

# Drystar™ 0113

Copolyester  
Eastman Chemical Company

Message:

Eastman is pleased to announce the launch of DRYSTAR\* copolyesters. This new product-line is designed to meet the needs of converters seeking value-added solutions to their drying requirements of copolyesters. Eastman’s copolyesters are highly valued for their excellent balance of properties such as superior aesthetics, impact strength, and chemical resistance. These properties can be optimally realized when the resins are properly dehydrated in accordance to recommended drying conditions and equipment.

Recognizing this value, Eastman conceived Drystar™ copolyesters to allow converters with limited access to desiccant dryers to achieve these optimizations. In addition, some converters with desiccant dryers may still find Drystar™ copolyesters value-adding to attain production flexibility and cost saving by removing the drying process prior to injection molding, profile extruding, or extrusion blow molding copolyesters. The initial launch comprises of the commercialization of four grades of Drystar™ copolyesters and Eastman has on-going program to extend this strategic product-line in the future.

\*DRYSTAR is only available in the Asia Pacific Region.

General Information			
Features	Good Chemical Resistance		
	Good Impact Resistance		
	Pleasing Surface Appearance		
Forms	Pellets		
Processing Method	Extrusion Blow Molding		
	Injection Molding		
	Profile Extrusion		

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.27	g/cm <sup>3</sup>	ASTM D792
23°C	1.27	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.50	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.13	%	ASTM D570, ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	106		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 23°C	50.0	MPa	ASTM D638
Yield, 23°C, 4.00 mm	50.0	MPa	ISO 527-2
Break, 23°C	28.0	MPa	ASTM D638
Break, 23°C, 4.00 mm	28.0	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	4.3	%	ASTM D638
Yield, 23°C, 4.00 mm	4.2	%	ISO 527-2

Break, 23°C	110	%	ASTM D638
Break, 23°C, 4.00 mm	60	%	ISO 527-2
Flexural Modulus			
23°C	2100	MPa	ASTM D790
23°C, 4.00 mm	2000	MPa	ISO 178
Flexural Stress			
23°C, 4.00 mm	68.0	MPa	ISO 178
Yield, 23°C	70.0	MPa	ASTM D790
Tear Resistance <sup>1</sup>			
10 % solids & 6/9 AF New test solution : 23°C	1.0 to 2.0	%	
10% solids & 6/9 AF test oil : 23°C	1.0 to 2.0	%	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
-40°C	37	J/m	ASTM D256
23°C	100	J/m	ASTM D256
-40°C <sup>2</sup>	4.2	kJ/m <sup>2</sup>	ISO 180
23°C <sup>3</sup>	6.2	kJ/m <sup>2</sup>	ISO 180
Unnotched Izod Impact			ASTM D4812
-40°C	No Break		
23°C	No Break		
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-40°C, Energy to Peak Force	13.0	J	
23°C, Energy to Peak Force	12.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	70.0	°C	ASTM D648, ISO 75-2/B
1.8 MPa, Unannealed	64.0	°C	ASTM D648, ISO 75-2/A
Vicat Softening Temperature			
--	85.0	°C	ASTM D1525, ISO 306/A 4 4
--	76.0	°C	ISO 306/B
Specific Heat			
60°C	1300	J/kg/°C	
240°C	2000	J/kg/°C	
Thermal Conductivity (23°C)	0.19	W/m/K	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity (23°C)	1.0E+15	ohms · cm	ASTM D257
Dielectric Strength <sup>5</sup> (23°C)	16	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
23°C, 1 kHz	2.60		
23°C, 1 MHz	2.40		

Dissipation Factor			ASTM D150
23°C, 1 kHz	5.0E-3		
23°C, 1 MHz	0.017		
Arc Resistance	158	sec	ASTM D495
Injection	Nominal Value	Unit	
Drying Temperature	70.0	°C	
Drying Time	6.0	hr	
Processing (Melt) Temp	250 to 270	°C	
Mold Temperature	15.0 to 40.0	°C	
NOTE			
1.	90°		
2.	2 mm		
3.	2 mm		
4.	Loading 1 (10 N)		
5.	500 V/sec, Method A (Short-Time)		

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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

