



AIRBAGS

High-tenacity Polyamide 6.6 Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
Enka® Nylon 442HRT	470	72	470	40.0	851	21.5	-	6.0 [#]
Enka® Nylon 446HRT (Medium Shrinkage)	350	140	352	30.5	866	22.5	-	5.4 [#]
	470	140	474	40.0	844	22.5	-	5.6 [#]
	580	140	582	47.5	816	21.5	-	5.5 [#]
	700	108	715	60.3	843	20.2	-	5.7 [#]
Enka® Nylon 447HRT (High Shrinkage LDPF yarn)	235	72	236	16.8	712	23.2	-	8.6 [#]
	350	144	351	25.6	729	24.2	-	8.1 [#]
	470	144	474	35.0	738	23.2	-	7.8 [#]

Tensile testing is performed at a yarn twist of Z60 1/m for Enka® Nylon
 EASF = Elongation at specified force
 LDPF = Low denier per filament

Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 5 mN/tex)

High-tenacity Polyester Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
Diolen® 80T	470	96	472	37.7	799	18.5	-	2.5 [*]
	550	96	558	44.4	796	18.4	-	2.5 [*]
1W70-35f	275	-	275	20.9	750	15.5	-	5.5 [*]
1W72-70f	465	-	465	34.9	750	19.0	-	1.7 [*]
1W72-70f	550	-	550	41.6	750	18.6	-	1.7 [*]

Tensile testing is performed at a yarn twist of Z60 1/m for Diolen®
 EASF = Elongation at specified force
 LDPF = Low denier per filament

Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 5 mN/tex)
 • Thermal Shrinkage (177 °C, 1 min, 0.05 g/D)



SEATBELTS

High-tenacity Polyester Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
Diolen® 54S	550	28	554	35.2	635	25.5	13.2 (14.9N)	1.7 [*]
	140	24	141	8.6	609	16.3	3.6 (3.8N)	11.1 [#]
Diolen® 57T	225	48	227	14.5	638	13.3	3.5 (6.1N)	12.1 [#]
	280	48	278	16.3	586	17.4	3.9 (7.6N)	9.9 [#]
	330	48	332	20.2	608	17.5	4.0 (9.0N)	10.1 [#]
	420	96	424	25.5	601	15.2	3.7 (11.4N)	8.4 [#]
	550	96	554	33.5	605	15.6	3.9 (14.9N)	8.9 [#]
Diolen® 61ST (super low shrinkage)	280	48	281	18.3	651	17.6	7.2 (7.6N)	1.7 [*]
	550	105	556	38.0	683	23.0	11.0 (14.9N)	1.4 [*]
FDY 1W70-35f	275	35	-	20.9	750	15.5	-	5.5 [*]
FDY 1W70-70f	465	70	-	34.9	750	19.0	-	1.7 [*]
FDY 1W70-70f	550	70	-	41.6	750	18.6	-	1.4 [*]
380T	1100	104	1115	88.5	794	13.8	6.8 (45N)	7.0 [*]

Tensile testing is performed at a yarn twist of Z60 1/m for Diolen®
 EASF = Elongation at specified force
 LDPF = Low denier per filament

Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 1 mN/tex)
 # Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 5 mN/tex)
 • Thermal Shrinkage (177 °C, 1 min, 0.05 g/D)



SEWING THREADS

High-tenacity Polyamide 4.6 Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
Stanylenka® 460HRST (low shrinkage)	470	72	478	35.1	734	21.8	7.4 (11.3N)	3.5 [#]

Tensile testing is performed at a yarn twist of Z60 1/m for Stanylenka®
EASF = Elongation at specified force
LDPF = Low denier per filament

Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 5 mN/tex)

High-tenacity Polyamide 6.6 Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
Enka® Nylon 140HRT (Medium shrinkage)	700	108	716	61.5	859	21.0	9.8 (34N)	5.5 [#]
	940	140	942	80.3	852	18.4	9.7 (45N)	5.1 [#]
	1400	210	1405	119.2	848	19.1	10.2 (68N)	5.1 [#]
Enka® Nylon 433HRST (Low elongation at break, high breaking tenacity)	235	36	236	19.8	839	20.8	7.2 (5.6N)	4.8 [#]
	312	72	318	27.2	855	20.8	7.2 (7.5N)	4.7 [#]
	470	72	474	38.8	818	20.7	7.2 (11.3N)	4.8 [#]
Enka® Nylon 444HRST (low shrinkage)	235	36	238	17.7	744	25.7	8.0 (5.6N)	3.7 [#]

Tensile testing is performed at a yarn twist of Z60 1/m for Enka® Nylon
EASF = Elongation at specified force
LDPF = Low denier per filament

Hot-air Shrinkage (2 min @ 180 °C) testing (pretension of 5 mN/tex)

High-tenacity Polyester Yarns

Automotive Safety	Linear density (nominal dtex)	Number of filaments (nominal)	Linear density dtex	Breaking force N	Breaking tenacity mN/tex	Elongation at break %	EASF (xN) %	Shrinkage %
T712-138dtex-35f	138	35	138	11	800	15.0	-	1.7 [#]
T712-188dtex-35f	188	35	188	14.3	760	17.5	-	1.7 [#]
T712-226dtex-67f	245	67	226	17.2	760	17.0	-	1.8 [#]
T712-231dtex-67f	278	67	231	18.0	780	15.0	-	1.9 [#]
T712-245dtex-48f	226	48	245	18.6	760	17.5	-	1.7 [#]
T712-278dtex-48f	231	48	278	21.1	760	17.5	-	1.7 [#]
1Y86-400f	2240	400	2240	163.5	730	20.0	-	1.5*

Method : tensile is performance at 0 1/m (untwisted) in accord to ASTM D885
EASF = Elongation at specified force
LDPF = Low denier per filament

Thermal Shrinkage 177 °C, 1 min, 0.05 g/D
* Thermal Shrinkage 177 °C, 1 min, 0.01 g/D

PLANTS

		Airbag Yarns and Fabrics				Seabell Yarns	Sewing Thread Yarns	
		PET		PA 6.6		PET	PET	PA 6.6
		Yarns	Fabrics	Yarns	Fabrics	Yarns	Yarns	Yarns
EMEA	Obernburg, DE	X	X	X	X	X ¹	X	X ³
	Krumbach, DE		X		X			
	Senica, SK					X ²		
America	Scottsboro, AL	X	X	X	X			X
	Puebla, MX		X		X			
Asia	Pingdingshan, CN			X				X
	Kaiping, CN					X ¹	X	

¹ weft ² warp ³ incl. PA 4.6