

# HOW TO MAKE BIODEGRADABLE POLYMERS ATTRACTIVE





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## What are biodegradable polymers?

The biodegradability of a polymer depends on its chemical structure, not on the origin of its raw materials. Biodegradation is a chemical process during which microorganisms that are available in the environment convert materials into natural substances such as water, carbon dioxide, and compost. Some bio-based plastics may not be biodegradable, and conversely 100 % fossil-based plastics can biodegrade.

## **THERE ARE TWO TYPES OF BIODEGRADABLE POLYMERS:**

- Bio-based and biodegradable, such as PLA and PHA or PBS
- Based on fossil resources and biodegradable, such as PBAT

The coloration of biodegradable polymers requires a careful selection of pigments which comply with the European Norm EN 13432. This norm defines the characteristics that a material has to possess in order to be considered “compostable”, namely that it can be processed through organic recovery (composting and anaerobic digestion).

Nine products are now officially “OK compost INDUSTRIAL” certified which ensures they are compostable in industrial composting plants when used up to the maximum concentration\* mentioned in the table.

All other shown pigments comply according to our tests with the limits of all substances listed in EN 13432 if used at the maximal given concentration.



PIGMENT	COLOUR INDEX	MAX. CONC. [%]	OK COMPOST INDUSTRIAL CERTIFIED [EN 13432]
<b>PV FAST® YELLOW H9G</b>	P.Y. 214	1	
<b>GRAPHTOL™ YELLOW 3GP</b>	P.Y. 155	1	YES
<b>PV FAST YELLOW HG 01</b>	P.Y. 180	1	
<b>PV FAST YELLOW HG</b>	P.Y. 180	1	YES
<b>PV FAST YELLOW H2GR</b>	P.Y. 191	1	
<b>PV FAST YELLOW HGR</b>	P.Y. 191	1	YES
<b>GRAPHTOL YELLOW H2R</b>	P.Y. 139	1	
<b>PV FAST YELLOW H3R</b>	P.Y. 181	1	
<b>PV FAST ORANGE H2GL</b>	P.O. 64	1	YES
<b>PV FAST RED B</b>	P.R. 149	1	
<b>GRAPHTOL RED LG</b>	P.R. 53:1	1	
<b>PV FAST RED D3G</b>	P.R. 254	1	YES
<b>GRAPHTOL RED F3RK 70</b>	P.R. 170	1	
<b>PV FAST RED HB</b>	P.R. 247	1	
<b>GRAPHTOL RED P2B</b>	P.R. 48:2	1	
<b>PV FAST RED HF4B</b>	P.R. 187	1	
<b>PV FAST RED E5B</b>	P.V. 19	1	
<b>GRAPHTOL RUBINE L4B</b>	P.R. 57:1	1	
<b>PV FAST PINK E</b>	P.R. 122	1	YES
<b>PV FAST VIOLET RL</b>	P.V. 23	1	
<b>PV FAST BLUE A4R</b>	P.B. 15:1	0.05	YES
<b>PV FAST BLUE BG</b>	P.B. 15:3	0.05	YES
<b>PV FAST GREEN GNX</b>	P.G. 7	0.1	YES
<b>PV FAST BROWN HFR</b>	P.Br. 25	1	



\*Maximum concentration of the single pigment in the final plastic application.

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