RESEARCH REPORT - LABORATORY

PROJECT	:	yarn "ALS 1108 2000 dtex"
PURPOSE RESEARCH	:	testing the climatic resistance of a yarn sample in accordance with the International Match Standard
PRINCIPAL	:	ALSAN PLASTİK TEKSTİL METAL SAN. TİC. LTD. ŞTİ. Contact: Mr. Atilla Bostan
EXECUTION	:	Kiwa ISA Sport B.V. Project Manager: Ms. N. Siemes
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CONCLUSION

From the results of the climatic resistance research during 5000 hours it is concluded that the yarn sample "ALS 1108 2000 dtex" has passed the test successfully.

28th September 2016

Kiwa ISA Sport B.V.

T.A. Joosten
General Manager

RESEARCH DESCRIPTION

ALSAN PLASTİK TEKSTİL METAL SAN. TİC. LTD. ŞTİ. asked Kiwa ISA Sport B.V. to execute a climatic resistance research on the yarn sample "ALS 1108 2000 dtex".

The yarn sample is subjected to a climatic simulation, including Ultra Violet light, moisture and temperature changes during 5000 hours, which represents a period of five years of use in practice. The climatic simulation is performed in accordance with the International Match Standard.

Before and after 5000 hours of climatic simulation, the following characteristics are determined at a temperature of approximately 23°C and a relative humidity of about 50%:

- tensile strength yarn (according to standard NEN-EN 13864);
- yarn colour (grey scale according to standard ISO 105-A02).

Besides the yarn is specified by the determination of the following characteristics:

- shape;
- yarn weight (dtex);
- thickness;
- width;
- RAL code (according to standard ISO 7724);
- yarn identification (DSC-analysis according to standard ISO 11357).

The results of the climatic resistance research are described on the next pages.

RESEARCH RESULTS

The climatic simulation is performed in accordance with the International Match Standard.

Table 1 gives an overview of the specifications of the yarn.

Table 1: specification "ALS 1108 2000 dtex"

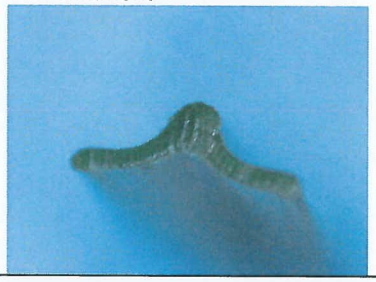
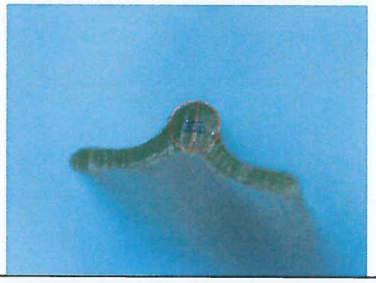
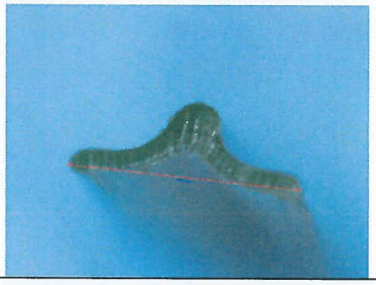
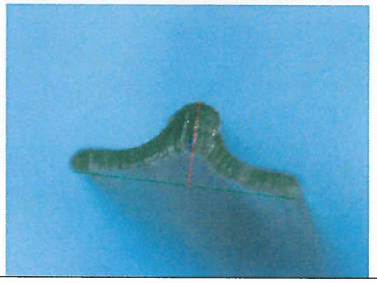
Characteristic	Results
Shape	Monofilament 
Thickness (cross section)	300 micron 
Width side A	1.4 mm 
Width side B	0.5 mm 
Yarn weight	2088 dtex
Yarn identification (onset)	89°C and 130°C
RAL	6002

Table 2 gives an overview of the research results for the yarn "ALS 1108 2000 dtex" before and after 5000 hours climatic simulation. The analysis of the yarn identification (DSC) is enclosed in appendix I.

Table 2: climatic simulation results "ALS 1108 2000 dtex"

Characteristic	Results			
	Before simulation	After simulation 5000 h	Relative change	International standard
Tensile strength	28 N	26 N	- 7%	≤ 50%
Colour				
L	38.3	37.7	4 - 5	≥ 3
a	-10.0	-10.1	(grey scale)	(grey scale)
b	12.9	12.2		

Conclusion:

From the results of the climatic resistance research during 5000 hours it is concluded that the yarn sample "ALS 1108 2000 dtex" has passed the test successfully.

APPENDIX I

yarn identification

ALS 1108 2000 dtex