创新塑造未来
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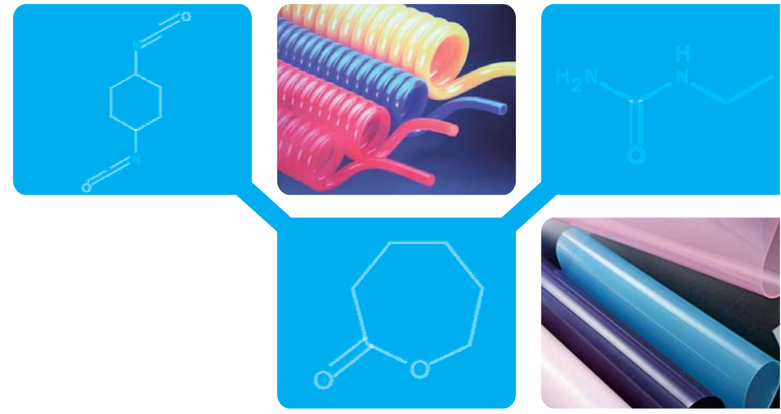
# DECTHANE

## TPU

Thermoplastic Polyurethane

## 热 塑 性 聚 氨 酯




得创热塑性聚氨酯（东莞）有限公司
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De Chuang TPU (Dongguan) Co., Ltd.

**得创热塑性聚氨酯（东莞）有限公司**

DECTHANE

# 公司简介 Company profile

得创热塑性聚氨酯（东莞）有限公司于2010年12月开始筹备，并于2013年3月正式注册创立。公司位于中国广东省东莞市高埗镇卢溪村银涌工业区. 以研发制造和销售高性能热塑性聚氨酯（Thermoplastic Polyurethane，TPU）为主营业务. 是一家集生产、销售、研发为一体的技术密集型和环境友好型企业。

除引进源自德国、美国、台湾的国际上最先进的TPU生产设备及检测设备，生产工艺使用国际领先的反应挤出(Reactive Extrusion, REX)技术外，我们还拥有理论实践经验丰富的业内资深专家和研发人员，及工艺水平高超的生产管理人员和操作人员。我们秉承可持续发展理念，切实履行社会责任，在环保方面投入了大量资金，采用清洁生产工艺以建设环境友好型企业，实现了经济效益与社会效益的和谐持续发展。

热塑性聚氨酯（Thermoplastic Polyurethane，TPU），业内通常称其为热塑性聚氨酯弹性体，因其兼具塑料的刚性和橡胶的弹性，并可多次回收加工，是一种新兴的有机高分子环保材料。TPU产品具有良好的加工性能，硬度范围宽、机械强度高、耐磨、耐寒、耐油、耐水解、耐霉菌，广泛应用在鞋材、薄膜、片材、管材、型材、线缆、织物涂层、粘合剂、熔纺氨纶、汽车等环保材料领域。

我们生产的DECTHANE TPU系列产品的邵氏硬度跨越40A–80D，包括聚酯型、聚醚型、聚已内酯型、聚碳酸酯型及其它特殊功能型，如热熔型TPU、发泡型TPU、基于液态橡胶或生物基原料的TPU，并可配合客户定制特殊产品，适合于注塑、挤出、吹塑、压延、热熔、热压等各种加工工艺。优良稳定的质量和容易加工的特性是DECTHANE TPU的特点。DECTHANE TPU均通过相关测试确保符合RoHS、REACH、PAHs等环保标准。

凭借累积多年的生产和销售经验及不断创新的精神，我们将致力于为您提供最完美的TPU产品和解决方案！

| DECTHANE | 40 | 95A | U | DPS102 |
|---|---|---|---|---|
| 商品名称<br>Trade Name | 产品系列<br>Production Series | 硬度<br>Hardness<br>A = Shore A<br>D = Shore D | 特殊性能<br>Special Properties | 客户定制代码<br>Customization Code |

E = Extrusion 挤出级
U = UV stabilized 紫外线稳定
X = Anti–abrasion modified 耐磨加强
H = Heat resistance modified 耐热加强
W = Anti–hydrolysis 耐水解加强
S = Anti–static modified 抗静电改良
M = Matt surface 亚光表面
PF = Soft & Plasticizer free 不含增塑剂的软化级
HFR = Flame retardant & Halogen free 无卤阻燃



# 企业文化 Company conception

DECTHANE

创新塑造未来
Innovation shape the future

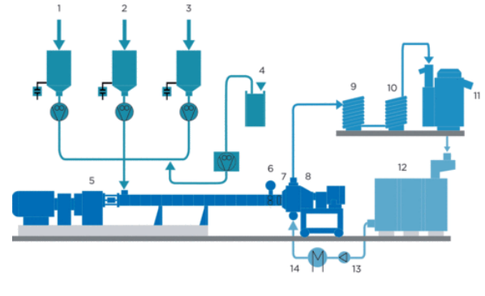
De Chuang TPU (Dongguan) Co., Ltd. was made preparations from December, 2010, and was founded and registered on March, 2013. The company is located in Yinyong Industrial Zone, Luxi Village, Gaobu Town, Dongguan City, Guangdong Province, China, and is focused on the research and development, manufacture and sales of TPU (Thermoplastic Polyurethane) with high performance. It is a technology–intensive and environment–friendly company with the integration of production, sales, research and development.

In addition to the importation of advanced manufacturing facilities and inspection devices from Germany, USA and Taiwan, and adopting the leading production process in international of REX (Reactive Extrusion) technology, we have the senior experts and researchers with rich theory and practical experience, and production managements and operators with high skills. We uphold the concept of sustainable development, and earnestly fulfill social responsibilities, invested a lot of funds in environmental protection, adopted clean production process for building environment–friendly company to achieve the concordant and sustainable development of the economic and social benefits.

TPU (Thermoplastic Polyurethane), often called thermoplastic polyurethane elastomer in the industry for its rigidity like plastics and elasticity like rubbers, and can be recycled in processing. It is a kind of rising organic polymer materials. TPU have good processing property and other advantages including wide hardness range, high mechanical strength with good abrasion, low–temperature flexibility, good oil, hydrolysis and microbial resistance, widely used in shoes, films and sheets, tubes and hoses, profiles, wires and cables, fabric coating, adhesive, melt spinning, automotive engineering and other green materials.

Our products of DECTHANE TPU series have shore hardness 40A–80D, including polyester, polyether, polycaprolactone, polycarbonate and other special products, such as hot melt TPU, foamed TPU, liquid rubber based and Bio–based TPU, also can provide customized products, are suitable for injection molding, extrusion molding, blow molding, calender, hot melt or hot pressure and other processing. Particularly stable quality and very easy processing are characteristics of DECTHANE TPU. All DECTHANE TPU have passed the relevant certifications and comply with RoHS, REACH, PAHs and other environmental standards.

We will provide perfect products and solutions with the experiences of many years in production and sales and the spirit of innovation!




**Typical set-up for the production of linear thermoplastic polyurethanes TPU**
1 Polyhydric alcohol I 2 MDI I 3 Butane diol I 4 Catalyst I 5 Twin–screw compounder ZSK I 6 Throttle–start–up valve I 7 Screen pack changer SWZ I 8 Underwater pelletizer UG I 9 Pellet Water tank I 10 Pellet dryer I 11 TPU I 12 Pellet water tank I 13 Pump I 14 Heat exchanger

# Overview of DECTHANE TPU
# DECTHANE TPU一览表

| Type 类型 | Standard Polyester 通用聚酯型 | | | Special Polyester 特殊聚酯型 | | | Extrusion 挤出级 | Blow Molding 吹塑级 | Polyether 聚醚型 |
|---|---|---|---|---|---|---|---|---|---|
| Products Series 产品系列 | 30 | 33 | 40 | 46 | 48 | 60 62 66 68 | | 70 | 71 | 82 |
| Transparence 透明度 | ++ | – | +/++ | 0 | – | ++ – 0 – | | + | ++ | ++ |
| Cycle times 易成型性 | 0 | ++ | + | + | ++ | 0 ++ ++ ++ | | 0 | + | + |
| Mechanical properties 机械性能 | + | ++ | + | + | ++ | + ++ + ++ | | + | ++ | ++ |
| Abrasion resistance 耐磨耗性能 | 0 | ++ | 0 | 0/+ | ++ | 0 ++ 0/+ ++ | | 0 | + | + |
| Heat resistance 耐热性能 | 0 | 0 | 0 | – | 0/+ | 0 + – ++ | | 0 | 0 | – |
| Low–temperature flexibility 低温柔顺性 | – | – | 0/+ | ++ | 0/+ | + + ++ 0/+ | | 0 | 0 | ++ |
| Hydrolysis resistance 耐水解性能 | 0 | 0 | 0 | + | + | ++ ++ ++ + | | 0 | 0 | ++ |
| Oils & greases resistance 耐油脂性能 | + | + | + | + | + | ++ ++ ++ + | | + | + | – |
| Hydrolysis resistance 抗微生物性能 | – | – | – | – | – | – – – – | | – | – | ++ |

++ = Excellent 优异　+ = Good 好　o = General 普通　– = Not Recommended 不推荐





Note:

1> Informations in this table based on past experience, applications and processing of products are uncontrolled for our company, for reference only
此表格内的信息基于过往经验, 产品应用和加工非我司所能管控, 仅供选择产品规格时参考
2> Adding functional additives, DECTHANE TPU can obtain the special performances to meet the special requirements of customers
DECTHANE TPU 可以通过添加功能性助剂来改善其特定方面的性能以满足客户特殊需求
3> Besides 70 series belongs to extrusion grade, other grades also can be produced for extrusion application according to demands of customers
除70系列挤出级产品外, 其他规格亦可根据客户需求生产应用于挤出的产品

Our company also provides the following TPU products:
我们还提供下列 TPU 产品:

| 69 Series 69 系列 | 90 Series 90 系列 | UV MB Series UV MB 系列 | Other Special Products 其他特殊产品 |
|---|---|---|---|
| Polycarbonate TPU 聚碳酸酯型 TPU<br>Heat resistance 耐热<br>Hydrolysis resistance 耐水解<br>Chemicals resistance 耐化学品<br>Microbial resistance 抗微生物 | Aliphatic TPU 脂肪族 TPU<br>Resistance to yellowing due to UV 持久耐黄变 | UV Master batch for TPU<br>TPU 基 UV 母粒 | Hot melt TPU 热熔型 TPU<br>Foamed TPU 发泡型 TPU<br>TPU based liquid rubber 液态橡胶型 TPU<br>Bio–based TPU 生物基 TPU |

For more details of these products, please contact our sales representative or technical service representative.
有关产品的更详细信息请联系我们的销售代表和技术服务代表。


DECTHANE® TPU


**Standard Polyester TPU / 通用聚酯型TPU**

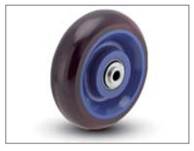
Injection molding, very short cycle times, high mechanical properties and good abrasion resistance

适用于注塑成型, 可快速成型, 高机械性能及良好的耐磨耗性能

**Applications / 应用:**

Shoe soles, shells, heels, buckles, mobile phone covers, ball handles, castors and other injection molding engineering parts

应用于鞋底, 鞋外壳, 鞋跟, 扣带, 手机保护套, 球柄, 脚轮及其他工程注塑制品



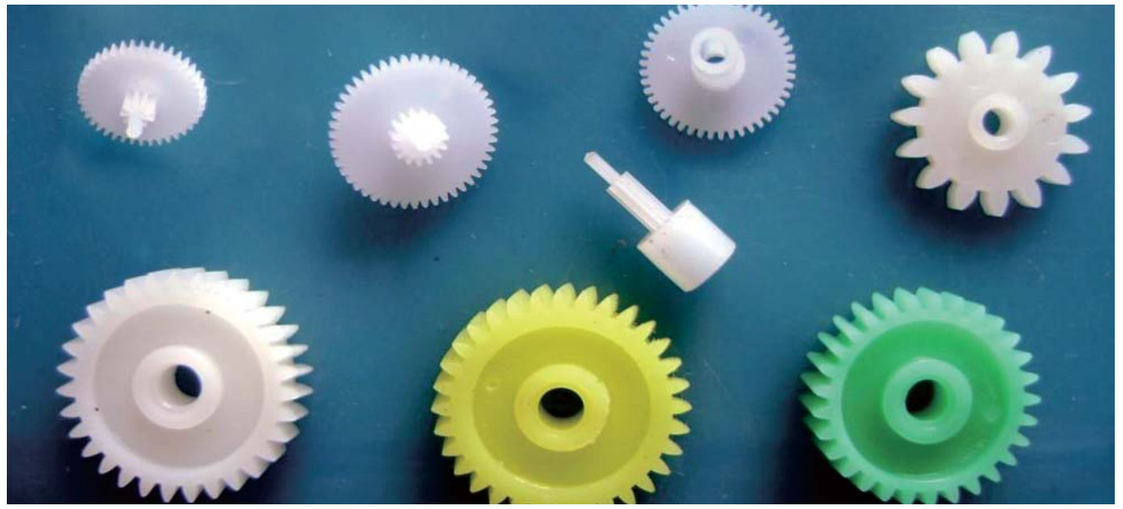
1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests

平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 33 Series / 33 系列 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 33 80A | 33 85A | 33 90A | 33 95A | 33 98A | 33 60D | 33 64D | 33 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.22 ± 0.02 | 1.23 ± 0.02 | 1.24 ± 0.02 | 1.24 ± 0.02 | 1.24 ± 0.02 | 1.24 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 83 ± 2 A | 86 ± 2 A | 90 ± 2 A | 95 ± 2 A | 97 ± 2 A | 62 ± 2 D | 65 ± 2 D | 70 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 25 | 35 | 45 | 50 | 50 | 50 | 50 | 55 |
| Elongation at Break 最大伸长 | ISO 37 | % | 600 | 550 | 500 | 500 | 450 | 400 | 400 | 350 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 5.5 | 7 | 8 | 10 | 15 | 20 | 25 | 27 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 10 | 12 | 15 | 20 | 30 | 35 | 37 | 40 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 85 | 100 | 110 | 130 | 170 | 210 | 230 | 250 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 60 | 55 | 50 | 45 | 45 | 40 | 40 | 40 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 100 ℃ | 100 ℃ | 100 ℃ | 105 ℃ | 105℃ | 105 ℃ | 110 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 165-185 | 180-195 | 190-205 | 195-210 | 195-210 | 200-215 | 200-215 | 205-220 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |


DECTHANE® TPU



**Standard Polyester TPU / 通用聚酯型TPU**
**Cold-flex Resistance Grades / 耐寒级**
Injection molding, very short cycle times, high mechanical properties and good abrasion resistance
适用于注塑成型, 可快速成型, 高机械性能及良好的耐磨耗性能
Improved hydrolysis resistance, heat resistance and low-temperature flexibility
提高耐水解性能和耐热性能并改善低温柔顺性

**Applications / 应用:**
Shoe soles, shells, heels, buckles, ski boots, rollers and wheels, and other injection molding engineering parts
应用于鞋底, 鞋外壳, 鞋跟, 扣带, 滑雪靴, 滚轴和滚轮及其他工程注塑制品



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平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 48 Series / 48 系列 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 48 75A | 48 80A | 48 85A | 48 90A | 48 95A | 48 98A | 48 60D | 48 64D | 48 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.18 ± 0.02 | 1.18 ± 0.02 | 1.19 ± 0.02 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.22 ± 0.02 | 1.22 ± 0.02 | 1.23 ± 0.02 | 1.24 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 78 ± 2 A | 82 ± 2 A | 86 ± 2 A | 91 ± 2 A | 94 ± 2 A | 97 ± 2 A | 56 ± 2 D | 64 ± 2 D | 70 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 28 | 30 | 40 | 45 | 50 | 50 | 50 | 55 | 58 |
| Elongation at Break 最大伸长 | ISO 37 | % | 600 | 600 | 500 | 500 | 450 | 450 | 450 | 400 | 350 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 4 | 5 | 6 | 8 | 10 | 15 | 17 | 25 | 28 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 9 | 10 | 14 | 16 | 20 | 30 | 35 | 40 | 48 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 80 | 85 | 100 | 115 | 130 | 170 | 185 | 230 | 280 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 60 | 60 | 45 | 45 | 45 | 40 | 40 | 40 | 40 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 95 ℃ | 100 ℃ | 100 ℃ | 100 ℃ | 105℃ | 105 ℃ | 105 ℃ | 110 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 170-190 | 175-195 | 180-200 | 185-205 | 190-215 | 195-220 | 200-225 | 205-225 | 210-230 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |


DECTHANE® TPU

**Special Polyester TPU / 特殊聚酯型TPU**

Injection molding, very short cycle times, high mechanical properties and good abrasion resistance
适用于注塑成型, 可快速成型, 高机械性能及良好的耐磨耗性能
Excellent hydrolysis resistance and oils & greases resistance , good heat resistance and low-temperature flexibility
极佳的耐水解性能和耐油脂性能, 良好的耐热性能和低温柔顺性

**Applications / 应用:**

Besides the applications of shoes, can also be used for watch straps, seals, gears and other injection molding engineering parts with special requirements
除了鞋材上的应用以外, 还可用于表带, 密封件, 齿轮及其他具有特殊要求的工程注塑制品



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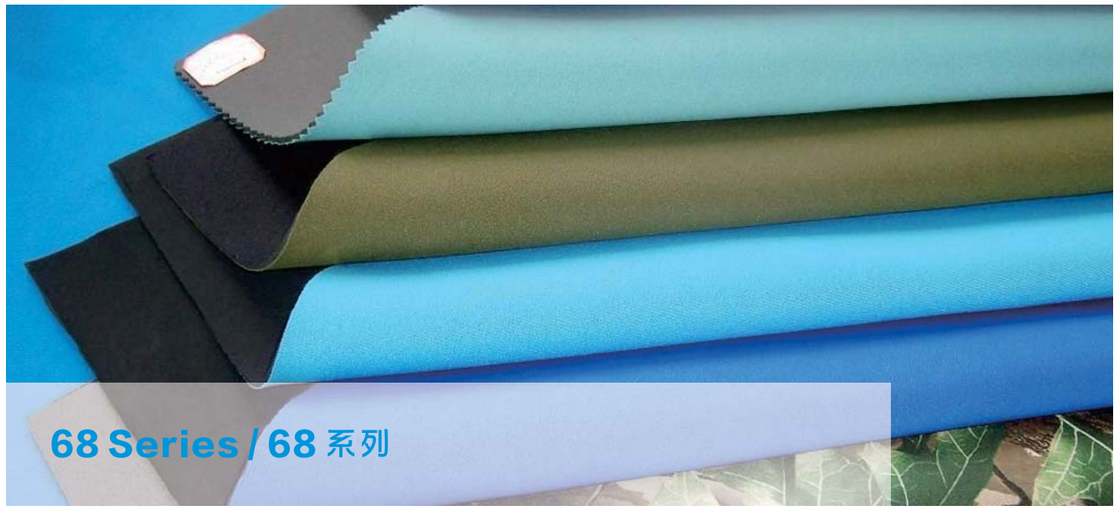
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 62 Series / 62 系列 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 62 75A | 62 80A | 62 85A | 62 90A | 62 95A | 62 98A | 62 60D | 62 64D | 62 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.15 ± 0.02 | 1.15 ± 0.02 | 1.16 ± 0.02 | 1.18 ± 0.02 | 1.18 ± 0.02 | 1.19 ± 0.02 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.21 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 78 ± 2 A | 82 ± 2 A | 85 ± 2 A | 92 ± 2 A | 94 ± 2 A | 96 ± 2 A | 55 ± 2 D | 63 ± 2 D | 70 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 30 | 32 | 34 | 45 | 50 | 50 | 50 | 50 | 55 |
| Elongation at Break 最大伸长 | ISO 37 | % | 600 | 600 | 550 | 500 | 450 | 450 | 420 | 400 | 350 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 4 | 5 | 6 | 9 | 10 | 15 | 17 | 22 | 26 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 8 | 9 | 11 | 18 | 20 | 30 | 35 | 40 | 46 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 70 | 80 | 100 | 120 | 125 | 170 | 185 | 220 | 255 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 55 | 55 | 50 | 40 | 40 | 40 | 40 | 40 | 40 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 95 ℃ | 100 ℃ | 100 ℃ | 100 ℃ | 105℃ | 105 ℃ | 105 ℃ | 110 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 170-190 | 175-195 | 180-200 | 185-205 | 190-215 | 195-220 | 200-225 | 205-225 | 210-230 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |



## 68 Series / 68 系列

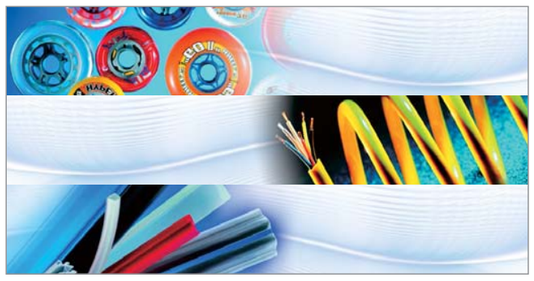
**Special Polyester TPU / 特殊聚酯型TPU**

Injection molding, very short cycle times, high mechanical properties and good abrasion resistance
适用于注塑成型, 可快速成型, 高机械性能及良好的耐磨耗性能

Excellent heat resistance, improved hydrolysis resistance and low-temperature flexibility
极佳的耐热性能, 提高耐水解性能和改善低温柔顺性

**Applications / 应用:**

Besides the applications of shoes, can also be used for coupling elements, driving wheels and other injection molding engineering parts with heat resistance
除了鞋材上的应用以外, 还可用于连接部件, 驱动轮及其他要求耐热性的工程注塑制品



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2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型





| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 68 Series / 68 系列 | | | |
|---|---|---|---|---|---|---|
| | | | 68 85A | 68 90A | 68 95A | 68 98A |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.17 ± 0.02 | 1.18 ± 0.02 | 1.20 ± 0.02 | 1.20 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 85 ± 2 A | 90 ± 2 A | 93 ± 2 A | 96 ± 2 A |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 35 | 45 | 50 | 50 |
| Elongation at Break 最大伸长 | ISO 37 | % | 500 | 500 | 450 | 450 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 6 | 7 | 10 | 15 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 12 | 15 | 20 | 30 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 100 | 110 | 130 | 170 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 50 | 45 | 45 | 45 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 100 ℃ | 100 ℃ | 100 ℃ | 105 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 180-200 | 185-205 | 190-215 | 195-220 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ |


DECTHANE® TPU

**Standard Polyester TPU / 通用聚酯型TPU**
**Transparent Grades / 透明规格**
Injection molding, very short cycle times, high mechanical properties and good abrasion resistance
适用于注塑成型, 可快速成型, 高机械性能及良好的耐磨耗性能
High transparence, clear and transparent with a wall thickness of up to maximum 6mm
高透明性, 最高可达6mm壁厚透明

**Applications / 应用:**
Sport shoe soles, shoe parts and accessories, and other injection molding parts with high transparence
应用于运动鞋底, 鞋配件, 及其他要求高透明度的注塑制品



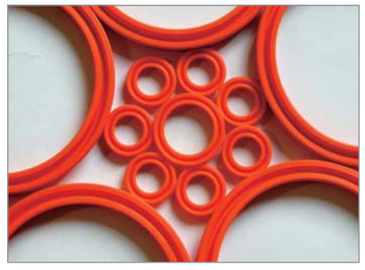
1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 40 Series / 40 系列 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 40 80A | 40 85A | 40 90A | 40 95A | 40 98A | 40 60D | 40 64D | 40 71D | 40 74D |
| Density 密度 | ISO 1183–1 | g/cm3 | 1.20 ± 0.02 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.21 ± 0.02 | 1.22 ± 0.02 | 1.23 ± 0.02 | 1.23 ± 0.02 | 1.23 ± 0.02 | 1.24 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 86 ± 2 A | 88 ± 2 A | 91 ± 2 A | 93 ± 2 A | 96 ± 2 A | 61 ± 2 D | 63 ± 2 D | 70 ± 2 D | 76 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 30 | 40 | 45 | 45 | 45 | 45 | 45 | 45 | 50 |
| Elongation at Break 最大伸长 | ISO 37 | % | 550 | 500 | 500 | 500 | 450 | 400 | 400 | 350 | 300 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 5 | 6 | 9 | 9 | 16 | 21 | 22 | 25 | 31 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 10 | 12 | 18 | 19 | 26 | 30 | 31 | 35 | 38 |
| Tear Strength 撕裂强度 | ISO 34–1 | kN/m | 80 | 90 | 110 | 120 | 170 | 200 | 215 | 235 | 290 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 60 | 60 | 55 | 55 | 55 | 50 | 50 | 50 | 50 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 95 ℃ | 95 ℃ | 100 ℃ | 100 ℃ | 100℃ | 105 ℃ | 105 ℃ | 105 ℃ |
| | Drying Time 干燥时间 | | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 175–195 | 180–200 | 185–205 | 190–210 | 195–215 | 200–220 | 200–220 | 205–225 | 210–225 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |


**Standard Polyester TPU / 通用聚酯型TPU**
**Super Transparent Grades / 超透明规格**
Injection molding, easy to process, good mechanical properties
适用于注塑成型, 易加工, 良好的机械性能
Super transparence, clear and transparent with a wall thickness of up to more than 6mm
极佳透明性, 可超过6mm壁厚透明

**Applications / 应用:**
Sport shoe soles, shoe parts and accessories, and other injection molding parts with super transparence
应用于运动鞋底, 鞋配件, 及其他要求极高透明度的注塑制品



1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型





| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 30 Series / 30 系列 | | | |
|---|---|---|---|---|---|---|
| | | | 30 95A | 30 60D | 30 66D | 30 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.21 ± 0.02 | 1.23 ± 0.02 | 1.23 ± 0.02 | 1.24 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 93 ± 2 A | 63 ± 2 D | 68 ± 2 D | 71 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 35 | 37 | 38 | 40 |
| Elongation at Break 最大伸长 | ISO 37 | % | 400 | 400 | 400 | 350 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 10 | 17 | 20 | 23 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 20 | 29 | 30 | 34 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 125 | 180 | 200 | 215 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 60 | 60 | 60 | 60 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 95 ℃ | 100 ℃ | 100 ℃ | 105 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 190-205 | 195-215 | 195-215 | 200-220 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ |


DECTHANE® TPU

**Special Polyester TPU / 特殊聚酯型TPU**
**Super Transparent Grades / 超透明规格**

Injection molding, easy to process, good mechanical properties
适用于注塑成型, 易加工, 良好的机械性能
Excellent hydrolysis resistance and oils & greases resistance, good low-temperature flexibility
极佳的耐水解性能和耐油脂性能, 良好的低温柔顺性
Super transparence, clear and transparent with a wall thickness of up to more than 6mm
极佳透明性, 可超过6mm壁厚透明

**Applications / 应用:**

Sport shoe soles, shoe parts and accessories, and other injection molding parts with hydrolysis resistance and super transparence
应用于运动鞋底, 鞋配件, 及其他要求耐水解性能和极高透明度的注塑制品




1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 60 Series / 60 系列 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 60 80A | 60 85A | 60 90A | 60 95A | 60 98A | 60 60D | 60 64D | 60 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.15 ± 0.02 | 1.16 ± 0.02 | 1.16 ± 0.02 | 1.17 ± 0.02 | 1.18 ± 0.02 | 1.19 ± 0.02 | 1.19 ± 0.02 | 1.20 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 80 ± 2 A | 85 ± 2 A | 89 ± 2 A | 92 ± 2 A | 96 ± 2 A | 60 ± 2 D | 63 ± 2 D | 70 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 30 | 35 | 40 | 45 | 45 | 45 | 50 | 50 |
| Elongation at Break 最大伸长 | ISO 37 | % | 550 | 500 | 450 | 450 | 400 | 400 | 400 | 350 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 5 | 6 | 8 | 9 | 14 | 18 | 20 | 23 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 10 | 12 | 18 | 20 | 28 | 30 | 32 | 34 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 80 | 90 | 110 | 120 | 155 | 170 | 190 | 220 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 60 | 60 | 55 | 55 | 55 | 55 | 55 | 55 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 95 ℃ | 95 ℃ | 95 ℃ | 95 ℃ | 100℃ | 100 ℃ | 105 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 170-190 | 175-195 | 180-200 | 190-205 | 195-210 | 195-215 | 195-215 | 200-220 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |


**Standard Polyester TPU / 通用聚酯型TPU**
**Soft Grades / 柔软规格**
Injection molding, short cycle times, good mechanical properties
适用于注塑成型, 成型快, 良好的机械性能
Excellent low-temperature flexibility and improved hydrolysis resistance
极佳的低温柔顺性并提高耐水解性能

**Applications / 应用:**
Shoe soles, shoe parts and accessories, and other injection molding parts with low hardness
应用于鞋底, 鞋配件, 及其他要求低硬度的注塑制品

1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型





| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 46 Series / 46 系列 | | |
|---|---|---|---|---|---|
| | | | 46 65A | 46 70A | 46 75A |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.16 ± 0.02 | 1.16 ± 0.02 | 1.17 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 65 ± 2 A | 71 ± 2 A | 76 ± 2 A |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 15 | 20 | 25 |
| Elongation at Break 最大伸长 | ISO 37 | % | 650 | 650 | 600 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 2.5 | 3.5 | 4 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 5.5 | 7 | 9 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 50 | 60 | 75 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | >100 | >90 | >60 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 85 ℃ | 85 ℃ | 90 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 145-165 | 155-175 | 160-180 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ |

## 66 Series / 66 系列

**Special Polyester TPU / 特殊聚酯型TPU**
**Special Soft Grades /特殊柔软规格**

Injection molding, faster processability, good mechanical properties
适用于注塑成型, 更快速的成型性, 良好的机械性能
Excellent hydrolysis resistance and low–temperature flexibility
极佳的耐水解性能和低温柔顺性

**Applications / 应用:**

Shoe soles, shoe parts and accessories, and other injection molding parts with low hardness and hydrolysis resistance
应用于鞋底, 鞋配件, 及其他要求低硬度和耐水解性能的注塑制品

1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 66 Series / 66 系列 | | |
|---|---|---|---|---|---|
| | | | 66 60A | 66 65A | 66 70A |
| Density 密度 | ISO 1183–1 | g/cm3 | 1.14 ± 0.02 | 1.15 ± 0.02 | 1.15 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 68 ± 2 A | 72 ± 2 A | 74 ± 2 A |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 15 | 18 | 20 |
| Elongation at Break 最大伸长 | ISO 37 | % | 600 | 600 | 600 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 3 | 3.5 | 3.8 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 6 | 7 | 8 |
| Tear Strength 撕裂强度 | ISO 34–1 | kN/m | 50 | 60 | 65 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | >90 | >80 | >70 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 90 ℃ | 90 ℃ | 90 ℃ |
| | Drying Time 干燥时间 | | 3–5 hrs | 3–5 hrs | 3–5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 150–170 | 155–175 | 160–180 |
| | Processing Mold[2] 建议成型方式 | | ■ | ■ | ■ |





## 71 Series / 71 系列

**Polyester TPU / 聚酯型TPU**
**Blow Molding / 吹塑成型**

Excellent batch stability and very high melt viscosity to ensure optimum productivity and reusability
优异的批次稳定性和高熔体粘度, 以确保最佳的生产效率和可复用性
Super transparence, clear and transparent with a wall thickness of up to more than 6mm
极佳透明性, 可超过6mm壁厚透明

**Applications / 应用:**

Blow molding are recommended, including air bags, and other profiles
推荐吹塑成型, 可应用于气囊及其他型体

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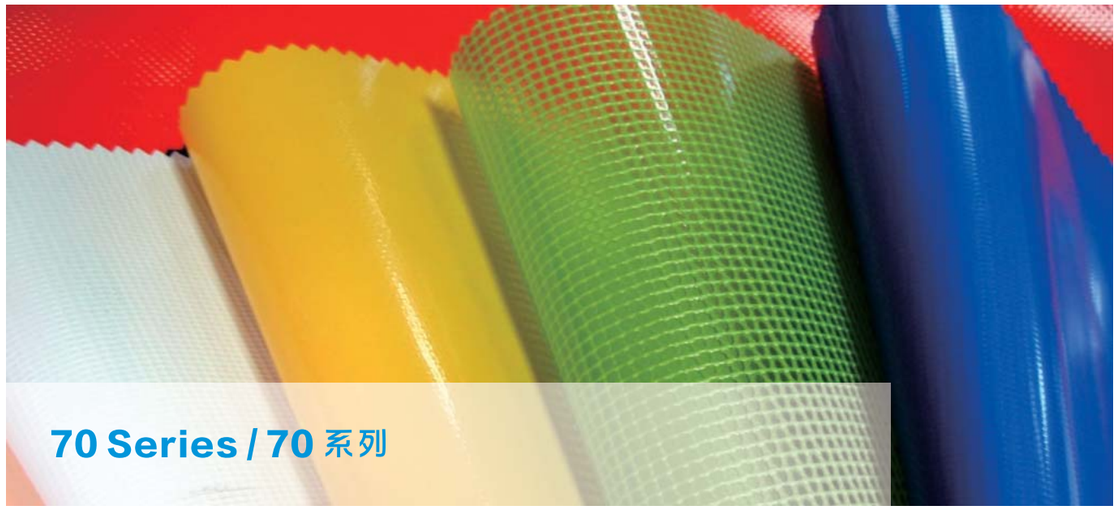
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 71 Series / 71 系列 | | | |
|---|---|---|---|---|---|---|
| | | | 71 85A | 71 90A | 71 95A | 71 96A |
| Density 密度 | ISO 1183–1 | g/cm3 | 1.20 ± 0.02 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.21 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 85 ± 2 A | 90 ± 2 A | 92 ± 2 A | 94 ± 2 A |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 40 | 45 | 50 | 50 |
| Elongation at Break 最大伸长 | ISO 37 | % | 550 | 500 | 400 | 420 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 5 | 7 | 9 | 12 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 9 | 14 | 21 | 27 |
| Tear Strength 撕裂强度 | ISO 34–1 | kN/m | 85 | 110 | 115 | 140 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 45 | 45 | 45 | 40 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 95 ℃ | 95 ℃ | 100 ℃ | 100 ℃ |
| | Drying Time 干燥时间 | | 3–5 hrs | 3–5 hrs | 3–5 hrs | 3–5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 180–200 | 185–205 | 190–210 | 195–215 |
| | Processing Mold[2] 建议成型方式 | | ● | ● | ● | ● |




**Polyester TPU / 聚酯型TPU**
**Extrusion Molding / 挤出成型**

Excellent batch stability and melt viscosity consistency to ensure optimum productivity and lower rejects
优异的批次稳定性和粘度一致性, 以确保最佳的生产效率和更少的次级品产出

**Applications / 应用:**

Specially designed for demand of extrusion applications: films and sheets, tubes and hoses, calender and fabric coating
为挤出应用专门设计: 薄膜和片材, 管材, 压延制品及织物涂覆

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平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

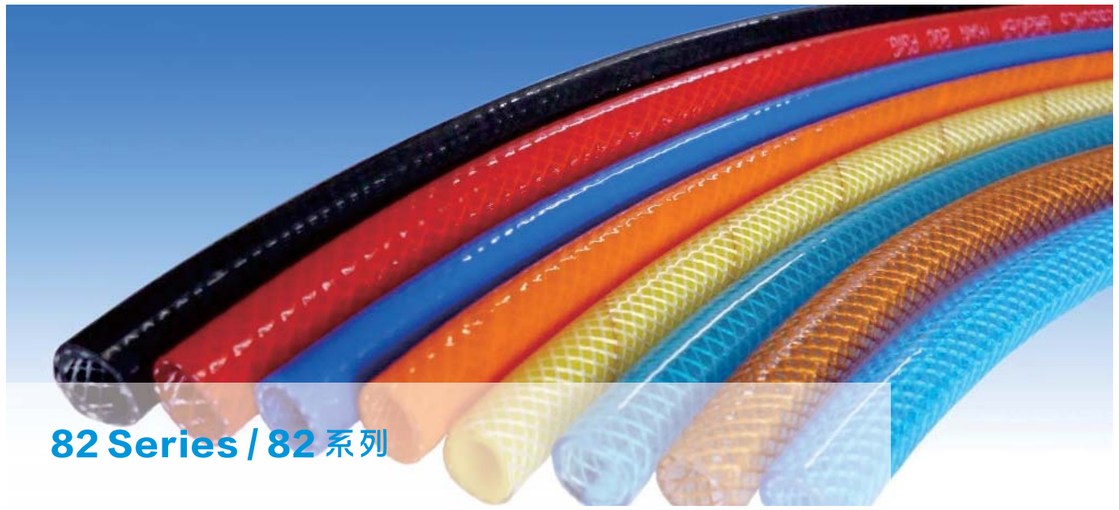
2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型



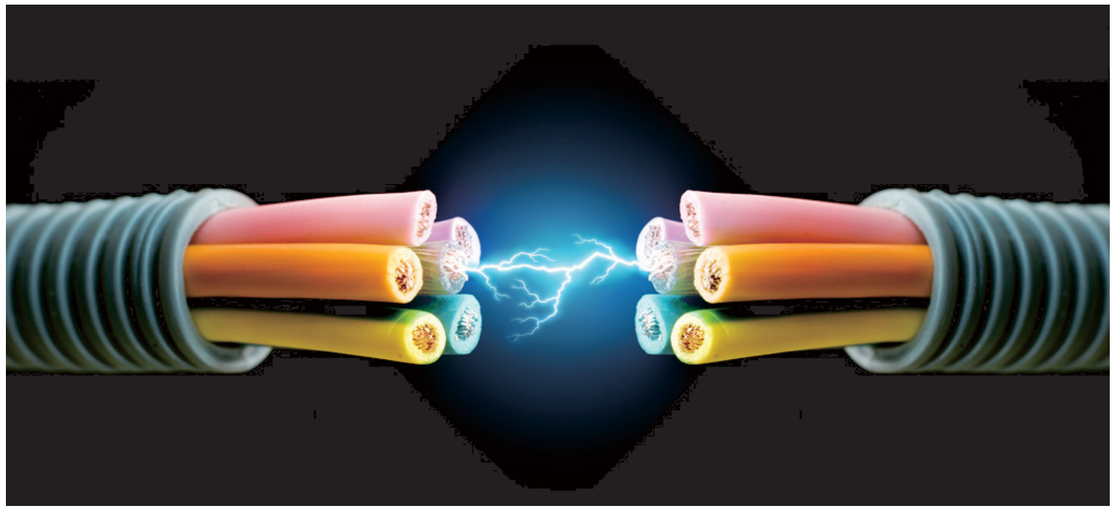
DECTHANE® TPU

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 70 Series / 70 系列 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 70 70A (lower viscosity) | 70 70A (higher viscosity) | 70 83A | 70 85A | 70 90A | 70 95A | 70 98A |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.18 ± 0.02 | 1.18 ± 0.02 | 1.19 ± 0.02 | 1.20 ± 0.02 | 1.21 ± 0.02 | 1.22 ± 0.02 | 1.22 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 70 ± 2 A | 74 ± 2 A | 81 ± 2 A | 88 ± 2 A | 91 ± 2 A | 96 ± 2 A | 97 ± 2 A |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 4 | 10 | 19 | 26 | 32 | 35 | 35 |
| Elongation at Break 最大伸长 | ISO 37 | % | 600 | 650 | 600 | 550 | 550 | 480 | 450 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 2.5 | 3 | 4 | 6 | 7 | 13 | 16 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 3 | 4 | 6 | 9 | 12 | 21 | 24 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 30 | 50 | 70 | 85 | 110 | 150 | 160 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 80 ℃ | 85 ℃ | 90 ℃ | 95 ℃ | 95 ℃ | 100℃ | 100 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 110-130 | 140-160 | 155-175 | 175-195 | 180-200 | 185-205 | 185-205 |
| | Processing Mold[2] 建议成型方式 | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |

DECTHANE® TPU




DECTHANE® TPU



**Polyether TPU with High Performance / 高性能聚醚型TPU**

Injection molding or extrusion molding, easy to process, high mechanical properties and good abrasion resistance
适用于注塑成型, 亦可挤出成型, 易加工, 高机械性能及良好的耐磨耗性能
Excellent hydrolysis resistance and low-temperature flexibility, an additional outstanding characteristic is microbial resistance
极佳的耐水解性能和低温柔顺性, 抗微生物性能显著
High transparence, clear and transparent with a wall thickness of up to maximum 6mm
高透明性, 最高可达6mm壁厚透明

**Applications / 应用:**

Sport shoe soles, shoe spikes, cable sheaths, hoses, seals, and other products with the following excellent properties:
hydrolysis resistance, microbial resistance, low-temperature flexibility, and high transparence
运动鞋底, 鞋钉, 电缆护套, 软管, 密封件及要求同时兼具以下优异性能的制品: 耐水解, 抗微生物, 低温柔顺性及高透明

1>Typical values, should not equal to the true values, different processing and test conditions will result in the difference values, please confirm all results by own tests
平均值, 不能等同于真实值, 不同的加工过程和测试条件将会导致不同的结果, 请亲自测试以进行确认

2>■ = Injection Molding 注塑成型
▲ = Extrusion Molding 挤出成型
● = Blow Molding 吹塑成型

| Typical Properties[1] 典型性能 | Test Standard 测试标准 | Unit 单位 | 82 Series / 82系列 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 82 70A | 82 80A | 82 85A | 82 90A | 82 95A | 82 98A | 82 60D | 82 64D | 82 71D |
| Density 密度 | ISO 1183-1 | g/cm3 | 1.08 ± 0.02 | 1.10 ± 0.02 | 1.11 ± 0.02 | 1.11 ± 0.02 | 1.14 ± 0.02 | 1.16 ± 0.02 | 1.16 ± 0.02 | 1.17 ± 0.02 | 1.18 ± 0.02 |
| Shore Hardness 肖氏硬度 | ISO 868 | Shore A/D | 72 ± 2 A | 80 ± 2 A | 86 ± 2 A | 89 ± 2 A | 94 ± 2 A | 97 ± 2 A | 60 ± 2 D | 65 ± 2 D | 71 ± 2 D |
| Tensile Strength 拉伸强度 | ISO 37 | Mpa | 25 | 30 | 35 | 40 | 45 | 50 | 50 | 50 | 50 |
| Elongation at Break 最大伸长 | ISO 37 | % | 650 | 600 | 550 | 500 | 450 | 400 | 400 | 350 | 310 |
| 100% Tensile Strength 拉伸强度@100%伸长 | ISO 37 | Mpa | 2.5 | 4 | 6 | 8 | 10 | 18 | 20 | 25 | 28 |
| 300% Tensile Strength 拉伸强度@300%伸长 | ISO 37 | Mpa | 4.5 | 8 | 12 | 15 | 24 | 30 | 32 | 40 | 40 |
| Tear Strength 撕裂强度 | ISO 34-1 | kN/m | 50 | 70 | 85 | 105 | 135 | 180 | 200 | 225 | 250 |
| Abrasion Loss 磨擦损耗 | ISO 4649 | mm3 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Drying 干燥 | Drying Temperature 干燥温度 | | 85 ℃ | 95 ℃ | 100 ℃ | 100 ℃ | 100 ℃ | 105℃ | 105 ℃ | 105 ℃ | 110 ℃ |
| | Drying Time 干燥时间 | | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs | 3-5 hrs |
| Processing 成型 | Processing Temperature (℃) 建议成型温度(℃) | | 160-180 | 170-190 | 190-205 | 190-210 | 195-215 | 195-215 | 205-220 | 205-225 | 205-225 |
| | Processing Mold[2] 建议成型方式 | | ■ ▲ | ■ ▲ | ■ ▲ | ■ ▲ | ■ ▲ | ■ | ■ | ■ | ■ |

Please refer to the following instructions, these will provide you with helpful informations during processing DECTHANE TPU:
请查阅以下资料, 可以让您更好的了解和应用DECTHANE TPU:

## Package & Storage / 包装及存储

DECTHANE TPU are supplied in pellets, the pellets are transparent, semi–transparent or opaque depending on different grades. DECTHANE TPU pellets are packaged in heat–sealed and moisture–proof multi–layer bags that are composed of kraft paper, aluminum–foil paper and PE film. Each bag is 25 kg net weight; 40 bags are shipped on pallets of 1000 kg.

DECTHANE TPU以粒子形式供货, 依照规格不同, 粒子可以是完全透明, 半透明或不透明。DECTHANE TPU封装于由牛皮纸, 铝箔和PE薄膜构成的, 可热封和防潮的多层包装袋内,每包净重25公斤,40包为1000公斤栈板包装以便运输。

DECTHANE TPU received should be inspected to ensure that containers are not damaged during transportation. DECTHANE TPU should be stored under well ventilated, cool (15–25°C) and dry environment prior to processing. Storage outdoors should be avoided, away from rains, highly humid environment and direct sunlight. A standard practice of consuming on a first–in and first–out basis should be employed. Under above conditions, DECTHANE TPU may have a long shelf life (at least 1 year).

在收到DECTHANE TPU后应先进行检查以确保包装在运输过程中未受损。未加工的DECTHANE TPU应储存于通风良好, 凉爽(15–25°C)及干燥的环境下。避免户外放置, 远离雨水和高湿环境, 避免阳光直射。 消耗方式应依照先进先出原则。 满足以上条件, DECTHANE TPU可以拥有较长的保质期(一年以上)。

## Moisture Absorption & Drying / 水分吸收及干燥

TPU have a strong tendency to absorb atmospheric moisture, the extent and rate of absorption depend on the different types, hardness and environment conditions. Moisture will degrade TPU significantly: blisters or streaks will appear on the surface of finished products; extrudate will be not smooth but foamy; the mechanical properties will be poor.

TPU有强烈的吸湿性, 吸湿程度和速度取决于其类型, 硬度和环境条件。湿气会严重引起TPU降级, 制品表面会出现气泡或银纹,挤出制品将变得不稳定并伴随起泡现象,机械性能也会变差。

Although all DECTHANE TPU pellets have been dried before packaging in our manufacturing facility and the moisture content of original DECTHANE TPU pellets is below 200ppm (0.02 wt. %), a drying step before processing is strongly recommend to avoid the possible problems caused by moisture. Depending on the hardness, the recommended drying temperatures are 80–110° C. Generally, a drying treatment of 1–2 hours in a dehumidifying dryer or 3–5 hours in a conventional hot–air circulating hopper can achieve the recommended moisture content below 200ppm (0.02 wt. %). The pellets in open air, especially dried and hot pellets, will absorb moisture from the atmosphere, so please close any opened bags or containers directly after use. It is recommended to keep the DECTHANE TPU in its original package that can be heat–sealed again.

尽管所有DECTHANE TPU粒子在包装出厂前已经充分干燥, 水分含量低于200ppm (0.02 wt. %), 但我们强烈推荐加工前先进行干燥, 以避免湿气所导致的问题发生。 根据产品硬度, 推荐的干燥温度在80–110° C之间. 通常, 使用除湿干燥机1–2小时或传统的热空气循环干燥器3–5小时均可达到低于200ppm (0.02 wt. %)的推荐水分含量。暴露于空气中的粒子, 尤其是干燥后的热粒子, 将会从大气中吸收湿气, 因此取用后请及时封闭打开的袋子或容器。推荐将DECTHANE TPU存放于可以再次热封的原始包装内。

## Coloring / 着色

DECTHANE TPU are supplied in natural color and can be easily colored during processing. Color masterbatches with TPU as the carrier material can achieve optimal dispersion and compatibility with DECTHANE TPU grades. Other color masterbatches are usually not suitable for DECTHANE TPU. Generally, a 1–6 wt. % of the color masterbatches based TPU is fully dry–mixed with the DECTHANE TPU before processing (depending on wall thickness and color density). Please ensure that the color masterbatches also have been fully dried according to the drying recommendations.

DECTHANE TPU以本色供货, 加工时容易着色。以TPU为基料的色母可以获得最佳的分布和相容,其他色母通常并不适合于DECTHANE TPU。 一般来讲, 加工前使用1–6 wt. %的TPU基色母同DECTHANE TPU进行充分干混即可(取决于制品的厚度和色度)。请确保色母已经依照推荐进行充分干燥。



DECTHANE® TPU

## Post Treatment / 后处理

DECTHANE TPU can achieve optimal and stable mechanical properties through post treatment such as heat treatment in a short time. This heat treatment can be carried out in a hot–air circulating oven. Recommended heat treatment conditions are about 20 hours at 80–100°C depending on different grades. By exposing finished products at room temperature for about 4~5 weeks, DECTHANE TPU also can achieve optimal and stable mechanical properties.

经过后处理, 如热处理, DECTHANE TPU能够在较短时间内获得最佳和稳定的机械性能。这种热处理可以在热空气循环烘箱内进行,根据规格的不同, 推荐的处理条件为80–100°C, 大约20小时,制品在室温下放置大约4–5周亦能获得最佳和稳定的机械性能。

## Recycling / 再生循环

DECTHANE TPU scraps can be reground, dried as recommended and well mixed with virgin materials in amounts up to 30 wt. % for injection molding, without significant changes in most mechanical properties, depending on the end–use requirements of finished products. High amounts of adding may result in finished products degraded or discolored, or other problems. All materials reground and used must be clean and unpolluted. Furthermore, adding materials reground to extrusion molding products is not recommended.

DECTHANE TPU边角料可以在粉碎, 依照推荐干燥并与新料充分混合后注塑使用而大部分机械性能无明显改变, 根据制品的最终要求, 添加量不超过30 wt. %. 过高的添加量可能导致制品降级或脱色, 及其他问题。所有使用的粉碎料必须是干净未被污染的。此外, 不推荐将粉碎料加入挤出制品中。

## Purging & Cleaning of Machine / 机台清洗

Polystyrene, polypropylene or polyethylene can be used to purge or clean out the screw and barrel. During operation, the screw speed and melt temperature should be properly increased to improve the efficiency. For die head, filter or adapter, the scorched substance should be completely cleaned after a period of production.
聚苯乙烯, 聚丙烯或聚乙烯可以用来清洗螺杆和料管。在清洗过程中, 适当提高螺杆转速和熔融温度有助于提高清洗效果。模头, 滤网和接头上的焦化物应在生产一段时间后完全清理干净。

## Health, Safety & Environment / 健康安全环保

According to the definition of existing laws and regulations, DECTHANE TPU are not dangerous for the health or the environment, do not belong to hazardous goods. The components from raw materials have been completely reacted to polyurethane or have combined firmly with polyurethane, our product do not cause any dangers in correct transport and processing.

根据现有法规的定义, DECTHANETPU对健康和环境无害, 不属于危险物。来自原材料的各种成分已经完全反应生成聚氨酯或均已牢固结合于聚氨酯中, 产品在正确运输和操作过程中不会引起任何危险。

DECTHANE TPU can be processed in a wide temperature range. Nevertheless, as other organic materials, it tends to decompose above a certain temperature. For fully dried pellets, the appearance of smoke signifies that decomposition is happening. Normally, slow decomposition will come at about 230–240° C depending on grades. We recommend efficient air ventilation and discharge equipment in operation room during processing. Please refer to relevant Material Safety Data Sheets (MSDS) for detailed informations.

DECTHANE TPU可以在相当宽的温度范围内进行加工。然而, 同其他有机物一样, 超过一定温度后也会分解。对于充分干燥的粒子, 烟雾的出现意味着分解的发生。通常, 根据规格的不同, 在大约230–240° C时开始缓慢分解。我们推荐加工时的作业场所应配置有效的空气流通和换气设备, 更详细的信息请查阅相应产品的安全技术说明书(MSDS)。

Useless waste materials that it is not contaminated with other substances can be disposed on municipal landfills. It does not cause a hazard to water. If the materials cannot be recycled any longer, it can be disposed in a waste incineration plant because of its high calorific value. Undoubtedly, local environmental protection regulations must be observed.

未被其它物质污染的无用废料可以弃置于市政垃圾场, 并不会造成水体污染。鉴于其高热量值, 不能再加工的废料可通过垃圾焚烧工厂处理以利用其热能。毫无疑问的是必须遵守当地政府的环保法规。

## Additional Information / 附加信息

For details of processing, please contact our sales representative or technical service representative and get the Processing Guidelines for DECTHANE TPU.

有关DECTHANE TPU加工成型的详细资料, 请联系我们的销售代表或技术服务代表获取加工指南。