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Client Ullfrotté AB Chafförsvägen 29 831 48 Östersund	Client's ref. nr.	
	Contact person Sofia Åberg	Our ref. nr. 5090046

Object: Determination of abrasion resistance of socks

Test material: Five kind of socks marked:

1. Woolpower Liner, black
2. Woolpower Liner, grey
3. Falke Airport, beige
4. Burlington, brown
5. Smartwool Liner, black

The test material was received from the client 2009-01-23.
The commission was performed 2009-01-26—02-09

Procedure and results:

Conditioning- and testing climate according to SS-EN ISO139:2005, (20±2)°C and (65±4)% RH, where nothing else is stated.

Abrasion resistance of socks was determined according to SS EN 13770:2002, method 1 in Martindale apparatus
Inspection interval: 1 000 rubs, up to 10 000 rubs then 2 000 rubs up to 20 000 rubs thereafter 5 000 rubs, thereafter 1000 rubs again in some case
Specimen breakdown definition: Thinning (surface of >(2×2)mm) / Hole
Test piece 1-2 was cut from the sole of the sock.
Test piece 3-4 was cut from the heel of the sock.

Abrasion resistance of socks, number of rubs at which breakdown has been observed

Sample	Woolpower Liner, black	Woolpower liner, grey	Falke Airport, beige
Specimen			
1; sole	45 000	> 50 000	50 000
2; solel	> 50 000	> 50 000	16 000
3; heel	> 50 000	> 50 000	16 000
4; heel	45 000	> 50 000	18 000
Mean value	-	> 50 000	25 000

Comments: Only on Falke Airport, beige specimen 1; sole, a hole appears, the others have thinning

Sample	Burlington, brown	Smartwool Liner, black
Specimen		
1; sole	7 000	37 000
2; solel	5 000	32 000
3; heel	3 000	26 000
4; heel	3 000	30 000
Mean value	4 500	31 250

Comments: All specimens have thinning

All results relate only to the materials tested.

Möln dal, 2009-02-10
Swerea IVF
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