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6M approach to bioplastics from molder's point of view



Material	Fossil based, non biodegradable
Man	Business as usual, high profession to process
Machine	Machines and existing molds are made for these materials
Method	Large processing window, "easy" to process
Measurement	Consistent material quality due large production batches
Mother Nature	Usually recyclable



Material	Fossil based, biodegradable
Man	Not so much experience
Machine	Machines are usually suitable, moulds might require special coating to avoid corrosion
Method	Processing window is smaller than in conventional plastics
Measurement	Smaller production batches?
Mother Nature	Based on fossil materials, maybe we should avoid these in the future



Material	Biobased, non biodegradable
Man	Similar to use as conventional plastics
Machine	Machines are suitable, "drop-in"
Method	Processing window same as conventional plastics
Measurement	Smaller production batches, availability is limited
Mother Nature	Definitely one option for more sustainable future



Material	Biobased, biodegradable
Man	Somewhat similar to use as conventional plastics
Machine	Machines are mainly suitable, sophisticated peripherals are needed for success
Method	Processing window is tight, depending on application
Measurement	Smaller production batches?
Mother Nature	The best option in the future.



Material	Fossil based, recycled
Man	Business as usual, high profession to process
Machine	Machines are suitable, infrastructure is existing
Method	Depending on source, there might be limits in processing, but usually "drop-in"
Measurement	Smaller production batches, different sources, approvals to use in all the applications, shrinkage problems
Mother Nature	CO2 -85%, great to have the polymers circulating



Material	Biocomposites
Man	Somewhat similar to other reinforced plastics
Machine	Wear resistant screws are recommended, gentle drying capacity
Method	Pay attention to fire safety (self-ignition) and air quality
Measurement	Smaller production batches, different sources, approvals to use in all the applications, shrinkage problems
Mother Nature	Why not substituting part of fossil based material with natural fibers



What is required from production to use these materials?



What applications are suitable for biobased and/or biodegradable plastics?



What is needed to convince customer to give bioplastics a try?



Any questions?

Thank You!!!

