



Understanding Compostable Plastics

Not all compostable and biodegradable plastics are considered equal and interpreting what the difference means in the terms ranging from 'degradable', biodegradable' to 'compostable' can be challenging.

Traditional plastics are primarily derived from fossil fuels and degrade very slowly which can adversely impact the health of the environment if littered. Compostable plastics may be plant based (Polylactic Acid-PLA) or petrochemical based (Polybutylene succinate-PBS) and are often advertised as a more sustainable option for packaging than conventional plastic however in practice, compostable plastics present a range of issues at end of life to existing composting and recycling systems.

Certified compostable plastics are defined as “a plastic that undergoes degradation by biological processes during composting to yield carbon dioxide, water, inorganic compounds, and biomass at a rate consistent with other known compostable materials leaving no visually distinguishable or toxic residues” (ASTM D6400-19).

Despite many claims, the technology does not currently exist to manufacture a compostable plastic product that will completely compost in backyard bins or piles. Even when certified, these materials do not necessarily break down as designed in actual composting processing conditions because certification standards test compostability based on laboratory conditions versus actual processing conditions at facilities, which is why they are not currently an acceptable composting material under the [BC Organic Matter Recycling Regulation \(OMRR\)](#).

Additionally, compostable plastics are visually identical to conventional petroleum-based plastics and are often screened out at compost facilities as potential plastic contamination as a result.

Most compostable plastics are not recyclable either and can contaminate the recycling stream if added to 'blue box' material. Many products labelled as compostable or biodegradable also have the potential to introduce microplastics and chemical additives such as Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) into soil systems.

The best way to reduce waste and support our planet is to reduce the amount of unnecessary plastic we use in the first place, compostable or otherwise, and choose reusable options where possible. Check out the City of Victoria's [Sustainable Takeout Guide](#) to learn which materials work best in our regional recycling and composting programs.



Plastic Type	Definition of Material	Associated Logo or Certification
<p>Conventional Plastics</p>	<p>Usually synthetic, most commonly derived from petrochemicals, but may contain some natural components. Most common material for food grade containers, beverages and industrial materials. Most are recyclable, but many plastics end up in landfills or littered.</p> <p>Note: Products labeled with symbols 1, 2, 4 and 5 are accepted in most residential curbside recycling programs. For all other products, check your local recycling program guidelines.</p>	<p>Plastic recycling Polyethylene terephthalate High-density polyethylene Polyvinyl chloride Low-density polyethylene Polypropylene Polystyrene OTHER</p>
<p>Degradable*</p>	<p>Consists of a mix of plastic and natural components; refers to a product that can change its chemical structure, but doesn't specify how long the change will take or what the product will change into.</p> <p>*Does not mean compostable and will not break down efficiently in a landfill.</p>	<p>No universal symbol-</p> <p>Covers a wide range of products, mostly conventional plastic, none of which are compostable or certified as safe for the natural environment once degraded.</p>

<p>Biodegradable*</p>	<p>The current absence of labelling legislation standards within Canada means the term 'biodegradable' can be applied to many materials. Labelling a plastic product as biodegradable does not guarantee environmental safety if leaked into natural systems.</p> <p>*Does not mean compostable and will not break down efficiently in a landfill.</p>	<p><u>No universal symbol-</u></p> <p>This term does not mean compostable and the 'biodegradable' bag or packaging will not break down safely or effectively in a landfill or composting facility.</p>
<p>Oxo- Biodegradable*</p>	<p>Made from oil or natural gas by-products, with an added chemical substance that helps to speed up oxidation of the plastic under natural conditions; May contain heavy metals.</p> <p>*Banned under the <u>Federal Single-Use Plastics Prohibition Regulations (2023)</u>.</p>	
<p>Compostable</p>	<p>May be plant based (PLA) or petrochemical based (PBAS). Must be able to break down into carbon dioxide, water and biomass at the same rate as paper and should not produce any toxic byproducts.</p> <p>Only truly compostable if packaging displays certification symbol and then only suitable for certain regional industrial facilities. Check acceptability with your province and municipality.</p>	 
<p>Backyard Compostable</p>	<p>Uncoated and unlined paper, paper board, bamboo or wood fibre products. Items should break down in a passive backyard composter within 6-12 months though some residual material may still be visible (e.g. wood cutlery).</p>	



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