

聚乳酸, 全名Poly Lactic Acid (PLA) 或Polylactide, 是以乳酸或乳酸的二聚体丙交酯为单体, 通过聚合的方式得到的高分子聚酯材料, 具有生物基和可降解的特点。

聚乳酸作为热塑性材料具有良好的机械性能和加工性能, 适用于挤出成型、注塑成型、挤吹成型、纺丝、发泡等主要塑料加工工艺, 能够兼容现有的塑料加工设备。

PLA(Poly lactic acid or polylactide) is a biobased and biodegradable polymer obtained by polymerization of lactic acid or its dimer lactide.

As a thermoplastic material, PLA has good mechanical properties and processing performance. It is suitable for extrusion, injection molding, extrusion blow molding, spinning, foaming and other major plastic processing technologies, and it is also compatible with the existing plastic processing equipments.





聚乳酸的应用及改性 APPLICATION AND COMPOUND OF PLA

聚乳酸具有良好的生物相容和可降解等特性,是一种具有相对高热稳定性的可结晶热塑性材料。

适用于注塑、挤出、纺丝等加工工艺,加工后的制品可以广泛地应用于家居、餐具、包装、服装、农业、电子产品等众多领域。

PLA has good biocompatibility and degradability. It's a crystallizable thermoplastic material with relatively high thermal stability. It's applicable for production processes such as extrusion, injection, spinning, etc. And it can be widely used in household, tableware, packaging, clothing, agriculture, electronic products and many other application fields.



纯聚乳酸树脂性能评测 PERFORMANCE EVALUATION OF PURE PLA RESIN

材料性能评级
Material Property Rating

优 ●●●●●
Excellent

良 ●●●●●
Good

中 ●●●●●
Average

差 ●●●●●
Poor

加工性
Processability

吹膜成型性 ●●●●●
Blown film formability
注射成型性 ●●●●●
Injection moldability

挤出成型性 ●●●●●
Extrusion formability
纤维成型性 ●●●●●
Fiber formability

双轴拉伸性 ●●●●●
Biaxial stretchability

力学性能
Mechanical Property

拉伸强度 ●●●●●
Tensile strength
韧性 ●●●●●
Toughness

抗冲击强度 ●●●●●
Impact strength

硬度 ●●●●●
Hardness

光学性质
Optical Property

透明度 ●●●●●
Transparency

透光率 ●●●●●
Transmittance

物理性质
Physical Property

耐高温性 ●●●●●
High-temperature resistance

耐低温性 ●●●●●
Low-temperature resistance

气体阻隔性 ●●●●●
Gas barrier

化学性质
Chemical Property

耐酸耐碱性 ●●●●●
Acid&alkali resistance

耐溶剂性 ●●●●●
Solvent resistance

附加功能性
Additional Functional Property

阻燃性 ●●●●●
Flame retardancy
热封性 ●●●●●
Heat-sealing

导电性 ●●●●●
Conductivity
印刷性 ●●●●●
Printability

发泡轻量化 ●●●●●
Foam lightweight

复合改性聚乳酸是以纯聚乳酸为基体树脂,通过与其他材料复合,改善纯聚乳酸在化学和物理等方面的固有性能,进一步开发和开拓其不同应用领域。

The compounded PLA uses pure PLA as the base resin, improves the inherent properties of pure PLA in chemistry and physics by compounding with other materials, and further develops and expands its different application fields.

RECODE物性
RECODE CHARACTERISTIC

物理性能 PHYSICAL PROPERTY		密度 g/cm ³ Density	熔指 g/10min (190°C/2.16kg) MFR	熔点 °C Melting point	玻璃化温度 °C Glass transition temperature
测试标准 Test Standard		GB/T1033.1-2008	GB/T3682.1-2018	GB/T19466.3-2004	GB/T19466.2-2004
挤出级 牌号 Extrusion Grades	RECODE 101	1.20-1.30	2-12	<155	60
	RECODE 110	1.20-1.30	2-12	155-170	60
	RECODE 190	1.20-1.30	2-12	170-180	60
	RECODE 711H	1.25-1.35	7-10	-	-
	RECODE 721	1.30-1.40	3-10	-	-
注塑级 牌号 Injection Molding Grades	RECODE 210	1.20-1.30	12-40	160-170	60
	RECODE 290	1.20-1.30	12-40	170-180	60
	RECODE 213	1.40-1.50	10-35	-	-
	RECODE 213S	1.40-1.50	10-25	-	-
机械性能 MECHANICAL PROPERTY		拉伸强度 MPa Tensile Strength	断裂伸长率 % Elongation at break	缺口冲击强度 kJ/m ² Notched impact strength	
测试标准 Test Standard		GB/T1040.1-2018	GB/T1040.1-2018	GB/T1043.1-2008	
挤出级 牌号 Extrusion Grades	RECODE 101	≥50	≥3	≥1	
	RECODE 110	≥50	≥3	≥1	
	RECODE 190	≥50	≥3	≥1	
	RECODE 711H	≥40	≥35	≥5	
	RECODE 721	≥50	≥3	≥2	
注塑级 牌号 Injection Molding Grades	RECODE 210	≥50	≥3	≥1	
	RECODE 290	≥50	≥3	≥1	
	RECODE 213	≥50	≥2	≥2	
	RECODE 213S	≥40	≥2	≥2	

