

TECHNICAL REPORT			
Description of samples received:	Ivory leather cutting	BLC Job ref:	AA090 2927 Final
Unique customer reference:	HERMES	Page:	1 of 4

ADDITIONAL INFORMATION			
Contact name:	Roul Hendriks	Date work confirmed:	29/06/2010
Customer Order No:	Roul Hendriks	Date out:	13/07/2010
Supplying:	Not specified	Specification:	Not specified

Testing of upholstery leather

Work requested

To carry out the following tests on the leather sample:-

- APEO/NPEO.
- Azo dyes.
- Cadmium.
- Chromium VI.
- Adhesion of finish.
- Flexing endurance.
- Colour fastness to light.
- PCP.
- Colour fastness to dry, wet and perspiration rubbing.
- Tear strength.
- Thickness of leather.
- Water spotting.
- pH value.

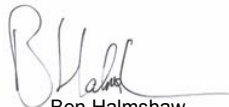
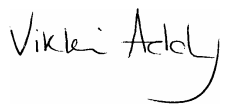
Work carried out

The sample has been tested as described above.

In the absence of a specific requirement the sample has been tested in accordance with the European guidelines for pigmented upholstery leather.

Where necessary the sample was conditioned and tested at 20°C±2°C and 65%±5% relative humidity according to BSEN ISO 2419:2006.

The results obtained have been tabulated on the following page:

<p>To: Roul Hendriks AD Hulst Vof Mandenmaker 9 RB Nieuwkuijk, 5253The Netherlands</p>	<p>This report is based on observations which have been related to information supplied, but on the distinct understanding that neither BLC nor any Officer of BLC is legally responsible therefore. Should any material facts have been withheld, the report may be invalid. Stable samples will be disposed of after 6 months unless otherwise instructed. Tests marked † are not UKAS accredited.</p>	 Ben Halmshaw Head of Section	 Dr Victoria Addy Technical Director
--	--	---	---

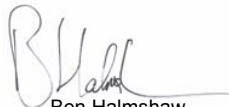
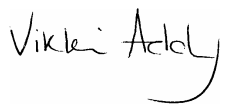
g:\users\general\tech\2009-2010\ad hulst\aa090 2927\aa090 2927 final tech report ad hulst vof.doc

TECHNICAL REPORT

Description of samples received:	<i>Ivory leather cutting</i>	BLC Job ref:	<i>AA090 2927 Final</i>
Unique customer reference:	<i>HERMES</i>	Page:	<i>2 of 4</i>

Test	Requirement	Sample	Sample Result	Pass/Fail
Adhesion of finish BSEN ISO 11644:2003	Minimum 2N/10mm	Cream leather (HERMES)	13.0N/10mm	<i>Pass</i>
Flexing endurance BSEN ISO 5402:2002	No damage after 50,000 cycles		No damage at 50,000 cycles	<i>Pass</i>
Colour fastness to light BSEN ISO 105 BO2	Minimum BWS** 5		> BWS** 5	<i>Pass</i>
Colour fastness to dry rubbing BSEN ISO 11640:1998	Minimum GSR* 4 after 500 cycles		Colour transfer: 4-5 Colour change: 4-5	<i>Pass Pass</i>
Colour fastness to wet rubbing BSEN ISO 11640:1998	Minimum GSR* 3-4 after 250 cycles		Colour transfer: 4-5 Colour change: 4-5	<i>Pass Pass</i>
Colour fastness to perspiration rubbing BSEN ISO 11640:1998 BSEN ISO 11641:2003 (modified)	Minimum GSR* 3-4 after 80 cycles		Colour transfer: 4-5 Colour change: 4-5	<i>Pass Pass</i>
Tear strength BSEN ISO 3377-1:2002	Minimum 20N		32.8N	<i>Pass</i>
Thickness of leather BSEN ISO 2589:2002	No requirement given		1.16 mm	-
Water spotting BSEN ISO 15700:1999	Minimum GSR* 3 (no permanent swelling)		After 30 minutes: GSR* 5 No change After 16 hours: GSR* 5 No change	<i>Pass Pass</i>

*Key to Grey Scale: Rating 5 - no change in appearance, Rating 4 - Slight change in appearance, Rating 3 - Moderate change in appearance, Rating 2 - marked change in appearance, Rating 1 Very marked change in appearance.

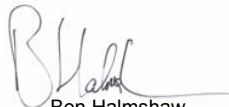
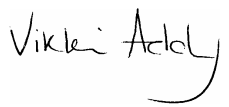
To: Roul Hendriks AD Hulst Vof Mandenmaker 9 RB Nieuwkuijk, 5253The Netherlands	This report is based on observations which have been related to information supplied, but on the distinct understanding that neither BLC nor any Officer of BLC is legally responsible therefore. Should any material facts have been withheld, the report may be invalid. Stable samples will be disposed of after 6 months unless otherwise instructed. Tests marked † are not UKAS accredited.	 Ben Halmshaw Head of Section	 Dr Victoria Addy Technical Director
--	--	---	---

g:\users\general\tech\2009-2010\ad hulst\aa090 2927\aa090 2927 final tech report ad hulst vof.doc

TECHNICAL REPORT

Description of samples received:	<i>Ivory leather cutting</i>	BLC Job ref:	<i>AA090 2927 Final</i>
Unique customer reference:	<i>HERMES</i>	Page:	<i>3 of 4</i>

Environmental and Legislative Tests	Method	Minimum Requirement	Results	Pass/Fail
†APEO sum NPEO and OPEO	BLC Method 7a.7 (Solvent extraction followed by HPLC analysis)	ΣNPEO and OPEO < 100 mg/kg (Detection limit: 1.0mg/kg)	None Detected (<1.0mg/kg)	<i>Pass</i>
Azo dyestuffs (Arylamines)	BLC method 7C.1 based on CEN ISO TS 17234:2003	None detectable (Detection limit: 30.0mg/kg)	None Detected (<30.0mg/kg)	<i>Pass</i>
Chrome VI	BS EN ISO 17075:2007	None detectable (Detection limit: 3.0mg/kg)	None Detected (<3.0mg/kg)	<i>Pass</i>
Formaldehyde	BLC method 7A.9 based on CEN ISO TS 17226-1 (HPLC analysis)	< 75 mg/kg (Detection limit: 0.5 mg/kg)	10.6 mg/kg	<i>Pass</i>
Cadmium	BLC 7D.3 ICP analysis - total digestion	< 100 mg/kg (Detection limit: 1.0 mg/kg)	None Detected (<1.0 mg/kg)	<i>Pass</i>
Penta-, tetra- and tri-chlorophenols (PCP, †TeCP & †TCP)	BLC in-house method 7B.5 (GCMS analysis)	< 3 mg/kg (Detection limit: 0.5mg/kg)	None Detected (<1.0 mg/kg)	<i>Pass</i>
pH	BS EN ISO 4045:2008	Min. 3.2. If the pH value is below 4 or above 10, the diff figure shall be < 0.7	pH = 4.2	<i>Pass</i>

<p>To:</p> <p>Roul Hendriks AD Hulst Vof Mandenmaker 9 RB Nieuwkuijk, 5253The Netherlands</p>	<p>This report is based on observations which have been related to information supplied, but on the distinct understanding that neither BLC nor any Officer of BLC is legally responsible therefore. Should any material facts have been withheld, the report may be invalid. Stable samples will be disposed of after 6 months unless otherwise instructed. Tests marked † are not UKAS accredited.</p>	 Ben Halmshaw Head of Section	 Dr Victoria Addy Technical Director
---	--	---	---

g:\users\general\tech\2009-2010\ad hulst\aa090 2927\aa090 2927 final tech report ad hulst vof.doc

TECHNICAL REPORT			
Description of samples received:	<i>Ivory leather cutting</i>	BLC Job ref:	<i>AA090 2927 Final</i>
Unique customer reference:	<i>HERMES</i>	Page:	<i>4 of 4</i>

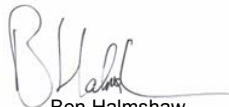
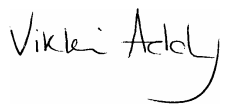
Technical Notes

- Results for restricted substances are based on duplicate analysis.
- Chromium VI - The sample was finely ground, accurately weighed and extracted for 3 hours in phosphate buffer at pH 8.0. Any oxygen present in the extraction solution was displaced using a flow of nitrogen at a rate in excess of 50ml/min. Analysis was carried out by reaction of the extract with diphenylcarbazide as described in CEN ISO 17075:2007 to produce a coloured derivative. This is then quantified using a 4cm cell in a spectrophotometer at 540nm.
- Formaldehyde - The sample was finely ground, accurately weighed, extracted and subjected to analysis as described in the method. Analysis was carried out according to the HPLC analysis of CEN ISO TS 17226:2003, which involves reaction of the formaldehyde with 2,4-dinitrophenylhydrazine to produce a coloured derivative. This was then analysed using High Performance Liquid Chromatography (HPLC). Identification and quantification were done by using retention time data from accurately known standards.
- Lead Testing – The paint/surface coating of the sample was removed by scraping and finely divided. The sample was digested according to the method and analysed using ICP-OES. Quantification was done using intensity data from accurately known standards. The uncertainty of the test method at 600mg/kg is ± 10 mg/kg, and is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.
- Where necessary the sample was conditioned and tested at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and $65\% \pm 5\%$ relative humidity.

Comments

The sample referenced above has complied with the requirements of the BLC Restricted Substances Specification 2009-V2 for the properties requested only. In certain cases these requirements are driven by legislation.

No further testing was carried out.

To: Roul Hendriks AD Hulst Vof Mandenmaker 9 RB Nieuwkuijk, 5253The Netherlands	This report is based on observations which have been related to information supplied, but on the distinct understanding that neither BLC nor any Officer of BLC is legally responsible therefore. Should any material facts have been withheld, the report may be invalid. Stable samples will be disposed of after 6 months unless otherwise instructed. Tests marked † are not UKAS accredited.	 Ben Halmshaw Head of Section	 Dr Victoria Addy Technical Director
---	--	---	---

g:\users\general\tech\2009-2010\ad hulst\aa090 2927\aa090 2927 final tech report ad hulst vof.doc