

## 308-9 Thread

PERFORMANCE	TEST METHOD	REQUIREMENT								
<b>INITIAL PACKAGE / FULL PACKAGE</b>										
<b>Physical Properties</b>										
Thread Twist	ASTM D1423	Determine S or Z Twist & Twist per inch Report Actual Readings								
Thread Twist Balance	ASTM D204	Report actual number of complete revolutions (Use general lock & stitch sewing machine)								
Thread Size	ASTM D1907	-0% / +10% of contracted Tex Count								
Fiber Content	AATCC 20/20A  16 CFR 303 Wool Product Labeling Act	One Fiber Only: No Tolerance  Two or More Fibers: +/- 3% max deviation from contracted fiber content  Functional Fibers i.e. Spandex: +/- 2% max deviation from contracted fiber content								
<b>Colorfastness</b>										
Colorfastness to Laundering AND Dry Cleaning	ASTM D 204 Laundering Conditions – option 2B Ultra Tide® Powder Detergent	Shade Change: Grade 4 min Staining: Grade 4 min								
Colorfastness to Perspiration	AATCC 15	Shade Change: Grade 4 min Staining: Grade 4 min								
Colorfastness to Crocking	AATCC 8/116	All Colors (except listed below): Dry – Grade 4 min Wet – Grade 3 min  Pigment Dyed/Printed, Sulphur, Indigo: Dry – Grade 3 min Wet – Grade 2 min								
Colorfastness to Light	AATCC 16.3-2012 20 AFU	Color Change: Grade 4 min Shade Change: Grade 4 min								
Colorfastness to Water	AATCC 107	Staining: Grade 4 min								
<b>Strength &amp; Durability</b>										
Thread Strength & Elongation	ASTM D 2256 As received and after wetting	See Chart Below								
<b>Content: Polyester Core/Cotton Wrap</b>										
<b>Tex Count</b>	<b>24</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>105</b>	<b>120</b>				
Breaking Strength (lbs)	2.05	3.30	5.82	6.37	7.63	10.50				
Elongation at Break	17-23	17-23	17-28	17-28	17-28	17-28				
<b>Below for Kohl's Reference</b>										
ELKO FTK Total max	7	7	7	8	8	8				
ELKO FTK Serious max	5	5	5	6	6	6				
lub % range	3 - 5	3 - 5	3 - 5	4 - 6	4 - 6	4 - 6				
<b>Content: Polyester Core/Polyester Wrap</b>										
<b>Tex Count</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>30</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>105</b>	<b>120</b>	
Breaking Strength (lbs)	1.72	1.80	2.36	2.99	4.02	6.29	8.07	9.58	13.00	
Elongation at Break	13-22	16-22	14-23	14-23	15-23	15-30	17-30	17-30	17-25	
<b>Below for Kohl's Reference</b>										
ELKO FTK Total max	8	8	8	6	6	6	6	6	6	
ELKO FTK Serious max	4	4	4	4	4	4	4	4	4	
lub % range	2.5 - 4.5	2.5 - 4.5	2.5 - 4.5	2.5 - 4.5	2.5 - 4.5	4 - 7	4 - 7	4 - 7	4 - 7	
<b>Content: Spun Polyester</b>										
<b>Tex Count</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>27-30</b>	<b>40</b>	<b>45</b>	<b>60</b>	<b>70</b>	<b>80</b>	<b>105</b>
Breaking Strength (lbs)	1.36	1.50	1.65	2.19	2.48	3.23	4.11	4.68	6.43	8.03
Elongation at Break	11 - 18	11 - 18	11 - 18	12 - 19	12 - 20	12 - 20	13-22	14-22	14-22	14-23
<b>Below for Kohl's Reference</b>										
ELKO FTK Total max	6	6	6	6	6	6	6	6	6	6
ELKO FTK Serious max	4	4	4	4	4	4	4	4	4	4
lub % range	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7	3 - 7
<b>Content: Textured Polyester</b>										
<b>Tex Count</b>	<b>18</b>	<b>35</b>	<b>40</b>	<b>60</b>	<b>100</b>					
Breaking Strength (lbs)	1.32	2.77	2.62	3.94	6.49					
Elongation at Break	22 - 30	22 - 30	22 - 30	22 - 30	22 - 30					

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<b>Below for Kohl's Reference</b>					
ELKO FTK Total max	1	1	1	1	1
ELKO FTK Serious max	1	1	1	1	1
lub % range	2 - 4	2 - 4	2 - 4	2 - 4	2 - 4

Content: Tri-lobal Polyester Embroidery					
Tex Count	10	18	27	40	
Breaking Strength (lbs)	0.75	1.17	2.29	2.60	
Elongation at Break	25 - 32	25 - 32	20 - 27	25 - 32	
<b>Below for Kohl's Reference</b>					
ELKO FTK Total max	1	1	1	1	
ELKO FTK Serious max	1	1	1	1	
lub % range	1.5 - 3.5	1.5 - 3.5	1.5 - 3.5	1.5 - 3.5	

Content: Polyester Air Entangled				
Tex Count	60	90		135
Breaking Strength (lbs)	6.16	8.29		13.01
Elongation at Break	9 - 21	12 - 19		13 - 20

Content: Metallic Embroidery		
Tex Count	27	105
Breaking Strength (lbs)	1.10	2.20
Elongation at Break	20 - 40	25 - 45

Content: Polyester Embroidery	
Tex Count	21
Breaking Strength (lbs)	1.48
Elongation at Break	8 - 22

ADDITIONAL COLORWAY TESTING		
Colorfastness to Laundering AND Dry Cleaning*	ASTM D 204 Laundering Conditions – option 2B Ultra Tide® Powder Detergent	Shade Change: Grade 4 min Staining: Grade 4 min
Colorfastness to Perspiration*	AATCC 15	Shade Change: Grade 4 min Staining: Grade 4 min
Colorfastness to Crocking*	AATCC 8/116	All Colors (except listed below): Dry – Grade 4 min Wet – Grade 3 min  Pigment Dyed/Printed, Sulphur, Indigo: Dry – Grade 3 min Wet – Grade 2 min
Colorfastness to Light*	AATCC 16:3-2012 20 AFU	Color Change: Grade 4 min
Colorfastness to Water*	AATCC 107	Shade Change: Grade 4 min Staining: Grade 4 min

Analytical Test- REQUIRED WHERE APPLICABLE AT ADDITIONAL COST		
Formaldehyde	Kohl's TM-5 (only for 4 years and up)	Negative, If Spot Test is Positive, proceed with step 2
	JIS L 1041:2000 –	Children over 4 T & Adults = 75 ppm max.
	Sec. 5.3.1 (2) Method B, JIS Water Extraction Method	Children's 0-4T = 20 ppm max.

TOXICOLOGY TESTING – REQUIRED WHERE APPLICABLE AT ADDITIONAL COST		
Lead Content in Surface Coating - Scrapeable in each color*	CPSC-CH-E1003-09.1	Children & Adult Products ≤ 90ppm (0.009% by weight)  Refer to Kohl's Product Safety Policy for additional requirement on Composite Testing
Total Lead in Substrate Material*	CPSC-CH-E1002-08.1/ CPSC-CH-E1001-08.1	Children's of ALL ages & Adult products ≤ 100 ppm (0.010% total weight)  Refer to Kohl's Product Safety Policy for additional requirement on Composite Testing

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Phthalates in each plasticized part/material such as PVC, Vinyl*	CPSC-CH-C1001.09.3	Children's & Adult Products (Coatings Shall be tested) < 0.1% (1000 ppm) in each part of DEHP, BBP, DBP, DINP, DIDP, DnHP, DnOP, DIBP, DnPP, DCHP  Refer to Kohl's Product Safety Policy for additional requirement on Composite Testing
Soluble Heavy Metals*  Applies to Children's Toys	ASTM F 963-17	Children's Toys = Defined as a consumer product designed or intended by the manufacturer for a child, for use by the child when the child plays. Required for children's toys of ALL ages  Mercury – 60 ppm Antimony – 60 ppm Arsenic – 25 ppm Selenium – 500 ppm  Barium – 1000 ppm Cadmium – 75 ppm Chromium – 60 ppm Lead – 90 ppm

(\*) asterisk= ALL COLORWAYS MUST BE TESTED

\*\*\*ALL COMPONENTS MUST BE TESTED FOR TOXICOLOGY\*\*\*

Basic Submission – An individual thread style. The basic submission contains the entire range of sizes for that style. Submit in a dark color.

### Minimum Sample Size Necessary for Testing

Initial Package: 1 cone (500 yards) of darkest colorway

Additional Colorway: 1 cone (300 yards) per colorway

**\*\*Please refer to Kohl's preferred third party labs for individual and optional testing pricing**

#### Toxicology Testing

Consult with approved lab for the number of samples

Turn Around Time = 6 working days

PROTOCOL VERSION	DESCRIPTION OF CHANGE	DATE REVISION / APPROVED BY
308-1	1. Thread Shrinkage Test – REMOVED 2. Breaking Strength (Spun Polyester Tex 30) – Changed requirement from 1.19 to 2.19. 3. Colorfastness to Laundering – Specified laundering condition to Option 2B – Non-Chlorine Bleach.	Nov. 2008/Ro Jain
308-2	1. Lead Content in Surface coating – Updated test method to CPSC-CH-E1003-09 2. Lead in Substrate – Updated test method to CPSC-CH-E1002/CPSC-CH-E1001-08 and requirement <100 ppm from spring 2011	Nov. 2009/Ro Jain
308-3	1. C/f to Laundering & Dry Cleaning – Added Ultra to Tide Detergent. 2. Lead in Surface Coating – Updated method to CPSC-CH-E1003-09.1. Added Adult requirement, <600 ppm. 3. Total Lead Substrate – Updated method to CPSC-CH-E1002-08.1/CPSC-CH-E1001-008.1. 4. Added Phthalates & Heavy Metals to protocol. 5. Thread Size – Changes requirement from +/-5% to -0%/+10%.	Nov. 2011/Amy Her
308-4	1. Lead in Substrate test – Starting Spring 2013, test is required on Adult products. 2. Toxicology tests required on both Children & Adult products. 3. Added Fiber Content test. 4. Updated price test.	Sept. 2012/ Vinoth Deenadayalan
308-5	1. Removed “starting spring 2013” statement 2. Added “coatings shall be tested” statement to the Phthalates test 3. Heavy Metals – updated test method to ASTM F963-11 4. C/f to Light – Updated method to AATCC 16.3-2012	May 2013/ Vinoth Deenadayalan
308-7	Removed pricing for testing/took out Intertek/added approved lab statement	October 6th 2014/Nov. 31 2014/Leah Gross-Hutchison
308-8	Added Formaldehyde	December 4th 2014- Michelle Zydek
308-9	Updated phthalates requirements Updated Soluble Heavy Metals version number	October 2018-Deppisch