

Technical Data

产品说明				
Tritan™ MXF121		Eastman Tritan™ Copolyester MXF121 is an amorphous opaque product. Eastman Tritan™ Copolyester MXF121 contains a mold release derived from vegetable based sources. Eastman Tritan™ Copolyester MXF121 has many outstanding features that include excellent toughness, hydrolytic stability, heat resistance, chemical resistance, and melt flowability. Eastman Tritan™ Copolyester MXF121 has been formulated for medical devices. Eastman Tritan™ Copolyester MXF121 has passed FDA/ISO 10993 testing for cytotoxicity, skin sensitization, and intracutaneous reactivity.		
Estar™ DN004, Natural		Copolyester DN004 has been tested for FDA/ISO 10993 and USP Class VI Biological Evaluation testing after Gamma and EtO sterilization. Eastar™ copolyesters are brilliantly clear polymers that have excellent impact strength, chemical resistance, dimensional stability, and low shrinkage rates. Eastar™ DN004 copolyesters are the toughest materials for the cosmetics and personal care packaging applications. It's very shatter resistant and offers excellent chemical resistance. DN004 contains a mold release. This product has been GREENGUARD INDOOR AIR QUALITY CERTIFIED The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute (GEI). GEI is an industry-independent, non-profit organization that oversees the GREENGUARD Certification Program. The GREENGUARD Certification Program is an industry independent, third-party testing program for low-emitting products and materials for indoor environments. For more information about GEI and to obtain printable certificates for Eastman™ Copolyesters, visit www.greenguard.org . Choose Eastman Chemical Company under the Manufacturer category and click search to display a list of our products.		
SKYGREEN® K2012		SKYGREEN® K2012 是一种乙二醇改性 - 聚对苯二甲酸乙二醇酯 (PETG)材料。该产品在北美洲、欧洲或亚太地区有供货。SKYGREEN® K2012 的主要特性为:阻燃/额定火焰。		
SKYGREEN® KN200		SKYGREEN® KN200 是一种乙二醇改性 - 聚对苯二甲酸乙二醇酯 (PETG)材料。该产品在北美洲、欧洲或亚太地区有供货。SKYGREEN® KN200 的主要特性为:阻燃/额定火焰。		
总体	Tritan™ MXF121	Estar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200
生产商/供应商	• Eastman Chemical Company	• Eastman Chemical Company	• SK Chemicals	• SK Chemicals
通用符号	• 共聚多酯	• 共聚多酯	• PETG	• PETG
材料状态	• 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 ¹	• Technical Datasheet (English)	• Technical Datasheet (English)	• Processing - Extrusion (English) • Processing - Injection (English) • Technical Datasheet (English)	• Technical Datasheet (English)
UL 黄卡 ²	• E118289-103096424	• E118289-220134	• E215991-229326	• E215991-270392
搜索 UL 黄卡	• Eastman Chemical Company • Tritan™	• Eastman Chemical Company • Estar™	• SK Chemicals	• SK Chemicals
供货地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 北美洲 • 欧洲 • 亚太地区	• 北美洲 • 欧洲 • 亚太地区
添加剂	• 脱模	• 脱模	--	--



总体	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200
特性	- 可加工性，良好 - 快的成型周期 - 良好的流动性 - 耐化学性良好 - 耐热性，高 - 韧性良好 - 水解稳定 - 无定形的	- 尺寸稳定性良好 - 电子束消毒 - 辐射消毒 - 抗撞击性，良好 - 耐化学性良好 - 清晰度，高 - 收缩性低 - 脱模性能良好	--	--
用途	- 医疗/护理用品 - 医疗器械	- 包装 - 包装，化妆品 - 地板保养/维修 - 电器用具 - 个人护理 - 家电部件 - 镜架 - 体育用品 - 玩具 - 文具 - 牙刷柄 - 眼镜 - 医疗/护理用品	--	--
机构评级	ISO 10993	- ISO 10993 - USP 第 VI 类	--	--
外观	不透明	自然色	--	--
形式	--	粒子	--	--
加工方法	注射成型	注射成型	--	--

物理性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
密度 / 比重						
--	1.19	1.23	1.27	--	g/cm³	ASTM D792
23°C	--	1.23	--	--	g/cm³	ISO 1183
--	--	--	--	1.27	g/cm³	ASTM D1505
收缩率 - 流动						ASTM D955
--	0.50 到 0.70	--	--	0.20 到 0.50	%	
3.20 mm	--	0.20 到 0.50	--	--	%	
吸水率						
24 hr, 23°C	--	0.13	--	--	%	ASTM D570
23°C, 24 hr	--	0.13	--	--	%	ISO 62



机械性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
拉伸模量 (23°C)	1610	1800	--	--	MPa	ASTM D638
抗张强度						
屈服 4	--	--	--	50.0	MPa	ASTM D638
屈服	--	--	50.0	--	MPa	ASTM D638
屈服, 23°C	43.0	45.0	--	--	MPa	ASTM D638
屈服, 23°C, 4.00 mm	--	46.0	--	--	MPa	ISO 527-2
断裂	--	--	29.0	--	MPa	ASTM D638
断裂 4	--	--	--	29.0	MPa	ASTM D638
断裂, 23°C	47.0	52.0	--	--	MPa	ASTM D638
断裂, 23°C, 4.00 mm	--	47.0	--	--	MPa	ISO 527-2
伸长率						
屈服 4	--	--	4.5	4.5	%	ASTM D638
屈服, 23°C	6.0	5.0	--	--	%	ASTM D638
屈服, 23°C, 4.00 mm	--	4.4	--	--	%	ISO 527-2
断裂 4	--	--	180	180	%	ASTM D638
断裂, 23°C	130	330	--	--	%	ASTM D638
断裂, 23°C, 4.00 mm	--	230	--	--	%	ISO 527-2
弯曲模量						
--	--	--	2100	--	MPa	ASTM D790
-- 5	--	--	--	2100	MPa	ASTM D790
23°C	1750	1800	--	--	MPa	ASTM D790
23°C, 4.00 mm	--	1800	--	--	MPa	ISO 178
弯曲强度						
-- 5	--	--	69.0	69.0	MPa	ASTM D790
23°C, 4.00 mm	--	63.0	--	--	MPa	ISO 178
屈服, 23°C	--	66.0	--	--	MPa	ASTM D790



冲击性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
悬壁梁缺口冲击强度						
-40°C	--	64	--	--	J/m	ASTM D256
23°C	420	无断裂	110	110	J/m	ASTM D256
-40°C	--	7.4	--	--	kJ/m²	ISO 180
23°C	--	130	--	--	kJ/m²	ISO 180
无缺口悬臂梁冲击						
-40°C	--	无断裂	--	--		ASTM D4218
23°C	无断裂	--	--	--		ASTM D4812
23°C	--	无断裂	--	--		ASTM D4218
多轴向仪器化冲击能量						ISO 6603-2
-40°C, 能量到力量峰值	--	16.0	--	--	J	
23°C, 能量到力量峰值	--	14.0	--	--	J	
硬度	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
洛氏硬度						ASTM D785
R 级, 23°C	109	105	--	--		
R 级	--	--	108	108		
热性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
载荷下热变形温度						
0.45 MPa, 未退火	94.0	74.0	70.0	70.0	°C	ASTM D648
0.45 MPa, 未退火	--	74.0	--	--	°C	ISO 75-2/B
1.8 MPa, 未退火	83.0	64.0	62.0	62.0	°C	ASTM D648
1.8 MPa, 未退火	--	65.0	--	--	°C	ISO 75-2/A
维卡软化温度						
--	--	88.0	--	--	°C	ASTM D1525 6 ISO 306/A 6
--	--	79.0	--	--	°C	ISO 306/B
比热						DSC
60°C	--	1340	--	--	J/kg/°C	
240°C	--	2050	--	--	J/kg/°C	
导热系数 (23°C)	--	0.19	--	--	W/m/K	ASTM C177



电气性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
介电强度 7 (23°C, 方法 A (短时间))	--	16	--	--	kV/mm	ASTM D149
介电常数						ASTM D150
23°C, 1 kHz	--	2.90	--	--		
23°C, 1 MHz	--	2.80	--	--		
耗散因数						ASTM D150
23°C, 1 kHz	--	3.0E-3	--	--		
23°C, 1 MHz	--	0.013	--	--		
耐电弧性	--	138	--	--	sec	ASTM D495
漏电起痕指数	--	> 600	--	--	V	ASTM D3638
高电压电弧起痕速率 (HVTR)	--	0.00	--	--	mm/min	UL 746
可燃性	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
UL 阻燃等级						UL 94
1.0 mm	--	--	HB	--		
1.5 mm	V-2	--	HB	HB		
1.6 mm	--	HB	--	--		
3.2 mm	--	HB	--	--		
3.0 mm	V-2	--	V-2	--		
光学性能	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	测试方法
透射率						ASTM D1003
常规	--	87.0	--	--	%	
总计	--	89.0	--	--	%	
--	--	--	90.0	90.0	%	
雾度	--	< 1.0	< 1.0	< 1.0	%	ASTM D1003
注射	Tritan™ MXF121	Eastar™ DN004, Natural	SKYGREEN® K2012	SKYGREEN® KN200	单位制	
干燥温度	88	71	--	--	°C	
干燥时间	4.0 到 6.0	6.0	--	--	hr	
加工 (熔体) 温度	260 到 282	250 到 270	--	--	°C	
模具温度	38 到 66	15 到 40	--	--	°C	



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 1.3 mm/min
- ⁶ 压力 1 (10N)
- ⁷ 500 V/sec



购买地点

供应商	
Tritan™ MXF121	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/
Eastar™ DN004, Natural	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/
SKYGREEN® K2012	SK Chemicals 电话: 949-336-8088 (USA); +49-6196-902-0612 (Germany) Web: http://www.skchemicals.com/
SKYGREEN® KN200	SK Chemicals 电话: 949-336-8088 (USA); +49-6196-902-0612 (Germany) Web: http://www.skchemicals.com/



分销商

Tritan™ MXF121

ALBIS Plastic

ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.

电话: +49-40-78105-0

Web: <http://www.albis.com/>

供货地区: Algeria, Austria, Belgium, Czech Republic, Denmark, Germany, Ireland, Luxembourg, Morocco, Netherlands, Norway, Russian Federation, Slovakia, Slovenia, Sweden, Tunisia, United Kingdom

Amco Polymers

电话: 800-262-6685

Web: <http://www.amcopolymers.com/>

供货地区: North America

CCC Plastics

电话: 800-465-6917

Web: <http://www.cccplastics.com/>

供货地区: Canada, United States

Nexeo Solutions

电话: 800-531-7106

Web: <http://www.nexeosolutions.com/>

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PolyOne Distribution

PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.

电话: 800-894-4266

Web: <http://polyonedistribution.com/>

供货地区: Global

Estar™ DN004, Natural

ALBIS Plastic

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Web: <http://www.albis.com/>

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Amco Polymers

电话: 800-262-6685

Web: <http://www.amcopolymers.com/>

供货地区: North America

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电话: 800-465-6917

Web: <http://www.cccplastics.com/>

供货地区: Canada, United States



Nexeo Solutions

电话: 800-531-7106

Web: <http://www.nexeosolutions.com/>

供货地区: North America

PolyOne Distribution*PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.*

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Web: <http://polyonedistribution.com/>

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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

SKYGREEN® K2012

ResMart

电话: 844-738-8806

Web: <http://www.resmart.com>

供货地区: North America

Southland Polymers*Southland Polymers - Full Service Engineering and Commodity Resin Distribution Since 1979*

电话: 562-921-0444

Web: <http://www.southlandpolymers.com/>

供货地区: Central America, North America, South America

沃德夫聚合物 (上海) 有限公司

电话: +86-21-51688081; Mr. Ma Cell: +86-13621999631

Web: <http://www.wdfsh.cn>

供货地区: China

SKYGREEN® KN200

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

电话: +49-40-32008-0

Web: <http://www.biesterfeld-plastic.com/>

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Chase Plastic Services, Inc.*Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here: <http://www.chaseplastics.com/contact/locations>**www.chaseplastics.com/contact/locations*

电话: 800-232-4273

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供货地区: North America



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