PLA Vs ABS (Industrial grade)

	PLA	ABS
Official Name:	Polylactic Acid or Polylactide	Acrylonitrile Butadiene Styrene
Molecular Formula:	(C3H4O2)n	(C8H8·C4H6·C3H3N)n
Derived From:	Renewable Resources: Corn Starch, Tapioca Roots, Chips, Starch, or Sugarcane	Chemical Compound: Acrylonitrile, Butadiene, and Styrene
Environmental Friendly:	YES	NO
Degradable:	YES	NO
Melting Point:	173 C to 178 C	205 C
Rockwell Hardness:	R70 to R90	105 to R110 (Harder)
Surface Quality:	Good	Fine
Cool Time:	Long	Medium
Heat Resistant	110 C	105 C
Smell:	Excellence	Stinky
Moisture Absorption:	Yes, Causing Moisture Issues	Yes, Causing Moisture Issues
Solubility in Water:	Insoluble (Better)	Insoluble
Density:	1.23 to 1.25 g/cm^3	1.04 g/cm^3
Elongation at Break:	3.8 %	20 %
Acrylic Bonding:	Very Firmly	Good
Glass Transition:	60 C to 65 C	105 C

	PLA	ABS
Tensile Strength:	57.8 MPa (8,383.18 psi)	44.81 MPa (6,500 psi)
Flexural Strength:	55.3 MPa (8,020.58 psi)	75.84 MPa (11,000 psi)
Compressive Strength:	N/A	46.54 MPa (6,750 psi)
Flexural Modulus:	2.3 GPa (333,586.79 psi)	2.28 GPa (330,000 psi)
Tensile Modulus:	3.3 GPa (478,624.53 psi)	2.21 GPa (320 000 psi)
Crystallinity:	~37 C	N/A
Products:	Cup, Box, Lid, Cutlery and etc	LEGO building bricks, Computer mouse and etc