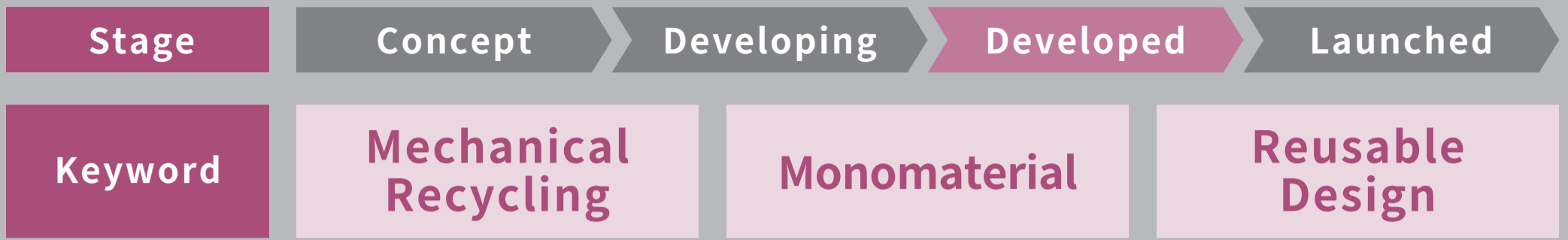


Polyethylene for Additive Manufacturing Suitable for Mechanical Recycling



Use MEX (Material Extrusion) Additive Manufacturing

Background

- Polyethylene tends to warp easily, making it difficult to use for Additive Manufacturing.
- PLA and ABS are prone to physical property degradation, making repeated use such as recycling difficult.

Flexibility and 3DP Temperature

Compared to conventional 3D printing materials, PE offers greater flexibility and enables fabrication at lower temperatures.

Repeated Extrusion

Material recycling can be performed while maintaining the integrity of physical properties.

Properties

Material Grade			3DP-1	3DP-2	3DP-3	Conv. PE
Printing Temperature	Nozzle	°C	180	150	120	190
	Stage	°C	~40	~40	~40	~40
Object Properties	Shrinkage	mm	1.0	0.5	0	3.0
	Tensile Stress	%	unbroken	260	400	170
Injection Properties	Density	g/cm ³	0.90	0.90	0.90	0.92
	Flexural Modulus	MPa	110	60	20	230