

Technical Data

Product Description

INSPIRE™
TF1500 ESU

INSPIRE™ TF1500 ESU 是滑石粉填充，具有高抗冲击性能的 PP 改性树脂。这一规格适用于有较高外观要求，耐刮擦，抗紫外的汽车零部件。由于其极高的抗冲击性，也特别适合要求高延展性的汽车内饰应用。

应用:

- 仪表板骨架
- 仪表板饰件
- 中控台
- 门板
- 门板文件袋
- 内饰件
- 卡车饰件

Description

Manufactured by adding an inorganic filler, talc to polypropylene, Hanwha Total' s heat-resistant PP compounds are designed for use in injection molding, and feature highly improved strength and heat-resistance. Produced with a variety of base PPs, such as HIPP (High Isotactic or High Crystalline Polypropylene), Hanwha Total' special processing technology results in PP of the highest quality.

These products feature superior rigidity and impact strength, long-term heat resistance and anti-static property. Dimensional stability is another plus! These Hanwha Total products are widely used in electric and electronic parts, household appliances and automobiles.

Characteristics

- Addition of an inorganic filler, talc enhances heat-resistance and dimensional stability;
- Superior strength and impact-resistance;
- Superior processability.

Applications

- Electric/electronic products
- Dish washer and microwave oven parts such as doors, air covers, air ducts;
- Washing machines parts (such as balances), and TV speaker cabinets;
- Household goods such as food containers.

Hanwha Total PP
TB51



Description

Manufactured by adding an inorganic filler, talc to polypropylene, Hanwha Total' s heat-resistant PP compounds are designed for use in injection molding, and feature highly improved strength and heat-resistance. Produced with a variety of base PPs, such as HIPP (High Isotactic or High Crystalline Polypropylene), Hanwha Total' special processing technology results in PP of the highest quality. These products feature superior rigidity and impact strength, long-term heat resistance and anti-static property. Dimensional stability is another plus! These Hanwha Total products are widely used in electric and electronic parts, household appliances and automobiles.

Characteristics

Hanwha Total PP
TB52

- Addition of an inorganic filler, talc enhances heat-resistance and dimensional stability;
- Superior strength and impact-resistance;
- Superior processability.

Applications

- Electric/electronic products
- Dish washer and microwave oven parts such as doors, air covers, air ducts;
- Washing machines parts (such as balances), and TV speaker cabinets;
- Household goods such as food containers.

General	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52
Manufacturer / Supplier	• Trinseo	• Hanwha Total Petrochemical Co., Ltd.	• Hanwha Total Petrochemical Co., Ltd.
Generic Symbol	• TPO	• TPO	• TPO
Material Status	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效
资料 ¹	• Technical Datasheet	• Technical Datasheet (English)	• Technical Datasheet (English)
UL 黄卡 ²	--	• E140331-102466569	• E140331-222954
搜索 UL 黄卡	• Trinseo	• Hanwha Total Petrochemical Co., Ltd.	• Hanwha Total Petrochemical Co., Ltd.
Availability	• 欧洲 • 亚太地区	• 北美洲 • 亚太地区	• 北美洲 • 亚太地区
Filler / Reinforcement	• 滑石填料, 15% Filler by Weight	• 滑石填料	• 滑石填料
Features	<ul style="list-style-type: none"> • 高抗撞击性 • 耐低温冲击 • 耐刮擦性 • 外观良好 • 延展性 	<ul style="list-style-type: none"> • 尺寸稳定性良好 • 刚性, 高 • 高抗撞击性 • 高强度 • 抗静电性 • 耐热性, 高 • 优异的加工性能 	<ul style="list-style-type: none"> • 尺寸稳定性良好 • 刚性, 高 • 高抗撞击性 • 高强度 • 抗静电性 • 耐热性, 高 • 优异的加工性能



General	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52
Uses	<ul style="list-style-type: none"> 汽车领域的应用 汽车内部零件 汽车仪表板 	<ul style="list-style-type: none"> 电气/电子应用领域 电气元件 电器用具 家用货品 汽车领域的应用 食品容器 	<ul style="list-style-type: none"> 电气/电子应用领域 电气元件 电器用具 家用货品 汽车领域的应用 食品容器
Automotive Specifications	<ul style="list-style-type: none"> GM QK 004022 U Color: Charcoal IMDS ID 21758150 Color: Charcoal PSA Peugeot-Citroën SPA X62 3858 	--	--
Forms	<ul style="list-style-type: none"> 粒子 	--	--
Processing Method	<ul style="list-style-type: none"> 注射成型 	<ul style="list-style-type: none"> 注射成型 	<ul style="list-style-type: none"> 注射成型

Physical	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Density					
--	1.02	--	--	g/cm³	ISO 1183
--	--	0.970	1.04	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)					
230°C/2.16 kg	--	10	11	g/10 min	ASTM D1238
230°C/2.16 kg	9.5	--	--	g/10 min	ISO 1133
Molding Shrinkage					
流动 : 2.00 mm	--	1.2 到 1.6	1.0 到 1.4	%	Internal Method
--	0.90 到 1.2	--	--	%	ISO 294-4

Mechanical	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Tensile Modulus	1950	--	--	MPa	ISO 527-2/1
Tensile Strength					
屈服 ⁴	--	34.3	34.3	MPa	ASTM D638
屈服	20.0	--	--	MPa	ISO 527-2/50
Tensile Elongation					
断裂 ⁴	70	--	--	%	ISO 527
断裂 ⁴	--	60	60	%	ASTM D638
断裂	70	--	--	%	ISO 527-2/50
Flexural Modulus					
-- ⁵	--	1960	2450	MPa	ASTM D790
-- ^{6,7}	1850	--	--	MPa	ISO 178



Impact	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Notched Izod Impact					
23°C	--	54	49	J/m	ASTM D256
-40°C	5.0	--	--	kJ/m²	ISO 180/1A
0°C	10	--	--	kJ/m²	ISO 180/1A
23°C	25	--	--	kJ/m²	ISO 180/1A
Hardness	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Rockwell Hardness (R 级)	--	95	93		ASTM D785
Thermal	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Deflection Temperature Under Load					
0.45 MPa, 未退火	--	130	139	°C	ASTM D648
0.45 MPa, 未退火	110	--	--	°C	ISO 75-2/B
1.8 MPa, 未退火	58.0	--	--	°C	ISO 75-2/A
Vicat Softening Temperature	135	--	--	°C	ISO 306/A120
CLTE - 流动	8.5E-5	--	--	cm/cm/°C	ASTM D696
Flammability	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	测试方法
Flame Rating	--	--	HB		UL 94
Injection	INSPIRE™ TF1500 ESU	Hanwha Total PP TB51	Hanwha Total PP TB52	单位制	
Rear Temperature	--	180 到 200	180 到 200	°C	
Middle Temperature	--	190 到 210	190 到 210	°C	
Front Temperature	--	200 到 220	200 到 220	°C	
Mold Temperature	--	50 到 80	50 到 80	°C	
Injection Pressure	--	39.2 到 88.3	39.2 到 88.3	MPa	
Holding Pressure	--	58.8 到 98.1	58.8 到 98.1	MPa	
Screw Speed	--	30 到 80	30 到 80	rpm	



备注

¹ 通过这些链接您能够访问供应商资料。我们尽量保证及时更新资料；不过您可以从供应商处了解最新资料。

² UL 黄卡含有 UL 验证的易燃性和电气特性。UL Prospector 持续努力在 Prospector 中将黄卡链接至单个塑料材料，然而此列表可能未包括所有相应链接。重要的是，我们对 Prospector 中找到的这些黄卡和塑料材料之间的关联进行验证。如需完整的黄卡列表，请访问 UL 黄卡搜索。

³ 一般属性：这些不能被视为规格。

⁴ 50 mm/min

⁵ 5.0 mm/min

⁶ 2.0 mm/min

⁷ 3 point load



购买地点

供应商	
INSPIRE™ TF1500 ESU	<p>Trinseo USA 电话: 888-789-7661 Web: http://www.trinseo.com/</p>
Hanwha Total PP TB51	<p>Hanwha Total Petrochemical Co., Ltd. Seoul, South Korea 电话: +82-2-3415-9408 Web: http://www.hanwha-total.com/</p>
Hanwha Total PP TB52	<p>Hanwha Total Petrochemical Co., Ltd. Seoul, South Korea 电话: +82-2-3415-9408 Web: http://www.hanwha-total.com/</p>
分销商	
INSPIRE™ TF1500 ESU	<p>Nexeo Solutions - Europe <i>Nexeo Solutions is a Pan European distribution company. Contact Nexeo for availability of individual products by country.</i> 电话: +34-93-480-9125 Web: http://www.nexeosolutions.com/ 供货地区: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Spain, Sweden, Switzerland, United Kingdom</p> <p>RESINEX Group <i>RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.</i> 电话: +32-14-672511 Web: http://www.resinex.com/ 供货地区: Europe</p> <p>安姆化工有限公司 电话: +86-20-3874-3190 供货地区: China</p>
Hanwha Total PP TB51	请联系供应商以便为 Hanwha Total PP TB51 查找分销商
Hanwha Total PP TB52	请联系供应商以便为 Hanwha Total PP TB52 查找分销商

