PG 5 7/91

FLAMMABILITY TEST # 53 A
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

Wash Interval 50

FABRIC CODE	FR–P10 CHAR LENGTH		FR–P11 CHAR LENGTH		FR–P12 CHAR LENGTH		FR–P13 CHAR LENGTH		FR–P14 CHAR LENGTH		FR–CW22 CHAR LENGTH	
CRITICAL BURN DIRECTION	L	C	L	C	L	C	L	C	L	C	L	C
PRODUCT E	AATCC Std. Det											
Condition _____												
Specimen #1	2.4		2.0		1.4		3.3		1.9		5.6	
Specimen #2	2.3		3.0		1.5		2.5		1.5		6.3	
Specimen #3	2.7		2.2		1.7		3.6		2.4		7.0	
Specimen #4	2.8		2.3		1.5		1.3		1.7		6.8	
Specimen #5	3.1		2.6		1.7		3.8		2.1		10.0	
AVERAGE CHAR LENGTH:	2.1		2.4		1.6		2.9		1.9		7.1	

PRODUCT F	AATCC Std. Det. & Activated Bleach/Preformed Peracid Bleach Additive											
Condition _____												
Specimen #1	3.0		1.8		1.4		3.9		1.7		7.0	
Specimen #2	1.9		2.4		1.5		2.8		1.8		10.0	
Specimen #3	3.2		2.4		1.6		1.7		1.9		6.9	
Specimen #4	1.7		1.2		1.4		1.8		1.3		6.2	
Specimen #5	2.9		2.8		1.5		2.4		1.5		10.0	
AVERAGE CHAR LENGTH:	2.5		2.1		1.5		2.5		1.6		8.0	

(1)

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

FLAMMABILITY TEST # 53 A

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 30

FABRIC CODE	FR–P10 CHAR LENGTH	FR–P11 CHAR LENGTH	FR–P12 CHAR LENGTH	FR–P13 CHAR LENGTH	FR–P14 CHAR LENGTH	FR–CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT A Zero P detergent (powder)						
Condition _____						
Specimen #1						5.0
Specimen #2						7.4
Specimen #3						4.8
Specimen #4						7.0
Specimen #5						10.0
AVERAGE CHAR LENGTH:						6.8
PRODUCT B Zero P detergent (powder)						
Condition _____						
Specimen #1						6.5
Specimen #2						9.0
Specimen #3						8.4
Specimen #4						6.8
Specimen #5						9.5
AVERAGE CHAR LENGTH:						8.0

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

FLAMMABILITY TEST # 53 A

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 30

FABRIC CODE	FR-P10 CHAR LENGTH	FR-P11 CHAR LENGTH	FR-P12 CHAR LENGTH	FR-P13 CHAR LENGTH	FR-P14 CHAR LENGTH	FR-CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L (C)	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT (A) Zero P detergent (powder)						
Condition _____						
Specimen #1						10.0
Specimen #2						10.0
Specimen #3						10.0
Specimen #4						10.0
Specimen #5						10.0
AVERAGE CHAR LENGTH:						10.0

PRODUCT (B) Zero P detergent (powder)						
Condition _____						
Specimen #1						9.0
Specimen #2						10.0
Specimen #3						8.5
Specimen #4						6.5
Specimen #5						6.5
AVERAGE CHAR LENGTH:						8.1

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

FLAMMABILITY TEST # 53 A
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

Wash Interval 30

FABRIC CODE	FR–P10	FR–P11	FR–P12	FR–P13	FR–P14	FR–CW22
	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH
CRITICAL BURN DIRECTION	L (C)	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT E	AATCC Std. Det.					
Condition _____						
Specimen #1						6.0
Specimen #2						8.5
Specimen #3						6.0
Specimen #4						10.0
Specimen #5						6.5
AVERAGE CHAR LENGTH:						7.4

PRODUCT F	AATCC Std Det & Activated bleach/Preformed Peracid Bleach Additive					
Condition _____						
Specimen #1						9.3
Specimen #2						9.0
Specimen #3						9.1
Specimen #4						6.4
Specimen #5						9.0
AVERAGE CHAR LENGTH:						8.9

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

'G 5 7/91

FLAMMABILITY TEST # 53
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

Wash Interval 10

FABRIC CODE	FR-P10 CHAR LENGTH	FR-P11 CHAR LENGTH	FR-P12 CHAR LENGTH	FR-P13 CHAR LENGTH	FR-P14 CHAR LENGTH	FR-CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L (C)	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT D	zero P detergent (powder)					
Condition _____						
Specimen #1						9.4
Specimen #2						9.5
Specimen #3						6.1
Specimen #4						9.8
Specimen #5						8.0
AVERAGE CHAR LENGTH:						8.2

PRODUCT E	AATCC Std. Det.					
Condition _____						
Specimen #1						5.5
Specimen #2						9.8
Specimen #3						4.2
Specimen #4						6.2
Specimen #5						6.4
AVERAGE CHAR LENGTH:						6.4

pass

. = Lengthwise or warp direction

: = Crosswise or filling direction

SD #1

MERCHANDISE

TESTING

LABORATORIES

REPORT

MTL LAB NO.: MC 54705 ADDENDUM
TEST NO. 53 B
DATE: NOVEMBER 16, 1992

PROCTER & GAMBLE
IVORYDALE TECHNICAL CENTER
5299 SPRING GROVE AVENUE
CINCINNATI, OH 45217

ATTN: GAIL DeWEESE

Sample Description: Four (4) fabrics.

Purpose of Test: Evaluation of fabrics for sleepwear flammability.

Executive Summary: The following Test Result sheets include all data recorded.

Supervisor - Glenn Sylvia

Executive Director
Dr. B. J. Park

BJP/sh

U.S.A. : 244 LIBERTY STREET, BROCKTON, MA 02401 TEL: 508 580-8353 FAX: 508 580-2669
HONG KONG : UNIT 19, 13/F, VANTA INDUSTRIAL CENTRE, 21-33 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG. TEL: 852-418-1222 FAX: 852-480-6666
TAIWAN : 2F, 226 KUANG MING ROAD, PEITOU, TAIPEI, TAIWAN TEL. 886-02-894-9722 FAX. 886-02-895-9209
SINGAPORE : 161 KAMPONG AMPAT, 05-02, GOLDLION BLDG. SINGAPORE, 1336 TEL. 65-283-0366 FAX: 65-283-0946
KOREA : C/O KOTITI, 819-3, YEOK-SAM DONG, KANG-NAM-KU, SEOUL, KOREA TEL. 822-02-567-7591 FAX: 822-02-557-3739

PG 5 7/9

FR CW22
B

FLAMMABILITY TEST # 53 B

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 10

FABRIC CODE	FR–P10 CHAR LENGTH	FR–P11 CHAR LENGTH	FR–P12 CHAR LENGTH	FR–P13 CHAR LENGTH	FR–P14 CHAR LENGTH	FR–CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT B	zero P detergent (powder)					
Condition						
Specimen #1						4.9
Specimen #2						10.0 *
Specimen #3						6.7
Specimen #4						5.0
Specimen #5						8.5
AVERAGE CHAR LENGTH:						7.0

PRODUCT						
Condition						
Specimen #1						
Specimen #2						
Specimen #3						
Specimen #4						
Specimen #5						
AVERAGE CHAR LENGTH:						

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

FCW22
10 F

FLAMMABILITY TEST # 53 15

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 10

FABRIC CODE	FR–P10	FR–P11	FR–P12	FR–P13	FR–P14	FR–CW22
	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH
CRITICAL BURN DIRECTION	L C	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT F AATCC Std detergent + activated bleach/ preformed peracid bleach additive						
Condition _____						
Specimen #1						5.0
Specimen #2						10.0 *
Specimen #3						4.8
Specimen #4						5.9
Specimen #5						5.6
AVERAGE CHAR LENGTH:						6.3

PRODUCT						
Condition _____						
Specimen #1						
Specimen #2						
Specimen #3						
Specimen #4						
Specimen #5						
AVERAGE CHAR LENGTH:						

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/9

#1 Cuzz
product 0

FLAMMABILITY TEST # 53 6
CHAR LENGTH DATA

Wash Interval Ø

DATE _____
SIGNATURE _____
TEST ID _____

FABRIC CODE	FR–P10	FR–P11	FR–P12	FR–P13	FR–P14	FR–CW22
Unwashed	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH
CRITICAL BURN DIRECTION	L C	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT Unwashed						
Condition _____						
Specimen #1						2.5
Specimen #2						6.1
Specimen #3						4.0
Specimen #4						4.9
Specimen #5						6.9
AVERAGE CHAR LENGTH:						4.9

PRODUCT						
Condition _____						
Specimen #1						
Specimen #2						
Specimen #3						
Specimen #4						
Specimen #5						
AVERAGE CHAR LENGTH:						

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

#0 CW22 product 0

FLAMMABILITY TEST # 53 B
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

Wash Interval Ø

FABRIC CODE	FR–P10	FR–P11	FR–P12	FR–P13	FR–P14	FR–CW22
Unwashed	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH	CHAR LENGTH
CRITICAL BURN DIRECTION	L C	(L) C	(L) C	(L) C	L (C)	L (C)
PRODUCT Unwashed						
Condition _____						
Specimen #1						3.0
Specimen #2						3.2
Specimen #3						2.8
Specimen #4						3.2
Specimen #5						3.5
AVERAGE CHAR LENGTH:						3.3

PRODUCT						
Condition _____						
Specimen #1						
Specimen #2						
Specimen #3						
Specimen #4						
Specimen #5						
AVERAGE CHAR LENGTH:						

. = Lengthwise or warp direction

: = Crosswise or filling direction

SD #1

MERCHANDISE

TESTING

LABORATORIES

REPORT

MTL LAB. NO.: MC 53269
DATE: SEPTEMBER 21, 1992
TEST NO. 54

PROCTER & GAMBLE
IVORYDALE TECHNICAL CENTER
5299 SPRING GROVE AVENUE
CINCINNATI, OH 45217

ATTN: GAIL DEWEESE

Sample Description: One (1) Fabric Product B from Test No. 49, 10 cycles.

Purpose of Test: Evaluation of the sleepwear for flammability.

Executive Summary: The following Test Result sheets include all data recorded.

Glenn Sylvia
Supervisor - Glenn Sylvia

BJ Park
Executive Director
Dr. B. J. Park

BJP/kr

U.S.A. : 244 LIBERTY STREET, BROCKTON, MA 02401 TEL: 508 580-8353 FAX: 508 580-2669
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TAIWAN 2F, 226 KUANG MING ROAD, PEITOU TAIPEI TAIWAN TEL 886-02 894-9722 FAX 886-02-895-9209
SINGAPORE 161 KAMPONG AMPAT, 05-02, GOLDLION BLDG SINGAPORE, 1336 TEL 65-283-8366 FAX 65-283-8966
KOREA C/O KOTITI, 819 5, YEOK SAM DONG KANG NAM KU, SEOUL KOREA TEL 822 02-567 7591 FAX: 822-02 557 3739

PG 5 7/91

FLAMMA ITY TEST # 44

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 10 cycle

140 / 105 6 gpg

FABRIC CODE	FR-P10 CHAR LENGTH	FR-P11 CHAR LENGTH	FR-P12 CHAR LENGTH	FR-P13 CHAR LENGTH	FR-P14 CHAR LENGTH	FR-CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	L C	L C	L C	L C	L C
PRODUCT From Test 44 zero P detergent (powder)						
Condition B						
Specimen #1						5.5
Specimen #2						4.6
Specimen #3						6.5
Specimen #4						7.0
Specimen #5						4.9
AVERAGE CHAR LENGTH:						5.7

PRODUCT						
Condition						
Specimen #1						
Specimen #2						
Specimen #3						
Specimen #4						
Specimen #5						
AVERAGE CHAR LENGTH:						

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

MERCHANDISE

TESTING

LABORATORIES

REPORT

MTL LAB NO.: MC 56713
TEST NO.: 55
DATE: DECEMBER 22, 1992

PROCTER & GAMBLE
IVORYDALE TECHNICAL CENTER
5299 SPRING GROVE AVE.
CINCINNATI, OH 45217

ATTN: GAIL DeWEESE

Sample Description: Six (6) Fabrics washed in four (4) different detergents.

Purpose of Test: Evaluation of the fabrics for sleepwear flammability.

Executive Summary: The following Test Result sheets include all data recorded.

? [illegible]

Glenn Sylvia
Supervisor - Glenn Sylvia

B J Park
Executive Director
Dr. B. J. Park

BJP/sh

U.S.A. : 244 LIBERTY STREET, BROCKTON, MA 02401 TEL: 508 580-8353 FAX: 508 580-2669
HONG KONG : UNIT 19, 13/F, VANTA INDUSTRIAL CENTRE, 21-33 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG. TEL: 852-418-1222 FAX: 852-480-6666
TAIWAN : 2F, 226 KUANG MING ROAD, PEITOU, TAIPEI, TAIWAN TEL: 886-02-894-9722 FAX: 886-02-895-9209
SINGAPORE : 161 KAMPONG AMPAT, 05-02, GOLDLION BLDG. SINGAPORE, 1336 TEL: 65-283-8366 FAX: 65-283-8966
KOREA : C/O KOTITI, 819-5, YEOK-SAM DONG, KANG-NAM-KU, SEOUL, KOREA TEL: 822-02-567-7591 FAX: 822-02-557-3739

FLAMMABILITY TEST # 55
CHAR LENGTH DATA

Wash Interval 6gpg 50

DATE _____
SIGNATURE _____
TEST ID _____

FABRIC CODE	FR–P10 CHAR LENGTH	FR–P11 CHAR LENGTH	FR–P12 CHAR LENGTH	FR–P13 CHAR LENGTH	FR–P14 CHAR LENGTH	FR–CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	L C	L C	L C	L C	L C
PRODUCT A - zero-P detergent (powder)						
Condition 140/105						
Specimen #1	2.8	2.9	3.4	3.5	1.8	10.0 *
Specimen #2	2.8	2.7	5.6	8.7	2.3	10.0 *
Specimen #3	3.6	1.9	1.6	3.6	1.2	10.0 *
Specimen #4	3.4	1.3	1.0	5.1	3.1	10.0 *
Specimen #5	2.5	3.3	1.8	3.2	2.1	10.0 *
AVERAGE CHAR LENGTH:	3.0	2.4	2.7	4.8	2.1	10.0 *
PRODUCT B - zero-P detergent w/ activated bleach (powder)						
Condition 140/105						
Specimen #1	2.1	2.1	1.7	5.0	1.5	10.0 *
Specimen #2	1.7	2.5	5.5	3.8	1.9	10.0 *
Specimen #3	3.0	2.2	0.8	3.6	2.0	10.0 *
Specimen #4	2.2	2.0	6.5	4.5	3.2	10.0 *
Specimen #5	2.7	2.4	1.0	1.9	2.5	10.0 *
AVERAGE CHAR LENGTH:	2.3	2.2	3.1	3.8	2.2	10.0 *

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

PG 5 7/91

FLAMMABILITY TEST # 55
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

Wash Interval 69P5 50

FABRIC CODE	FR–P10 CHAR LENGTH		FR–P11 CHAR LENGTH		FR–P12 CHAR LENGTH		FR–P13 CHAR LENGTH		FR–P14 CHAR LENGTH		FR–CW22 CHAR LENGTH	
CRITICAL BURN DIRECTION	L	C	L	C	L	C	L	C	L	C	L	C
PRODUCT C	Zero P detergent plus fabric softner (powder)											
Condition 140/105												
Specimen #1	2.3		3.0		0.6		5.7		1.2		10.0 *	
Specimen #2	2.7		3.2		2.1		* 10.0		2.5		9.0	
Specimen #3	2.8		2.8		1.0		6.8		2.6		10.0 *	
Specimen #4	3.0		2.2		1.8		4.0		1.0		10.0 *	
Specimen #5	3.4		2.6		1.2		6.7		2.2		10.0 *	
AVERAGE CHAR LENGTH:	2.8		2.8		1.3		5.4 *		2.0		9.8 *	

PRODUCT D	AATCC Std. Det.											
Condition 140/105												
Specimen #1	2.5		2.2		1.5		2.7		1.5		9.8	
Specimen #2	2.5		2.8		1.5		3.0		2.0		5.5	
Specimen #3	2.4		2.8		1.4		2.5		1.0		6.0	
Specimen #4	4.0		2.1		1.4		4.0		1.4		5.5	
Specimen #5	2.8		2.5		1.3		1.8		1.7		10.0 *	
AVERAGE CHAR LENGTH:	2.8		2.5		1.4		2.8		1.5		7.8 *	

10

L = Lengthwise or warp direction
C = Crosswise or filling direction
GD #1

G 5 7/91

FLAMMABILITY TEST # 55
CHAR LENGTH DATA

DATE _____
SIGNATURE _____
TEST ID _____

6 gpg
Wash Interval 30

FABRIC CODE	FR–P10 CHAR LENGTH L C	FR–P11 CHAR LENGTH L C	FR–P12 CHAR LENGTH L C	FR–P13 CHAR LENGTH L C	FR–P14 CHAR LENGTH L C	FR–CW22 CHAR LENGTH L C
CRITICAL BURN DIRECTION						
PRODUCT A - zero-P detergent (powder)						
Condition 140/105						
Specimen #1						8.0
Specimen #2						5.9
Specimen #3						5.3
Specimen #4						7.5
Specimen #5						8.5
AVERAGE CHAR LENGTH:						7.0 *

PRODUCT B - zero P detergent w/ activated bleach (powder)						
Condition 140/105						10.0*
Specimen #1						10
Specimen #2						10.0 *
Specimen #3						10.0 *
Specimen #4						10.0 *
Specimen #5						9.8 *
AVERAGE CHAR LENGTH:						

L = Lengthwise or warp direction
C = Crosswise or filling direction

GD #1

PG 5 7/91

FLAMMABILITY TEST # 55

CHAR LENGTH DATA

DATE _____

SIGNATURE _____

TEST ID _____

Wash Interval 30 (69P9)

FABRIC CODE	FR–P10 CHAR LENGTH		FR–P11 CHAR LENGTH		FR–P12 CHAR LENGTH		FR–P13 CHAR LENGTH		FR–P14 CHAR LENGTH		FR–CW22 CHAR LENGTH	
CRITICAL BURN DIRECTION	L	C	L	C	L	C	L	C	L	C	L	C
PRODUCT C	zero D detergent plus fabric softeners (powder)											
Condition 140/105												
Specimen #1							0.8				10.0 *	
Specimen #2							0.5				7.0	
Specimen #3							4.2				7.0	
Specimen #4							4.1				4.5	
Specimen #5							4.6				10.0 *	
AVERAGE CHAR LENGTH:							2.9				7.7 *	

PRODUCT D	A ATCC Std. Det.											
Condition 140/105												
Specimen #1											8.8	
Specimen #2											7.0	
Specimen #3											8.0	
Specimen #4											10.0 *	
Specimen #5											10.0 *	
AVERAGE CHAR LENGTH:											8.8 *	

3

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

FLAMMABILITY TEST # 55
CHAR LENGTH DATA

Wash Interval 6gPg 10

DATE _____
SIGNATURE _____
TEST ID _____

FABRIC CODE	FR–P10 CHAR LENGTH	FR–P11 CHAR LENGTH	FR–P12 CHAR LENGTH	FR–P13 CHAR LENGTH	FR–P14 CHAR LENGTH	FR–CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	L C	L C	L C	L C	L C
PRODUCT C	zero P detergent plus fabric softener (powder)					
Condition 140/105						
Specimen #1						6.6
Specimen #2						7.6
Specimen #3						10.0 *
Specimen #4						6.2
Specimen #5						10.0 *
AVERAGE CHAR LENGTH:						8.1

PRODUCT D	AATCC Std. Det.					
Condition 140/105						
Specimen #1						6.2
Specimen #2						8.0
Specimen #3						10.0 *
Specimen #4						7.5
Specimen #5						10.0 *
AVERAGE CHAR LENGTH:						8.3

L = Lengthwise or warp direction

C = Crosswise or filling direction

GD #1

FLAMMABILITY TEST # 55
CHAR LENGTH DATA

Wash Interval 6gPg 10

DATE _____
SIGNATURE _____
TEST ID _____

FABRIC CODE	FR–P10 CHAR LENGTH	FR–P11 CHAR LENGTH	FR–P12 CHAR LENGTH	FR–P13 CHAR LENGTH	FR–P14 CHAR LENGTH	FR–CW22 CHAR LENGTH
CRITICAL BURN DIRECTION	L C	L C	L C	L C	L C	L C
PRODUCT A Zero P detergent (powder)						
Condition 140/105						
Specimen #1						10.0 *
Specimen #2						8.7
Specimen #3						10.0 *
Specimen #4						10.0 *
Specimen #5						10.0 *
AVERAGE CHAR LENGTH:						9.5 *

PRODUCT B						
Condition 140/105 Zero P detergent with activated bleach (powder)						
Specimen #1						6.0
Specimen #2						10.0 *
Specimen #3						10.0 *
Specimen #4						10.0 *
Specimen #5						10.0 *
AVERAGE CHAR LENGTH:						9.2

~~L = Lengthwise or warp direction~~

C = Crosswise or filling direction

GD #1