

LEMARK
NO 1 HOUGHTON HILL INDUSTRIES,
SAWTRY WAY
HOUGHTON
CAMBRIDGESHIRE
PE28 2DH
UNITED KINGDOM

Attention: Steve Marshall

The following sample was submitted and identified by the client as:

Sample Description: Sample of Dirty Rigger - Armourdillo gloves

Details of Sample:




Date Sample(s) Received: 05th April 2013

Testing Period: Tested between 10/04/2013 and 16/04/2013

Test(s) Requested: EN 388:2003 Protective gloves mechanical risks
EN 420:2003/A1:2009 Protective gloves general requirement

Test Results: Detailed in Appendix A

Signed for and on behalf of
SGS United Kingdom Ltd


Stephanie Mackenzie B.Sc. (Hons)
Textile Technologist, Softlines Dept.

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Appendix A: Test Results

EN 388:2003 Protective Gloves against Mechanical Risks

Clause	Test name	Result				Performance Level
6.1	Abrasion Resistance (cycles)	2000	2000	2000	2000	3
6.2	Blade Cut Resistance (Index)	4.48 3.90 3.00 2.94 3.06	<u>Mean 3.48</u>	3.06 3.12 3.29 3.63 3.33	<u>Mean 3.29</u>	2
6.3	Tear Strength Resistance (N)	54.9	62.8	54.5	54.4	3
6.4	Puncture Resistance (N)	240.7	133.2	218.1	139.7	3

EN 420:2003/A1:2009 Protective Gloves General Requirements

4.3.2 pH	Sample	pH	Pass/Fail	
	Palm leather	3.7	Pass	
	Lining	6.4	Pass	
	Binding tape	6.8	Pass	
	Grey finger fabric	6.3	Pass	
	Black ribbed fabric	6.5	Pass	
	Black synthetic finger	6.8	Pass	
	Black knit fabric	6.6	Pass	
4.3.3 Chromium (VI) Content ISO 17075	16.8mg/kg (Requirement: ≤3mg/kg)		Fail	
5.1 Size	Marked Size	Circumference (mm)	Length (mm)	Actual size
	XS	206.5	210.5	8*
	S	217.5	224.5	8½*
	M	230.5	229.5	9*
	L	246.0	231.0	9½*
	XL	256.0	240.0	10*
	XXI	268.0	246.5	10½*
5.2 Dexterity	Minimum Pin Diameter		Performance Level	
	5,5,5,5		5	

*→Fit for special purpose

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Detection and Determination of certain listed aromatic amines derived from AZO colourants

Test method: **ISO 17234:2010** Detection of the use of certain azo colourants in coloured leather. Analysis conducted with the use of Gas chromatography- Mass Spectrometry (GC-MS) / High performance Liquid Chromatography – Diode Array Detector (HPLC-DAD).

Fabric – Black palm leather

No	Forbidden Amines Substances	CAS No.	Result (mg/kg)
1	4-aminodiphenyl/xenylamine/Biphenyl-4-yamine	92-67-1	n.d
2	Benzidine	92-87-5	n.d
3	4-chlor-o-toluidine	95-69-2	n.d
4	2-naphthylamine	91-59-8	n.d
5	o-aminoazotoluene/4-o-tolyazo-o-toluidine/4-amino-2',3-dimethylazobenzene	97-56--3	n.d
6	2-amino-4-nitrotoluol/5-nitro-o-toluidine	99-55-8	n.d
7	p-chloranilin/4-chloroaniline	106-47-8	n.d
8	2,4-diaminoanisol/4-methoxy-m-phenylenediamine	615-05-4	n.d
9	4,4'-diaminodiphenylmethane/4,4'-methylenedianiline	101-77-9	n.d
10	3,3'-dichlorobenzidine/3,3'dichlorobiphenyl-4,4'ylenediamine	91-94-1	n.d
11	3,3'-dimethoxybenzidine/o-dianisidine	119-90-4	n.d
12	3,3'-dimethylbenzidine/4,4'bi-o-toluidine	119-93-7	n.d
13	3,3'-dimethyl-4,4'-diaminodipenylmethane/4.4'-methylenedi-o-toluidine	838-88-0	n.d
14	p-cresidine/6-methoxy-m-toluidine	120-71-8	n.d
15	4,4'-methylen-bis-(2-chloro-aniline)/2,2'-dichloro-4,4'methylene-dianiline	101-14-4	n.d
16	4,4'-oxydianiline	101-80-4	n.d
17	4,4'-thiodianiline	139-65-1	n.d
18	o-toluidine/2aminotoluene	95-93-4	n.d
19	2,4-toluylendiamine/4-methyl-m-phenylenediamine	95-80-7	n.d
20	2,4,5-trimethylaniline	137-17-7	n.d
21	4-aminoazobenzene**	60-09-3	n.d
22	o-anisidine/2-methoxyaniline	90-04-0	n.d
23	2,4-Xylidine	95-68-1	n.d
24	2,6-Xylidine	87-62-7	n.d
	Overall rating		P

Recommended max limit with reference to entry 43 of regulation (EC) No.552/2009 amending Annex XVII of REACH Regulation (E) No.1907/2006.

No relevant amine to exceed 30ppm (mg/kg)

Note: n.d = Not detectable
 Detection limit = 5 mg/kg (for individual components)

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Detection and Determination of certain listed aromatic amines derived from AZO colourants

Test method: **EN14362-1:2012** Analysis conducted with the use of Gas chromatography- Mass Spectrometry (GC-MS) / High performance Liquid Chromatography – Diode Array Detector (HPLC-DAD).

Fabric – Lining fabric, Back fabric (black/grey/finger fabric – grey), Cuff & binding tape

No	Forbidden Amines Substances	CAS No.	Result (mg/kg)
1	4-aminodiphenyl/xenylamine/Biphenyl-4-yamine	92-67-1	n.d
2	Benzidine	92-87-5	n.d
3	4-chlor-o-toluidine	95-69-2	n.d
4	2-naphthylamine	91-59-8	n.d
5	o-aminoazotoluene/4-o-tolyazo-o-toluidine/4-amino-2',3'-dimethylazobenzene	97-56--3	n.d
6	2-amino-4-nitrotoluol/5-nitro-o-toluidine	99-55-8	n.d
7	p-chloranilin/4-chloroaniline	106-47-8	n.d
8	2,4-diaminoanisol/4-methoxy-m-phenylenediamine	615-05-4	n.d
9	4,4'-diaminodiphenylmethane/4,4'-methylenedianiline	101-77-9	n.d
10	3,3'-dichlorobenzidine/3,3'dichlorobiphenyl-4,4'ylenediamine	91-94-1	n.d
11	3,3'-dimethoxybenzidine/o-dianisidine	119-90-4	n.d
12	3,3'-dimethylbenzidine/4,4'bi-o-toluidine	119-93-7	n.d
13	3,3'-dimethyl-4,4'-diaminodipenylmethane/4.4'-methylenedi-o-toluidine	838-88-0	n.d
14	p-cresidine/6-methoxy-m-toluidine	120-71-8	n.d
15	4,4'-methylen-bis-(2-chloro-aniline)/2,2'-dichloro-4,4'methylene-dianiline	101-14-4	n.d
16	4,4'-oxydianiline	101-80-4	n.d
17	4,4'-thiodianiline	139-65-1	n.d
18	o-toluidine/2aminotoluene	95-93-4	n.d
19	2,4-toluyldiamine/4-methyl-m-phenylenediamine	95-80-7	n.d
20	2,4,5-trimethylaniline	137-17-7	n.d
21	4-aminoazobenzene**	60-09-3	n.d
22	o-anisidine/2-methoxyaniline	90-04-0	n.d
23	2,4-Xylidine	95-68-1	n.d
24	2,6-Xylidine	87-62-7	n.d
	Overall rating		P

Recommended max limit with reference to entry 43 of regulation (EC) No.552/2009 amending Annex XVII of REACH Regulation (E) No.1907/2006.

No relevant amine to exceed 30ppm (mg/kg)

Note: n.d = Not detectable
 Detection limit = 5 mg/kg (for individual components)

Testing was conducted by NABL accredited laboratory Certificate No.T-1769/T-1770.

***** End of Report*****

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