

## Technical Data

### Product Description

TOTAL Polypropylene  
PPR 9220

Polypropylene PPR 9220 is a nucleated random copolymer polypropylene with a Melt Flow Index of 20 g/min for the injection moulding of articles with high transparency and excellent surface appearance.

Polypropylene PPR 9220 is intended for household goods, thin wall packaging, caps.

TITANPRO®  
SM498

Polypropylene random copolymer.

Titanpro SM498 is a clarified grade designed for high transparency articles. The base resin meets the requirements of the U.S. Food and Drug Administration as specified in 21 CFR 177.1520(a)(3)(i) and (c)3.1a. The adjuvant meet their respective FDA regulations and 21 CFR 177.1520(b). In summary, this resin meets the FDA criteria covering safe use of polyolefin articles and component of articles intended for food Contact use.

TSCA Registry: CAS# 9010-79-1

#### APPLICATIONS

High clarity oriented PP bottles for hot filled applications, moisture sensitive packaging, baby feeding bottles, toiletries and detergent packaging, etc. High transparent thin walled containers, storage containers, large particles, housewares.

#### ADVANTAGES

Excellent clarity. Good balance of rigidity and impact resistance. Excellent moisture barrier. Cycle time reduction with low processing melt temperature. Utilities cost saving. Suitable for hot filling and thin walled products.

#### FABRICATION

Equipment - injection stretch blow molding (ISBM) machine, injection molding machine.

Techniques - standard processing.

TAIRIPRO®  
K4515

Injection Molding

CHARACTERISTICS: High clarity, Anti-static, Good resistance to chemical

Globalene® ST868M 是一种聚丙烯无规共聚物 (PP 无规共聚物) 材料。该产品在北美洲或亚太地区有供货,加工方式为:injection stretch blow molding 或注射成型。

Globalene®  
ST868M

Globalene® ST868M 的主要特性有:

- 共聚物
- 耐冲击
- 透明度

典型应用领域包括:

- 电气用具
- 瓶子
- 容器



General	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M
Manufacturer / Supplier	• TOTAL Refining & Chemicals	• Lotte Chemical Titan (M) Sdn. Bhd.	• Formosa Chemicals & Fibre Corporation	• Lee Chang Yung Chemical Industry Corp.
Generic Symbol	• PP 无规共聚物	• PP 无规共聚物	• PP 无规共聚物	• PP 无规共聚物
Material Status	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效
资料 <sup>1</sup>	• <a href="#">Technical Datasheet (English)</a>	• <a href="#">Technical Datasheet (English)</a>	• <a href="#">Processing (English)</a> • <a href="#">Technical Datasheet (English)</a>	• <a href="#">Technical Datasheet (English)</a>
UL 黄卡 <sup>2</sup>	• E72824-103484704	--	• E162823-306703	• E85783-271906
搜索 UL 黄卡	• TOTAL Refining & Chemicals	• Lotte Chemical Titan (M) Sdn. Bhd.	• Formosa Chemicals & Fibre Corporation • TAIRIPRO®	• Lee Chang Yung Chemical Industry Corp. • Globalene®
Availability	• 欧洲	• 北美洲	• 北美洲 • 欧洲 • 亚太地区	• 北美洲 • 亚太地区
Additive	• 成核剂	--	--	--
Features	• 成核的 • 清晰度，高 • 无规共聚物 • 优良外观	• 防潮 • 高刚性 • 快的成型周期 • 良好抗撞击性 • 清晰度，高 • 食品接触的合规性 • 无规共聚物	• 抗静电性 • 耐化学品性能，良好 • 清晰度，高 • 无规共聚物	• 耐低温冲击 • 清晰度，高 • 无规共聚物
Uses	• 薄壁包装 • 护罩 • 家用货品	• 包装 • 家用货品 • 瓶子 • 容器 • 浴室配件	--	• 电器用具 • 瓶子 • 容器
Agency Ratings	• EC 1907/2006 (REACH)	• FDA 21 CFR 177.1520(a) 3 (i) • FDA 21 CFR 177.1520(b) • FDA 21 CFR 177.1520(c) 3.1a • TSCA Listed on Inventory <sup>3</sup>	• EC 1907/2006 (REACH) • FDA 21 CFR 177.1520(c) 3.1a	--
RoHS Compliance	• RoHS 合规	--	• RoHS 合规	--
UL File Number	--	--	• E162823	--
Appearance	• 清晰/透明	--	--	--
Forms	• 粒子	--	--	• 粒子
Processing Method	• 注射成型	• Injection Stretch Blow Molding • 注射成型	• 注射成型	• Injection Stretch Blow Molding • 注射成型



Physical	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Density / Specific Gravity						
--	--	--	0.898	0.900	g/cm³	ASTM D792
--	0.902	--	--	--	g/cm³	ISO 1183
--	--	0.900	--	--	g/cm³	ASTM D1505
Apparent (Bulk) Density	0.53	--	--	--	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)						
230°C/2.16 kg	--	20	18	18	g/10 min	ASTM D1238
230°C/2.16 kg	20	--	--	--	g/10 min	ISO 1133
Molding Shrinkage - 流动						
--	--	--	--	1.2	%	ASTM D955
--	--	1.3 到 1.4	--	--	%	No Standard
23°C	--	--	1.5 到 2.0	--	%	Internal Method
Water Absorption (24 hr)	--	0.020	--	--	%	ASTM D570
Mechanical	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Tensile Modulus	1000	--	--	--	MPa	ISO 527-2
Tensile Strength						
屈服	--	29.4	--	28.4	MPa	ASTM D638
屈服, 23°C	--	--	30.0	--	MPa	ASTM D638
屈服	20.0	--	--	--	MPa	ISO 527-2
Tensile Elongation						
屈服	--	10	--	12	%	ASTM D638
屈服	10	--	--	--	%	ISO 527-2
断裂	--	--	--	690	%	ASTM D638
断裂, 23°C	--	--	> 200	--	%	ASTM D638
Flexural Modulus						
--	--	--	--	1060	MPa	ASTM D790
--	--	1270	--	--	MPa	ASTM D790B
23°C	--	--	1130	--	MPa	ASTM D790A
--	900	--	--	--	MPa	ISO 178



Impact	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Charpy Notched Impact Strength (23°C)	8.5	--	--	--	kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact						
23°C	--	--	--	31	J/m	ASTM D256
23°C	--	59	--	--	J/m	ASTM D256A
23°C, 3.18 mm	--	--	59	--	J/m	ASTM D256
23°C	6.5	--	--	--	kJ/m <sup>2</sup>	ISO 180
Hardness	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Rockwell Hardness						
R 级	--	85	--	82		ASTM D785
R 级, 23°C	--	--	95	--		ASTM D785
R 计秤	82	--	--	--		ISO 2039-2
Thermal	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Deflection Temperature Under Load						ASTM D648
0.45 MPa, 未退火	--	85.0	--	--	°C	
1.8 MPa, 未退火, 6.35 mm	--	--	95.0	--	°C	
Vicat Softening Temperature						
--	130	--	--	--	°C	ISO 306/A50
--	67.0	--	--	--	°C	ISO 306/B50
Melting Temperature (DSC)	146	--	--	--	°C	ISO 3146
Flammability	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Flame Rating	--	--	HB	--		UL 94
Additional Information	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	测试方法
Heat Deflection Temperature	--	--	--	88	°C	ASTM D648
Injection	TOTAL Polypropylene PPR 9220	TITANPRO® SM498	TAIRIPRO® K4515	Globalene® ST868M	单位制	
Processing (Melt) Temp	--	--	220 到 240	--	°C	
Mold Temperature	--	--	30 到 50	--	°C	
Injection Pressure	--	--	3.92 到 8.83	--	MPa	

备注

- <sup>1</sup> 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。
- <sup>2</sup> 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。
- <sup>3</sup> CAS# 9010-79-1
- <sup>4</sup> 一般属性：这些不能被视为规格。



购买地点

供应商	
TOTAL Polypropylene PPR 9220	<b>TOTAL Refining &amp; Chemicals</b> Houston, TX USA 电话: 713-483-5000 Web: <a href="http://www.totalrefiningchemicals.com/">http://www.totalrefiningchemicals.com/</a>
TITANPRO® SM498	<b>Lotte Chemical Titan (M) Sdn. Bhd.</b> Kuala Lumpur, Malaysia 电话: +60-3-2093-4222 Web: <a href="http://www.lottechem.my/">http://www.lottechem.my/</a>
TAIRIPRO® K4515	<b>Formosa Chemicals &amp; Fibre Corporation</b> Taipei, Taiwan 电话: +886-2-2712-2211 Web: <a href="http://en.fcfc-plastics.com/">http://en.fcfc-plastics.com/</a>
Globalene® ST868M	<b>Lee Chang Yung Chemical Industry Corp.</b> Taipei, Taiwan 电话: +886-2-2528-8895 Web: <a href="http://www.lcygroup.com">http://www.lcygroup.com</a>



## 分销商

TOTAL Polypropylene PPR 9220

**Plastribution**

电话: +44-845-345-4560  
 Web: <http://www.plastribution.co.uk/>  
 供货地区: United Kingdom

**RESINEX Group**

*RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.*

电话: +32-14-672511  
 Web: <http://www.resinex.com/>  
 供货地区: Europe

**SNETOR Distribution**

*SNETOR Distribution is a Pan European distribution company. Contact SNETOR for availability of individual products by country.*

电话: +33-1-4904-8888  
 Web: <http://www.snetor.com/>  
 供货地区: France

**Telko Oy**

*Telko Oy is a Pan European distribution company. Contact Telko Oy for availability of individual products by country.*

电话: +358-9-5211  
 Web: <http://www.telko.com/>  
 供货地区: Denmark, Estonia, Finland, Latvia, Lithuania, Norway, Russian Federation, Sweden

**TER HELL Plastic GmbH**

*TER HELL Plastic is a Pan European distribution company. Contact TER HELL Plastic for availability of individual products by country.*

电话: +49-2366-5661-0  
 Web: <https://www.terplastics.com/>  
 供货地区: France, Germany, Poland, Spain

TITANPRO® SM498

请联系供应商以便为 TITANPRO® SM498 查找分销商

TAIRIPRO® K4515

**Click Plastics AG**

*Click Plastics AG is a Pan European distribution company. Contact Click Plastics for availability of individual products by country.*

电话: +49-6251-770-690-0  
 Web: <http://www.clickplastics.com>  
 供货地区: Germany

**Osterman & Company**

电话: 800-914-4437  
 Web: <http://www.osterman-co.com/>  
 供货地区: North America

**PolySource**

电话: 866-558-5300  
 Web: <http://www.polysource.net/>  
 供货地区: North America



**Resinal de México**  
电话: +52-55-5254-7600  
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供货地区: Mexico

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