

# OTIZ

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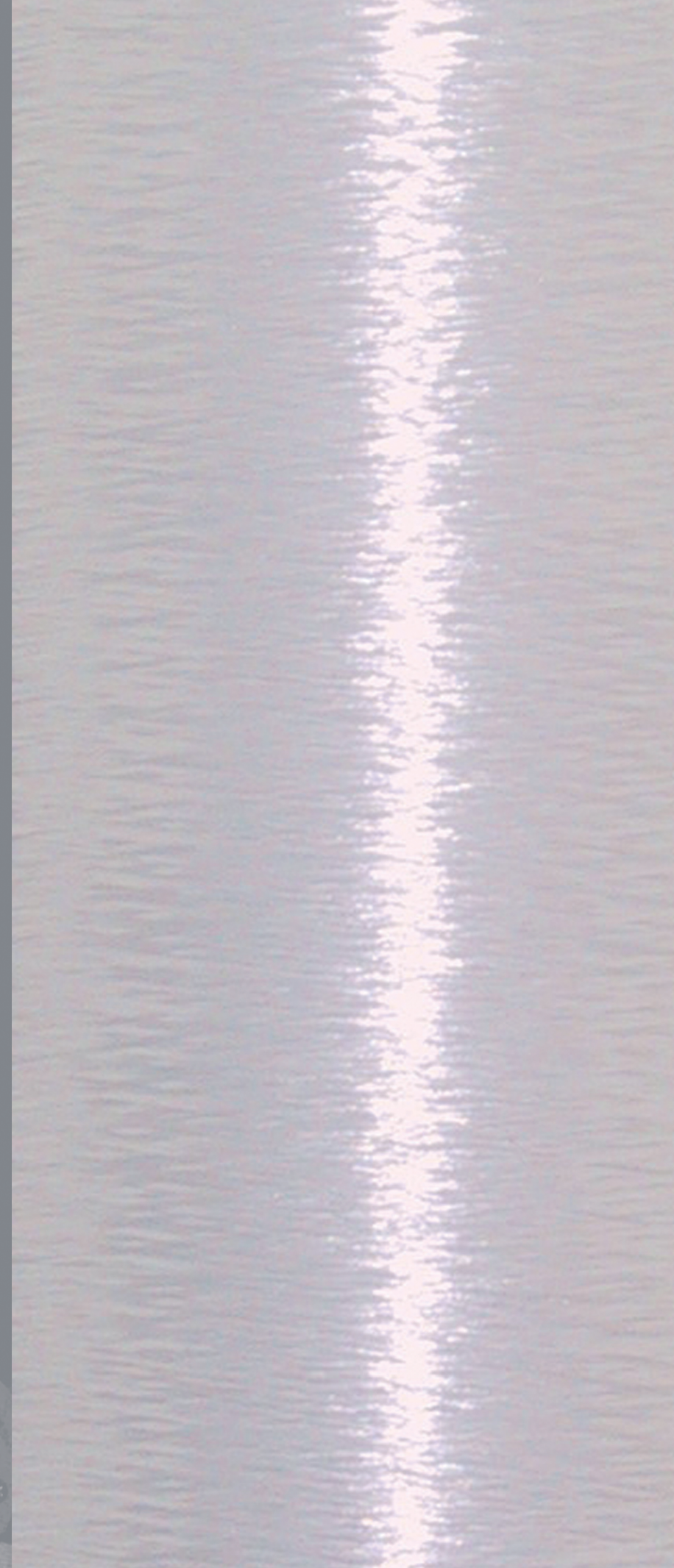
切片&工业丝产品册

Chip & High Tenacity Yarn

亚东工业(苏州)有限公司  
苏州市吴中经济开发区尹中南路1688号

ORIENTAL INDUSTRIES (SUZHOU) LTD.  
1688 Yinzhong South Road, Wuzhong Economic  
Development District, Suzhou, P.R.China

TEL: +86 512 6595 1888 分机: 8825, 8803  
Fax: +86 512 6698 2668  
网址URL: [www.otiz.com.cn](http://www.otiz.com.cn)



## 工业丝事业群简介

### High Tenacity Yarn SBU Introduction



- ▶ 亚东工业于2005年在中国苏州建立生产基地。凭借多年的行业经验，全进口的机器设备，以及完善的管理理念，亚东工业一跃成为工业丝行业差异化生产商。
- ▶ 我们的产品可被广泛运用于各种领域，其产品范围涵盖生产生活的多个方面，包括汽车安全带，安全气囊轮胎帘子布，帐篷，输送带，建筑用，土工工业骨架材等。
- ▶ 我们的产品不但符合一般市场的商品需求，还可根据客户的需求，提供适用的解决方案，为客户特殊需求量身打造，把客户的构想和设计转化为各项实际而多元的产品。
- ▶ 选择亚东，我们将是您现在及未来，长期而可靠的伙伴。

Oriental Industries (Suzhou) Ltd (OTIZ) is a global well-known manufacture for High tenacity yarn. The products can be used for Seatbelt, airbag, tire cord, tent, conveyor belt, construction material, geo-textile and so on.

In 1987, the mother company of OTIZ--Far Eastern Textile was founded in Taiwan. And in 2007, OTIZ started the production in Suzhou China. With more than 20 years spinning experience, advanced imported equipment and managing experience, OTIZ becomes a world leader of special yarn supplier.

With excellent R&D and professional after service team, OTIZ not only provide marketing commodity but also customized specialty. OTIZ offer multiple solutions and design for various customers.

Special products, special for you. OTIZ will be your long term and reliable partner, for now, for ever.

## 高粘度聚酯切片

### High Viscosity Polyester Chip

- ▶ 产品特点：  
粘度高，下游染色好。
- 主要用途：  
涤纶工业丝，涤纶单丝，聚酯片材。

Product Property:  
High viscosity, good dyeing.

Main Application:  
Polyester yarn, Polyester monofilament,  
Polyester sheet.



项目 ITEM	单位 UNIT	数值 VALUE	测试方法 TEST METHOD
特性粘度 Intrinsic Viscosity	dl/g	1.0±0.02	乌氏粘度计 Ubbelohde Viscometer Capillary
白度 L	/	90±5.0	测色仪 Colorquestxe
色度(黄蓝度) Color(Lb)	/	4.0±2	测色仪 Colorquestxe
酸价 COOH	mol/t	12±5.0	GB 17931
二甘醇 DEG	%	0.9±0.1	GB 17931
熔点 Melting Point	℃	≥250	示差扫描量热法 DSC
包装 Packing	包装袋为PE内袋和PP外袋，净重1,100公斤，集装箱装箱为20包或22,000公斤。 1,100kgs in PP woven bag with PE interlining. 20bages or 22,000kgs in one 20 feet container.		

# 常规应用

## Normal Applications

项次 No.	种类 Item	用途介绍 Application
1	涂布及贴合织物 Coated & Laminated Fabrics	卡车帆布, 灯箱片, 帐篷布, 广告看板, 棚盖布, 屋顶覆布, 旗布, 防护服, 手套, 安全气囊, 充气型游泳池, 橡皮艇, 气垫船 Truck Canvas, tent, beach chair material, sunshading cloth, billboard, tarpaulin, awning, flag, protection cover, gloves, airbag, inflatable swimming pool, pneumatic boat, hovercraft
2	滤布 Filter Fabrics	液体用滤布, 气体用滤布, 油过滤布, 电气式滤布 Filter cloth for liquid, gas, oil, electronic
3	橡胶类纺品 Rubber Reinforcement Materials	轮胎帘子线, 输送带, 软式水管, 三角皮带, 跑步机带, 消防水龙带 Tire cord, conveyor belt, soft pipes, V-belt, treadmill rubber, firehose
4	土工织物 Geo Textiles	分离用布, (垃圾掩埋场)过滤布, 土工格栅, 排水用布, 建筑用布 sifting cloth, (landfill) filter cloth, grill net, drain cloth, construction cloth
5	绳索及网类 Ropes & Nets	芯线, 工业用合股捻线, 包覆芯线, 电线芯线, 缝纫线, 渔网线, 安全绳索, 锚绳, 海洋绳索, 建筑防护网 core cable, industrial joint stock burning cable, cover core cable, electric wire cable, sewing thread, fishing net, fixed net, safety rope, anchor rope, oil containment booms, building protection net
6	窄幅织布类 Narrow Fabrics	安全带, 工业吊带, 拖车带, 拉链带, 窗帘带, 帽带, 松紧带, 布边带, 标记带, 打印带, 工业带, 无边带 Seatbelt, sling, cargo liner, zip belt, curtain belt, hat belt, elastic band, frill band, mark band, spindle band, copying band, industrial band, industrial frill band, frill-less band
7	其他纺织品 Others	鞋材用布, 降落伞, 人造皮革, 防护服, 凉椅布 Shoe lining, shoe cloth, parachute, artificial leather, safety apparel, beach bench cloth

# 规格物性

## Specification Of High Tenacity Polyester Yarn

规格Specification		物性 Physical properties			特性Characteristic		
丹尼数(denier) Linear Density	孔数 (No.) Yarn Count	强度(G/D) Tenacity	断裂伸长(%) Elongation	干热收缩(%) H.A.S	普通高强 HTRS	低缩 HTLS	低伸 HTLE
210	48	8.5	16.5	6.0			
250	48	8.8	16.5	6.0			
420	96	9.2	14.0	12.0			
500	96	9.1	18.5	6.0			
840	192	9.2	14.0	13.0			
1000	192	9.5	14.0	13.0			
1000	192	9.3	18.0	6.0			
1300	192	9.3	14.5	12.5			
1500	192	9.4	14.0	13.0			
2000	250	9.0	15.0	13.0			
2600	384	9.3	15.0	12.0			
3000	384	9.4	14.5	13.0			
4000	384	9.1	14.5	13.0			
5000	768	9.3	15.0	12.0			
6000	768	9.3	16.0	12.0			
1000	192	9.2	14.5	9.0			
1000	192	8.7	21.0	5.0			
1300	192	9.2	15.0	9.0			
1500	384	9.0	15.0	10.0			
1000	192	9.6	14.5	10.0			
1300	192	9.4	15.0	10.0			
2000	384	9.4	15.0	10.0			
220	48	8.0	20.5	3.0			
250	48	8.2	21.0	3.0			
280	18	7.1	29.0	3.3			
500	96	8.0	21.5	3.0			
1000	192	8.3	21.0	3.0			
1300	192	8.3	22.0	2.8			
1500	192	8.1	22.5	2.8			
2000	384	8.3	22.0	3.0			

Test Standards:

1. ASTM D885 (M/C: TEXTECHNO FPA4 with 60 TPM); Pre-tension: 0.5 CN/Tex
2. H.A.S.: 177°C 10min; Load: 0.05cN/dtex



### 安全带用丝 (见表一)

Safety Belt Yarn

▶ 特性

强度高, 毛丝少。  
染色性佳, 耐久性优异。  
可为客户定制。

Product property:

High tenacity, Less broken filament.  
Good dyeability and durability.  
Can customize for customers.

### 安全气囊用丝 (见表二)

Air Bag Yarn

▶ 特性

已成功批量供应全球客户。  
较强的研发能力。  
可为客户定制。

Product property:

Succeed to develop airbag yarn for Global market.  
Good at R&D.  
Can customize for customers.

### 轮胎帘布用丝 (见表三)

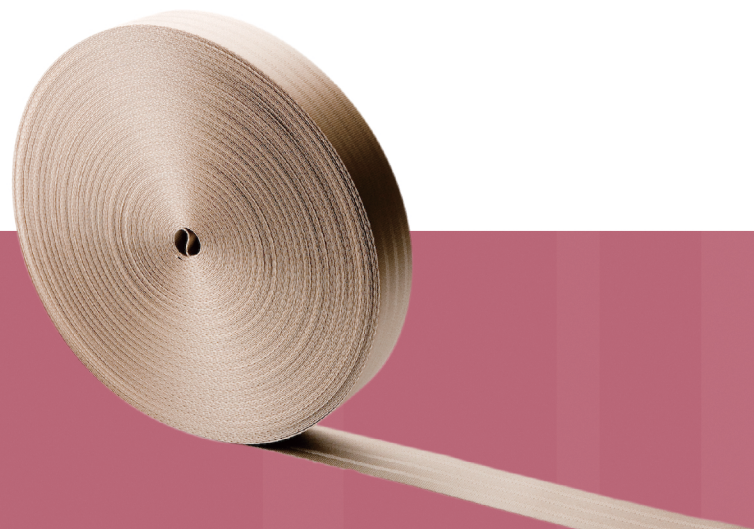
Tire Cord Yarn

▶ 特性

强度高, 模量高, 热收缩率低。  
伸度变形小, 尺寸稳定性卓越。  
后加工过程中强度损失小。

Product property:

High tenacity and modulus, low hot-air shrinkage.  
Low Elongation, excellent stability.  
Specially designed for tire cord, good performance at high speeds.



表一 Specification Of Seat Belt

丹尼数(denier) Linear Density	孔数 (No.) Yarn Count	强度(G/D) Tenacity	断裂伸度(%) Elongation	干热收缩(%) H.A.S	色泽
500	48	8.5	16	10	Full Bright
750	96	8.6	15	12	Full Bright
1000	72	8.7	13	14	Semi Bright
1000	72	9.1	13	13	Full Bright
1000	96	9.3	14.5	11	Full Bright
1260	96	9.4	14.5	11	Full Bright
1500	96	8.8	15	11	Full Bright
1500	144	9.2	15	11	Full Bright

Test Standards:

1. ASTM D885 (M/C: TEXTECHNO FPA4 with 60 TPM); Pre-tension: 0.5 CN/Tex 2. H.A.S.: 177°C 10min; Load: 0.05cN/dtex

表二 Specification Of Air Bag

丹尼数(denier) Linear Density	孔数 (No.) Yarn Count	强度(G/D) Tenacity	断裂伸度(%) Elongation	干热收缩(%) H.A.S	备注 Remark
420/500	96	≥8.0	≥15.5	≤8.0	涂层coating
420/500	144	≥7.5	≥18.0	≤8.0	涂层/非涂层coating/uncoated
420/500	144	≥8.0	≥15.5	≤10.0	涂层/非涂层coating/uncoated

表三 Specification Of HMLS

丹尼数(denier) Linear Density	孔数 (No.) Yarn Count	强度(G/D) Tenacity	断裂伸度(%) Elongation	中间伸度(%) EASL(4.5g/d)	干热收缩(%) H.A.S	备注 Remark
1000	240	8.8	12.5	5.6	3.2	
1000	240	8.3	14	6.2	3.2	
1000	240	8.2	14	6.2	3.2	Adhesive Active Yarn(活化纱)
1000	240	8.1	12.5	5.5	5.5	Adhesive Active Yarn(活化纱)
1300	370	8.6	13.5	6.2	3.2	
1300	370	8.3	14	6.2	3.2	
1300	370	8.2	14	6.5	2.7	Adhesive Active Yarn(活化纱)
1500	360	8.8	12.5	5.8	3.2	
1500	370	8.3	14	6.5	3.2	
1500	370	8.3	14.5	6.5	2.7	Adhesive Active Yarn(活化纱)

Test Standards:

1. ASTM D885 (M/C: TEXTECHNO FPA4 with 60 TPM); Pre-tension: 0.5 CN/Tex 2. H.A.S.: 177°C 10min; Load: 0.05cN/dtex

# 优势产品

## Advantage Products

### 疏水纱 (见表四)

A/W yarn

▶ 产品特点:  
疏水效率佳, 物性稳定, 加工性好。

主要用途:  
涂层织物: 屋顶材料, 充气型游泳池, 橡皮艇, 气垫船。

Product property:  
Good performance on A/W, stable property.

Main application:  
Coated & Laminated Fabrics: inflatable swimming pool, pneumatic boat, hovercraft.

### 色纱 (见表五)

High Tenacity Dope-dye Color Yarn (HTDD)

▶ 产品特点:  
• 强度高, 伸度低, 耐磨性佳。  
• 色牢度卓越, 久不褪色。  
• 专为环保, 绿化世界, 解决因染色造成的污水问题, 研制出的各种工业用纱。

主要用途:  
织布类、工业用材类、织带类、安全带、绳索类、捻线类、缝纫类、网线(渔网类)及其他用途。

Product property:  
• High tenacity, low elongation, high abrasion resistance.  
• High performance of color fastness.

Main application:  
Belts, Seat belts, rope, strings, nets (fishing nets), sewing thread and others.



表四 Specification Of Anti Wicking Yarn

丹尼数(denier) Linear Density	孔数(No.) Yarn Count	强度(G/D) Tenacity	断裂伸度(%) Elongation	干热收缩(%) H.A.S	备注 Remarks
500	72	8	26	3.5	<2.54cm/24HR
840	144	8	26	3.5	<2.54cm/24HR
1000	144	8	26	3.5	<2.54cm/24HR
1000	192	9.5	14	9.5	<5cm/1HR
1000	192	8.5	22	5	<5cm/1HR
1260	192	9.3	14	11.5	<5cm/1HR
1300	144	8	26	3.5	<2.54cm/24HR

表五 Specification of Dope-dye Color Yarn

丹尼数(denier) Linear Density	孔数(No.) Yarn Count	强度(G/D) Tenacity	断裂伸度(%) Elongation	干热收缩(%) H.A.S	Remarks
500	96	≥7.5	15.0±2.5	11.0±2.5	
750	192	≥7.5	15.0±2.5	11.0±2.5	
840	192	≥7.5	15.0±2.5	11.0±2.5	
1000	96/192	≥7.5	15.0±2.5	11.0±2.5	
1000	96	≥7.3	21.0±2.5	6.0±1.5	
1200	192	≥7.5	15.0±2.5	11.0±2.5	
1500	96/192	≥7.5	15.0±2.5	11.0±2.5	
1500	96/192	≥7.3	21.0±2.5	6.0±1.5	
2000	192/384	≥7.5	15.0±2.5	11.0±2.5	
2500	192/384	≥7.3	15.0±2.5	11.0±2.5	
3000	192/384	≥7.5	15.0±2.5	11.0±2.5	
4000	384	≥7.5	15.0±2.5	11.0±2.5	

# 优势产品

## Advantage Products

### 合股, 捻纱 (见表六)

Multi-compaction&Twisting Yarn

▶ 产品特点:

- 加捻过程中强度保持率高。
- 加捻范围: 250d~12000d。
- 捻度范围: 40~360TPM。

主要用途:

高档汽车安全带、工程线绳、PVC管材、工业缝纫线、机织工业用布, 土工隔栅。

Product property:

- Low loss of tenacity during compact & twist processing.
- Twist range: 250D-12000D.
- Twist range: 40-360TPM.

Main application:

Seat belts, engineering ropes, PVC-hose, sewing thread, plain-woven fabric, Geo-grid, Slings.

表六 Specification Of Twisting Yarn

规格 Type		250D~12000D
断裂强力 Breaking strength	kgf	原丝水平90%以上 above 90% of flat yarn level
	N	原丝水平90%以上 above 90% of flat yarn level
断裂强度 Tenacity	g/d	原丝水平90%以上 above 90% of flat yarn level
	CN/dtex	原丝水平90%以上 above 90% of flat yarn level
断裂伸度 Elongation at Break	%	原丝水平 remains as flat yarn level
干热收缩率(%) H.A.S (177°C,10min)	ASTM-D885	/
	G.B (0.5cn/tex)	原丝水平 remains as flat yarn level
捻度 Twist	T/M	M±5.0
捻向 Twist direction		S或Z S or Z
备注说明 Remarks		M: 代表设计捻度 捻度范围: 40-360TPM M: Required twist. Twist range: 40-360TPM

# 尼龙66高强工业丝

## Nylon 66 High Tenacity yarn

### 中低旦高强力丝

Low denier high tenacity yarn

▶ 特性

- 强度和耐磨度高, 且具有质轻、柔软的优点
- 有较大弹性, 长期使用不易疲劳;
- 外观良好和加工性优良、且染色性好。

Product property:

- High tenacity & abrasion resistance, light and soft
- High elasticity and good fatigue resistance during long time use
- Good looking ,processing property, dyeability

分持数 Linear Density (Dtex)	孔数 Yarn Count (No.)	断裂强度 Tenacity (CN/Dtex)	断裂伸长率 Elongation at break (%)	干热收缩率 H.A.S (%)
235	36F	≥7.5	20.0±3.0	4.0±1.5
315	36F	≥7.5	20.0±3.0	4.0±1.5
470	68F	≥7.5	20.0±3.0	4.0±1.5

### 轮胎帘布用丝

Tire Cord Yarn

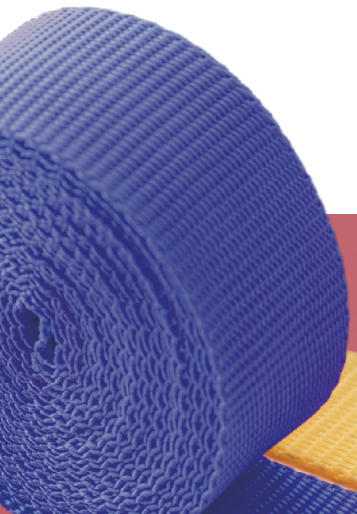
▶ 特性

- 强度高、抗冲击负载性能高、耐疲劳性好;
- 强伸变异系数小, 尺寸稳定性高;
- 后加工强度保持率大, 且与橡胶黏合性好。

Product property:

- High tenacity, good performance of fatigue
- Stable property, excellent dimensional stability
- Provide good adhesion with rubber

分持数 Linear Density (Dtex)	孔数 Yarn Count (No.)	断裂强度 Tenacity (CN/Dtex)	断裂伸长率 Elongation at break (%)	定负荷伸长 EASL (%)	干热收缩率 H.A.S (%)
940	140	≥8.2	18.0	10.5	5.5
1400	210	≥8.2	19.0	11.5	5.5
2100	280	≥8.2	19.0	11.5	5.5



## 尼龙6高强工业丝

### Nylon 6 High Tenacity yarn

## 环保产品

### GREEN PRODUCTS

#### 渔网线用丝

Fishing nets Yarn

##### 特性

- 强度高，抗UV效果佳，物性稳定。
- 染色性好。

##### Product property:

- High tenacity, UV stabilized, less variation.
- Good dyeability

物料号 Type (No.)	丹尼/根数 denier/ filaments	纤度 Linear Density (Dtex)	断裂强力 Strength (N)	断裂强度 Tenacity (CN/Dtex)	断裂伸长率 Elongation (%)	中间伸长率 EASL% (4.7CN/Dtex)	干热收缩率 H.A.S (%)
NF0841	840/96	940±20	≥70	≥7.5	22±3	11±1.5	≤7.5
NF1241	1260/96	1400±28	≥105	≥7.5	22±3	11±1.5	≤7.5
NU0841 (uv type)	840/96	940±20	≥70	≥7.5	22±3	11±1.5	≤7.5
NU1241 (uv type)	1260/96	1400±28	≥105	≥7.5	22±3	11±1.5	≤7.5

- 测试方法：FZ/T 54044-2011；
- 强伸度测试前将纱线增加60 tpm；
- 干热测试方法：160°C \*2min\*0.05cn/dtex；

- Test method: FZ/T 54044-2011；
- Tesile testing is performed at a yarn twist of 60 tpm；
- Shrinkage: 160°C \*2min\*0.05cn/dtex；

#### 轮胎帘布用丝

Tire Cord Yarn

##### 特性

- 强度高，强力保持力好。

##### Product property:

- High tenacity, heat stabilized

物料号 Type (No.)	丹尼/根数 denier/ filaments	纤度 Linear Density (Dtex)	断裂强力 Strength (N)	断裂强度 Tenacity (CN/Dtex)	断裂伸长率 Elongation (%)	中间伸长率 EASL% (4.7CN/Dtex)	干热收缩率 H.A.S (%)
NT0841	840/140	930±30	≥74.9	≥8.05	22±3	11±1.5	≤7.5
NT1241	1260/210	1400±28	≥112.7	≥8.05	22±3	11±1.5	≤7.5
NT1641	1680/280	1880±40	≥149.0	≥8.05	22±3	11±1.5	≤7.5

- 测试方法：FZ/T 54044-2011；
- 强伸度测试前将纱线增加60 tpm；
- 干热测试方法：160°C \*2min\*0.05cn/dtex；

- Test method: FZ/T 54044-2011；
- Tesile testing is performed at a yarn twist of 60 tpm；
- Shrinkage: 160°C \*2min\*0.05cn/dtex；

#### 生物基聚酯

BIO-POLYESTER

指标项目 Item	单位 Unit	工业丝 Industry Yarn		高模低缩丝 HMLS Yarn	
规格 Spec	dtex	550	1100	1670	1100/1440/1670
断裂强度 Breaking Strength	cN/dtex	≥7.7	≥7.7	≥7.7	>6.9
断裂伸长率 Elongation @ Break	%	18.0±2.0	14.5±2.0	15.0±2.0	11.0±2.0
干热收缩率 Hot Air Shrinkage	%	6.0±1.0	11.0±2.0	11.0±2.0	5.0±1.0

#### 生物基尼龙56

BIO-NYLON 56

指标项目 Item	单位 Unit	工业丝 Industry Yarn		
规格 Spec	dtex	470	940	1400
断裂强度 Breaking Strength	cN/dtex	≥7.5	≥7.5	≥7.5
断裂伸长率 Elongation @ Break	%	21.0±3.0	20.5±3.0	20.5±3.0
干热收缩率 Hot Air Shrinkage	%	5.5±1.5	5.5±1.5	5.5±1.5



消费后再生型聚酯

Post-Consumer Recycled PET

再生型聚酯高模低缩丝 Recycled PET HMLS Yarn		再生切片比例 Recycled Chip Content 30%			再生切片比例 Recycled Chip Content 100%		
指标项目 Item	单位 Unit	高模低缩丝 HMLS Yarn			高模低缩丝 HMLS Yarn		
规格 Spec	dtex	1100	1440	1670	1100	1440	1670
断裂强度 Breaking Strength	cN/dtex	≥6.8	≥6.8	>6.8	>6.5	≥6.5	>6.5
断裂伸长率 Elongation @ Break	%	10.5±2.5	10.5±2.5	11.0±2.5	10.5±3.0	10.5±3.0	11.0±3.0
干热收缩率 Hot Air Shrinkage	%	5.0±1.0	5.0±1.0	5.0±1.0	5.0±1.5	5.0±1.5	5.0±1.5

再生型聚酯工业丝 Recycled PET Industry Yarn		再生切片比例 Recycled Chip Content 30%		再生切片比例 Recycled Chip Content 100%	
指标项目 Item	单位 Unit	低缩丝 Low shrinkage Yarn	高强丝 High tenacity Yarn	低缩丝 Low shrinkage Yarn	高强丝 High tenacity Yarn
规格 Spec	dtex	1100	1100	1100	1100
断裂强度 Breaking Strength	cN/dtex	≥6.7	≥7.5	≥6.5	≥7.2
断裂伸长率 Elongation @ Break	%	25.0±2.5	14.5±2.5	25.0±3.0	15.0±3.0
干热收缩率 Hot Air Shrinkage	%	2.5±0.7	12.0±2.5	2.5±0.9	12.0±3.0

包装方式

Packing & Loading Way

尺寸 产品类型		涤纶 POLYESTER					锦纶 PA6, 66		
		标准型 Standard	高模低缩型 HMLS	低丹尼尔型 Low Denier	加捻丝 Twist Yarn	粗丹尼 HDI	细丹尼 LDI		
卷重 (kg) (Bobbin Weight)		10	11	11	8	9	10	9	10
纸管尺寸 Tube Size	内径(mm) Inner Diameter	94	94	110	110	125	75	94	125
	外径(mm) Out Diameter	110	110	126	126	140	83	106	140
	高度(mm) Height	300	300	300	225	300	290	300	200
卷装尺寸 Bobbin Dimension	外径(mm) Out Diameter	250±5	265±5	265±5	275±5	268±5	270±5	266±5	330±5
	动程(mm) Traverse Length	252	252	252	192	250	252	260	175
Bobbin Pattern									
托盘包装 Pallet Package	筒子数(pcs) Bobbin Qty	48	48	48	64	48	48	48	45
	每箱净重(kg) Net Weight	480	528	528	512	432	480	432	450
	包装箱尺寸(mm) (长*宽*高) Carton Size	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x950(1050)	1130x1130x1000(1160)
40英尺集装箱 40'FT Container	托盘数(pcs) Pallet Qty	40	40	40	40	40	40	40	40
	装箱净重(kg) Total Net Weight	19200	21120	21120	20480	17280	19200	20000	18000
20英尺集装箱 20'FT Container	托盘数(pcs) Pallet Qty	20	20	20	20	20	20	20	20
	装箱净重(kg) Total Net Weight	9600	10560	10560	10240	8640	9600	8640	8100

