers / the ultimate battle

No Mixed Tropical Hardwoods detected.

Hardwood bleached kraft – Principally Eucalyptus with some Maple, Populus spp., Oak, Redgum, Beech, Birch, Alder
Softwood bleached kraft – [White and/or Red Pine], [Spruce and/or Hemlock], Hard Pine (Except Red & Scotch)
Softwood mechanical – [Spruce and/or Hemlock]
Softwood Unbleached Kraft – [White and/or Red Pine]
Hardwood chemimechanical – Populus spp.

Table 3. Fiber Identification of 3. Barbie

No Mixed Tropical Hardwoods detected.

100% Softwood Unbleached Kraft – Hard Pine (Except Red & Scotch)

Table 4. Fiber Identification of 4. Barbie / Fashionistas

Mixed Tropical Hardwoods were detected.

Hardwood bleached kraft – Principally Mixed Tropical Hardwoods with some Birch, Eucalyptus, and Beech

Softwood bleached kraft – Principally Hard Pine (Except Red & Scotch) with some [Spruce and/or Hemlock]

Softwood mechanical – [Spruce and/or Hemlock], Hard Pine (Except Red & Scotch)

Trace of Grass Fiber

Table 5. Fiber Identification of 5. My little Pony / Pinkie Pie

A small amount of Mixed Tropical Hardwoods was detected.

Hardwood bleached kraft – Populus spp., Redgum, Birch, Oak, Maple, Yellow-poplar, Acacia, Unknown Tropical, Eucalyptus

Softwood bleached kraft – Douglas-fir, Hard Pine (Except Red & Scotch), [Spruce and/or Hemlock]

Small amounts of Hardwood chemimechanical – Populus spp.

and Softwood mechanical

and Softwood Unbleached Kraft

Analyzed by WJR

Quality review by BLD

Date(s) of testing March 16 – 24, 2011

Table 6. Fiber Analysis, Including Species Percentages, of 1. Transformers-Robot

Fiber Type	<u>Softwood</u>	Raw Count	<u>135</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>1.00</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>135</u>
		% by Weight	<u>28%</u>

Species:

Principal - Hard Pine (Except Red & Scotch)

Some - Douglas-fir, [Spruce and/or Hemlock], [White and/or Red Pine]

Fiber Type	<u>Hardwood</u>	Raw Count	<u>685</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.45</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>308</u>
		% by Weight	<u>64%</u>

<u>Species</u>	<u>Total Vessels Counted</u>	<u>Calculated Percent By Weight</u>
Eucalyptus	21	≈31%
Mixed Tropical Hardwoods*	11	≈15%
Oak	13	≈14%
Acacia	8	≈11%
Birch	21	≈11%
<u>Populus</u> spp.	36	≈7%
Maple	15	≈4%
Redgum	12	≈3%
Yellow-poplar	7	1-2%
Ash	1	≈1%
Alder	4	≈1%
Blackgum	2	Trace
Basswood	2	Trace

*At least 7 different types detected.

Fiber Type	<u>Softwood</u>	Raw Count	<u>7</u>
Bleaching	<u>Unbleached</u>	Weight Factor	<u>1.25</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>9</u>
		% by Weight	<u>2%</u>

Species:

Principal - Hard Pine (Except Red & Scotch)

Table 6. Fiber Analysis, Including Species Percentages, of 1. Transformers-Robot
(contd.)

Fiber Type	<u>Softwood</u>	Raw Count	<u>14</u>
Bleaching	<u></u>	Weight Factor	<u>1.50</u>
Pulp Process	<u>Mechanical</u>	Final Count	<u>21</u>
		% by Weight	<u>4%</u>

Species:

Principal - [Spruce and/or Hemlock]

Fiber Type	<u>Hardwood</u>	Raw Count	<u>15</u>
Bleaching	<u></u>	Weight Factor	<u>0.70</u>
Pulp Process	<u>Chemimechanical</u>	Final Count	<u>11</u>
		% by Weight	<u>2%</u>

Species:

Principal - Populus spp.

Overall Comments: Traces of Hardwood Bleached Sulfite pulp - Maple and Softwood Bleached Alpha pulp were detected.

Table 7. Fiber Analysis, Including Species Percentages, of 4. Barbie-Fashionistas

Fiber Type	<u>Softwood</u>	Raw Count	<u>101</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>1.00</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>101</u>
		% by Weight	<u>16%</u>

Species:

- Principal - Hard Pine (Except Red & Scotch)
- Some - [Spruce and/or Hemlock]
- Trace - Douglas-fir

Fiber Type	<u>Hardwood</u>	Raw Count	<u>966</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.45</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>435</u>
		% by Weight	<u>70%</u>

<u>Species</u>	<u>Total Vessels Counted</u>	<u>Calculated Percent By Weight</u>
Mixed Tropical Hardwoods*	49	≈74%
Eucalyptus	9	≈14%
Acacia	4	≈6%
Birch	3	≈2%
<u>Populus spp.</u>	8	≈2%
Maple	3	≈1%
Beech	3	less than 1%
Redgum	1	Trace
Blackgum	1	Trace

*At least 10 different types detected.

Fiber Type	<u>Softwood</u>	Raw Count	<u>49</u>
Bleaching	<u></u>	Weight Factor	<u>1.50</u>
Pulp Process	<u>Mechanical</u>	Final Count	<u>74</u>
		% by Weight	<u>12%</u>

Species:

- Principal - [Spruce and/or Hemlock]

Table 7. Fiber Analysis, Including Species Percentages, of 4. Barbie-Fashionistas
(contd.)

Fiber Type	<u>Hardwood</u>	Raw Count	<u>14</u>
Bleaching	<u></u>	Weight Factor	<u>0.70</u>
Pulp Process	<u>Chemimechanical</u>	Final Count	<u>10</u>
		% by Weight	<u>2%</u>

Species:

Principal - Populus spp.

Overall Comments: Traces of Softwood Unbleached Kraft pulp and Grass Fiber Bleached Chemical pulp were detected.

Table 8. Fiber Analysis, Including Species Percentages, of 5. My Little Pony

Fiber Type	<u>Softwood</u>	Raw Count	<u>112</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>1.00</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>112</u>
		% by Weight	<u>24%</u>

Species:

Principal - Douglas-fir, [Spruce and/or Hemlock], [White and/or Red Pine]

Fiber Type	<u>Hardwood</u>	Raw Count	<u>843</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.42</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>354</u>
		% by Weight	<u>74%</u>

<u>Species</u>	<u>Total Vessels Counted</u>	<u>Calculated Percent By Weight</u>
Acacia	12	≈39%
Eucalyptus	4	≈14%
Maple	16	≈11%
Mixed Tropical Hardwoods	3	≈10%
<u>Populus</u> spp.	14	≈6%
Yellow-poplar	10	≈5%
Oak	2	≈5%
Beech	6	≈3%
Alder	5	≈3%
Cherry	3	≈1%
Redgum	2	≈1%
Blackgum	2	≈1%

Fiber Type	<u>Softwood</u>	Raw Count	<u>2</u>
Bleaching	<u>Unbleached</u>	Weight Factor	<u>1.25</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>3</u>
		% by Weight	<u>less than 1%</u>

Species:

Principal - Hard Pine (Except Red & Scotch)

Table 8. Fiber Analysis, Including Species Percentages, of 5. My Little Pony (contd.)

Fiber Type	<u>Softwood</u>	Raw Count	<u>4</u>
Bleaching	<u></u>	Weight Factor	<u>1.50</u>
Pulp Process	<u>Mechanical</u>	Final Count	<u>6</u>
		% by Weight	<u>1%</u>

Species:

Principal - None Identified

Fiber Type	<u>Hardwood</u>	Raw Count	<u>2</u>
Bleaching	<u></u>	Weight Factor	<u>0.70</u>
Pulp Process	<u>Chemimechanical</u>	Final Count	<u>1</u>
		% by Weight	<u>less than 1%</u>

Species:

Principal - Populus spp.

Fiber Type	<u>Grass Fiber</u>	Raw Count	<u>3</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.50</u>
Pulp Process	<u>Chemical</u>	Final Count	<u>2</u>
		% by Weight	<u>less than 1%</u>

Species:

Principal - Unidentified

Method: TAPPI Test Method T 401 om-03 "Fiber Analysis of Paper and Paperboard."

The Species Percentage determination is an internal method of IPS.

Analyzed by KLA & WJR

Quality Review by BLD

Date(s) of testing March 18 - 25, 2011

Notes: These results relate only to the item(s) tested. This test report shall not be reproduced, except in full, without written consent of IPS.