# Artenius UNIQUE G10

## Polyethylene Terephthalate

### Artenius

#### Message:

Artenius UNIQUE G10 combines both post-consumer recycled PET and virgin PET resin in every single pellet. The virgin resin base is our Artenius GLOBAL, yet made using 10% clean recycled PET material as feedstock. It make possible to replace conventional non-renewable petrochemical raw materials, saving natural resources and reducing environmental impact.

Artenius UNIQUE G10 is suitable for processing as stretch blow moulding in one and particularly two stage processes, extrusion and film applications. Formulation has been specially developed for the packaging of still or carbonated water, soft drinks, edible oil, food packaging and spirit drinks. Artenius UNIQUE G10 is produced using a proprietary chemical recycling process. The clean recycled PET is de-polymerized and mixed together with standard virgin PET raw materials, integrating both types of components into the repolymerization process. Decontamination challenge tests prove that our production process results in a resin as pure as 100% virgin resin, even under the strictest conditions. For this reason, Artenius UNIQUE G10 can safely be used for all direct food contact applications.

Recycled Content Yes 10%   Features Food Contact Acceptable   Uses Bottles Film Food Packaging   Agency Ratings EU 94/62/EC EU No 10/2011   Forms Pellets   Processing Method Extrusion Film Extrusion Stretch Blow Molding   Physical Nominal Value Unit   Specific Gravity <sup>1</sup> > 1.39 g/cm <sup>3</sup> Apparent Density 0.84 g/cm <sup>3</sup> Viscosity Number (Reduced Viscosity) 80.0 to 84.0 ml/g ISO 1628   Acetaldehyde < 1.0 ppm ASTM F2013   Color b < 0.00 - ASTM D6290   Color L > 78.0 - ASTM D6290   Color L > 78.0 - ASTM D6290   Color L > 78.0 - ASTM D6290   City Stellinity > 48 % -   Moisture < 0.20 % -   Moisture < 0.20 % -   Meting Temperature 240.0 250 °C -   Dying Temperature 165 to 175 °C -	General Information			
UsesBottlesFilmFood PackagingAgency RatingsEU 94/62/EC EU No 10/2011FormsPelletsProcessing MethodPelletsProcessing MethodExtrusion Stretch Blow MoldingPhysicalNominal ValueVincosity 10.84Aparent Density0.84Aparent Density80.0 to 84.0Multion CorrectASTM F2013Color L< 1.0	Recycled Content	Yes,10%		
Film   Fod Packaging     Agency Ratings   EU 94/2/C     EV 10/2011   EU 94/2/C     Forms   Pelets     Forcessing Method   Extrusion     Film Extrusion   Film Extrusion     Specific Gravity 1   Nominal Value   Volt     Physical   Nominal Value   grava     Apparent Density   0.84 000   grava     Specific Gravity 1   0.80 to 84.0   m/g     Apparent Density   0.80 to 84.0   m/g     Otor La   3.00 to 84.0   m/g     Color L   0.80 to 84.0   m/g     Misture   0.80 to 84.0   m/g     Misture   0.80	Features	Food Contact Acceptable		
Ford Packaging     Agency Ratings   EU 94/62/CE     EU 90/62/CE   EU 10/0211     Forms   Pellets     Processing Method   Pellets     Film Extusion   Film Extusion     Forder Delet Version   Film Extusion     Forder Delet Version   Grant     Specific Gravity 1   Nomina Value   Method     Apparent Density   040 400   grant     Yostosity Number (Reduced Viscosity)   800 to 84.0   milg   So 162.6     Color L   0.00   milg   So 162.0   So 162.0     Color L   0.00   Milg   Milg   So 162.0     Color L   0.00   So 162.0   So 162.0   So 162.0     Color L   0.00   So 162.0   So 162.0   So 162.0     Color L   0.00   So 162.0   So 162.0   So 162.0     Color L   0.00   So 162.0 <td>Uses</td> <td>Bottles</td> <td></td> <td></td>	Uses	Bottles		
Agency Ratings   EU 94/62/EC EU No 10/2011     Forms   Pellets     Forcessing Method   Pellets     Film Extrusion Film Extrusion Surveich Blow Molding   Forms     Physical   Nominal Value   Unit     Apparent Density   > 1.39   g/cm³     Yoscosity Number (Reduced Viscosity)   80.00 84.0   ml/g cm³     Acetaldehyde   < 1.0		Film		
EUN 01/2011     Forms   Pellets     Processing Method   Extrusion     Film Extrusion   Stretch Blow Molding     Physical   Nominal Value   Unit   Test Method     Specific Gravity <sup>1</sup> > 1.39   g/cm <sup>3</sup> Jenter Science     Viscosity Number (Reduced Viscosity)   80-0 to 84.0   m/lg   ISO 1628     Golor L   Ogo   ASTM F2013   ASTM F2013     Color L   > 78.0   ASTM D6290   ASTM D6290     Odd Strute   - 0.00   Strute Science   ASTM D6290     Color L   > 20.0   Minal Value   Minal Value   Minal Value     Moisture   - 0.20   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Cr   Cr   Cr     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value   Minal Value   Minal Value		Food Packaging		
EUN 01/2011     Forms   Pellets     Processing Method   Extrusion     Film Extrusion   Stretch Blow Molding     Physical   Nominal Value   Unit   Test Method     Specific Gravity <sup>1</sup> > 1.39   g/cm <sup>3</sup> Jenter Science     Viscosity Number (Reduced Viscosity)   80-0 to 84.0   m/lg   ISO 1628     Golor L   Ogo   ASTM F2013   ASTM F2013     Color L   > 78.0   ASTM D6290   ASTM D6290     Odd Strute   - 0.00   Strute Science   ASTM D6290     Color L   > 20.0   Minal Value   Minal Value   Minal Value     Moisture   - 0.20   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Cr   Cr   Cr     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value   Minal Value     Meting Temperature   20.0   Minal Value   Minal Value   Minal Value   Minal Value   Minal Value				
Forms   Pellets     Processing Method   Krusion     Film Extrusion   Film Extrusion     Stretch Blow Molding   Stretch Blow Molding     Physical   Nominal Value   Unit   Test Method     Apparent Density   > 1.39   g/cm³   ISO 1628     Kretaldehyde   <0.00	Agency Ratings	EU 94/62/EC		
Processing MethodExtrusion Film Extrusion Stretch Blow MoldingPhysicalNominal ValueUnitTest MethodSpecific Gravity 1> 1.39g/cm³Apparent Density0.84g/cm³Viscosity Number (Reduced Viscosity)8.0.0 to 84.0m/gAcetaldehyde< 1.0		EU No 10/2011		
Processing MethodExtrusion Film Extrusion Stretch Blow MoldingPhysicalNominal ValueUnitTest MethodSpecific Gravity 1> 1.39g/cm³Apparent Density0.84g/cm³Viscosity Number (Reduced Viscosity)8.0.0 to 84.0m/gAcetaldehyde< 1.0				
Film Extusion Stretch Blow MoldingPhysicalNominal ValueUnitTest MethodSpecific Gravity 1> 1.39g/cm³-Apparent Density0.84g/cm³-Viscosity Number (Reduced Viscosity)80.0 to 84.0m/g of 0.0 162.0Acetaldehyde< 1.0	Forms	Pellets		
Streth Blow MoldingPhysicalNomina ValueUnitTest MethodSpecific Gravity 1> 1.39g/cn³-Apparen Density0.84g/cn³-Viscosity Number (Reduced Viscosity)80.to 8.40m/gISO 1628Actaldehyde< 1.0	Processing Method	Extrusion		
PhysicalNominal ValueUnitTest MethodSpecific Gravity 1> 1.39g/cm³-Apparent Density0.84g/cm³ISO 1628Viscosity Number (Reduced Viscosity)80.0 to 84.0ml/gISO 1628Acetaldehyde< 1.0		Film Extrusion		
Specific Gravity 1> 1.39g/cm3Apparent Density0.84g/cm3Viscosity Number (Reduced Viscosity)80.0 to 84.0m/gISO 1628Acetaldehyde< 1.0		Stretch Blow Molding		
Specific Gravity 1> 1.39g/cm3Apparent Density0.84g/cm3Viscosity Number (Reduced Viscosity)80.0 to 84.0m/gISO 1628Acetaldehyde< 1.0				
Apparent Density0.84g/cm³Viscosity Number (Reduced Viscosity)80.0 to 84.0ml/gISO 1628Acetaldehyde<1.0	Physical	Nominal Value	Unit	Test Method
Viscosity Number (Reduced Viscosity)80.0 to 84.0ml/gISO 1628Acetaldehyde< 1.0	Specific Gravity <sup>1</sup>	> 1.39	g/cm³	
Acetaldehyde< 1.0ppmASTM F2013Color b< 0.00	Apparent Density	0.84	g/cm³	
Color b< 0.00ASTM D6290Color L> 78.0ASTM D6290Crystallinity> 48%Moisture< 0.20	Viscosity Number (Reduced Viscosity)	80.0 to 84.0	ml/g	ISO 1628
Color L> 78.0ASTM D6290Crystallinity> 48%Moisture< 0.20	Acetaldehyde	< 1.0	ppm	ASTM F2013
Crystallinity> 48%Moisture< 0.20	Color b	< 0.00		ASTM D6290
Moisture< 0.20%Weight - of 20 Chips320.0mgThermalNominal ValueUnitMelting Temperature240 to 250°CExtrusionNominal ValueUnit	Color L	> 78.0		ASTM D6290
Weight - of 20 Chips320.0mgThermalNominal ValueUnitMelting Temperature240 to 250°CExtrusionNominal ValueUnit	Crystallinity	> 48	%	
ThermalNominal ValueUnitMelting Temperature240 to 250°CExtrusionNominal ValueUnit	Moisture	< 0.20	%	
Melting Temperature 240 to 250 °C   Extrusion Nominal Value Unit	Weight - of 20 Chips	320.0	mg	
Extrusion Nominal Value Unit	Thermal	Nominal Value	Unit	
	Melting Temperature	240 to 250	°C	
Drying Temperature 165 to 175 °C	Extrusion	Nominal Value	Unit	
	Drying Temperature	165 to 175	°C	

Drying Time	5.0 to 6.0	hr	
Melt Temperature	270 to 290	°C	
NOTE			
1.	Crystalline		

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