

B I S F A

THE INTERNATIONAL BUREAU
FOR THE STANDARDISATION OF MAN-MADE FIBRES

**Testing methods
for
polyamide BCF
(bulked continuous filament yarns)**

2000 Edition

Scope

The rules and methods apply to polyamide bulked continuous filament yarns on bobbin, such as : single yarns, interlaced yarns, cabled yarns and heat-set yarns.

These methods do not include yarns on beams.

Appendix 1 sets out the definition of polyamide to which these methods apply.

© BISFA 2000

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission from the publisher.

BISFA
Avenue E. Van Nieuwenhuyse 6
B-1160 Brussels
Belgium

Contents

	Page
Scope	2
Introduction	5
Preface	6
Chapter 1 GENERAL RULES FOR SETTLING OF DISPUTES.....	8
Chapter 2 DEFINITIONS.....	9
Chapter 3 SAMPLING	16
3.1 General remarks.....	16
3.2 Taking the consignment sample and the number of containers to be sampled.....	16
3.3 Taking the laboratory samples for determination of commercial mass	17
3.4 Taking the laboratory samples for determination of properties other than commercial mass	19
Chapter 4 DETERMINATION OF COMMERCIAL MASS	20
4.1 Scope	20
4.2 Principle.....	20
4.3 Apparatus and materials	20
4.4 Test procedure	21
4.5 Calculation of results and statistical evaluation	22
4.6 Verification of the invoice mass.....	24
4.7 Presentation of results.....	24
4.8 Example of verification of invoiced mass	24
Chapter 5 DETERMINATION OF TWIST	28
5.1 Scope	28
5.2 Principle.....	28
5.3 Apparatus.....	28
5.4 Test procedure	29
5.5 Data to be collected	31
5.6 Calculation of results and statistical evaluation	31
5.7 Designation of yarns	32
5.8 Presentation of results.....	32
Chapter 6 DETERMINATION OF LINEAR DENSITY.....	33
6.1 Scope	33
6.2 Principle.....	33
6.3 Apparatus.....	33
6.4 Test procedure	34
6.5 Calculation of properties and statistical evaluation.....	34

6.6	Presentation of results.....	35
6.7	Precisions and bias	35
6.8	Tolerance	37
Chapter 7	DETERMINATION OF CRIMP CONTRACTION	38
7.1	Scope	38
7.2	Principle.....	38
7.3	Apparatus.....	38
7.4	Preparation of laboratory samples	39
7.5	Test procedures.....	40
7.5.1	Method A: Crimp development in hot air	40
7.5.2	Method B: Crimp development in hot water.....	41
7.6	Calculation of properties and statistical evaluation.....	42
7.7	Presentation of results.....	43
7.8	Comparison of crimp contraction in hot water and hot air.....	44
Chapter 8	STATISTICS: TERMINOLOGY AND CALCULATIONS.....	45
8.1	Definitions	45
8.2	Basic statistics	46
8.3	Statistical Process Control Parameters (SPC)	53
Appendix 1	DEFINITION OF POLYAMIDE	55
Appendix 2	DETERMINATION OF RELATIVE HUMIDITY OF AIR.....	56
Appendix 3	ACCURACY OF TEST METHODS	62