



Bioplastics Worldwide. Your Markets – Your Solutions – Our Certifications.

Bioplastics are still quite a new market and represent only one percent of the total plastics produced worldwide. Nevertheless, compared to conventional plastics, bioplastics reveal a great progress in regard to properties and quality. Thus, bioplastics are more and more applied in various markets like packaging, catering products, automotive.

For customers and waste management it is of great importance to be able to rely on the product's properties regarding biodegradability in different environmental and renewable resources. This is why independent certification by DIN CERTCO according to European or international standards plays an important role in this field.

Global Market Access for your Bioplastics in Europe

Biodegradable and compostable plastic bags are the product segment with the highest volume in Europe. Currently, bioplastics represent about one percent of the about 320 million tonnes of plastic produced annually and the demand is continuously rising. A new EU law was introduced on July 2nd 2019 for the ban of single-use non-biodegradable plastics by 2021. This includes single use cutlery, plates, straws, and other consumer products containing oxo-degradable and non-biodegradable plastics.

Since 2015, an amendment of the EU Directive on Packaging and Packaging Waste „Directive 94/62/EU“

regulates the consumption of plastic bags, especially lightweight plastic carrier bags (LPCB) with a wall thickness < 50 µm in the EU, in order to reduce their impact on the environment. LPCB represent the vast majority of bags in the EU. Further LPCB shall not be provided free of charge at points of sale. However, this does not apply for very lightweight plastic bags, wall thickness < 15 µm.

EU member states can implement their own laws and regulations to reach a decrease in bag consumption. In the following you will find an overview about the legislations established in some of the EU member states until now.

ITALY

- Ban of most plastic bags < 100 µm – Exemption of biodegradable and compostable bags according to EN 13432
- and of single-use plastic in super-markets already from 1st July 2019

FRANCE

- From 1st July 2016 ban of lightweight plastic bags (< 50 µm)
- Exemptions are home compostable bags certified according French standard NF T 51-800. These also must feature a biobased content of at least 30 %. The minimum biobased content will be increased to 60 % in 2025.

GERMANY

- 80 % of all plastic carrier bags are not given out for free (exemption for bags < 15 µm)
- Waste bags for the green bin must be certified according to EN 13432 or EN 14995 and must be produced “predominantly from renewable resources”.

NETHERLANDS

- From 1st January 2016 ban of free plastic bags
- All compostable certified products can be disposed in the green bin if they contribute to biowaste and food scraps collection.

BELGIUM

- Ban of lightweight plastic bags – Exemptions are biodegradable and compostable bags according EN 13432
- About 30 % of the Belgian households perform home composting in their backyard for kitchen and garden waste.

SPAIN

- Charge for all plastic carrier bags from 1st January 2018. Only exemptions are very lightweight bags for food or hygiene
- Lower charge for biodegradable bags
- Ban of lightweight oxo-degradable bags

Global Market Access for your Bioplastics Worldwide

UK

- Since 5th October 2015 large businesses (≥ 250 employees) need to charge 5 pence for single-use plastic carrier bags
- Paperbags, bags for unwrapped food, bags on airports stay free of charge
- No exemption for biodegradable bags, yet

USA

- Bans on plastic bags in Austin, Cambridge, Mass. Chicago, LA, San Francisco, Seattle
- Plastic bag fees in Boulder, Brownsville, Montgomery County, Md., New York, Portland, Washington D.C.
- For more information visit: <http://www.ncsl.org/research/environment-and-natural-resources/plastic-baglegislation.aspx>

CANADA

- Montreal implemented ban on January 1st 2018 on lightweight plastic bags with a thickness of less than 50 microns as well as oxo-degradable bags
- Exception: thin bags that are used in grocery stores to transport fruits and vegetables to the cash register or to wrap up meat
- Canada to ban harmful single-use plastics, like plastic bags, straws, cutlery, plates, and stir sticks, as early as 2021

Source: <http://www.plasticsnewseurope.com/article/20150114/PNE/301149981/chinas-new-plastics-ban-in-jilinprovince-boosts-bioplastics-sector>
<https://globalnews.ca/news/3940536/no-more-plastic-bags-in-montreal-firstmajor-canadian-city-to-implement-ban/>
<https://www.gov.uk/government/publications/single-use-plastic-carrierbags-why-were-introducing-the-charge/carrier-bags-why-theres-a-5p-charge>

AUSTRALIA

- Queensland bans plastic shopping bags less than 35 microns in thickness from 1st July 2018
- This ban includes compostable, degradable and biodegradable plastic shopping bags
- Not included: barrier bags for perishable foods, garbage bags, 'dog poo' bags

CHINA

- Jilin Province approved the country's first ban on the production and sale of single-use, non-biodegradable bags on 1st January 2015

NEW ZEALAND

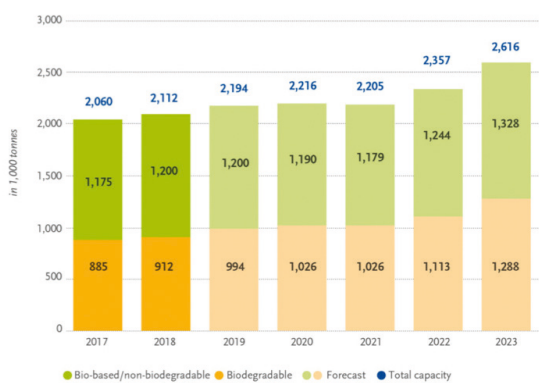
- Single-use plastic shoppers banned from July 1st 2019

Source: <https://www.qld.gov.au/environment/pollution/management/waste/plastic-bags/about>

Global Production Capacities of Bioplastics

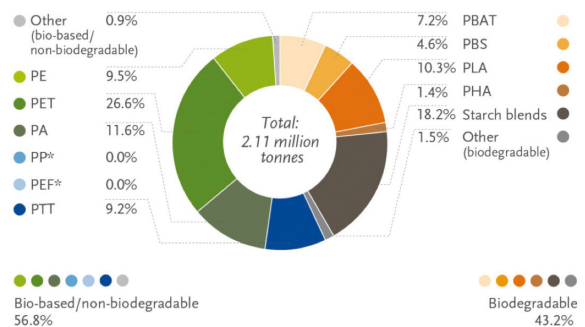
The market for bioplastic products is continuously growing. Global production capacities are predicted to grow from 2.11 million tonnes to approximately 2.62 million tonnes in 2023. Major production capacities are located in Asia.

Global production capacities of bioplastics



Source: European Bioplastics, nova-Institute (2018)
More information: www.european-bioplastics.org/market and www.bio-based.eu/markets

Global production capacities of bioplastics 2018 (by material type)



*Bio-based PP and PEF are currently in development and predicted to be available at commercial scale in 2023

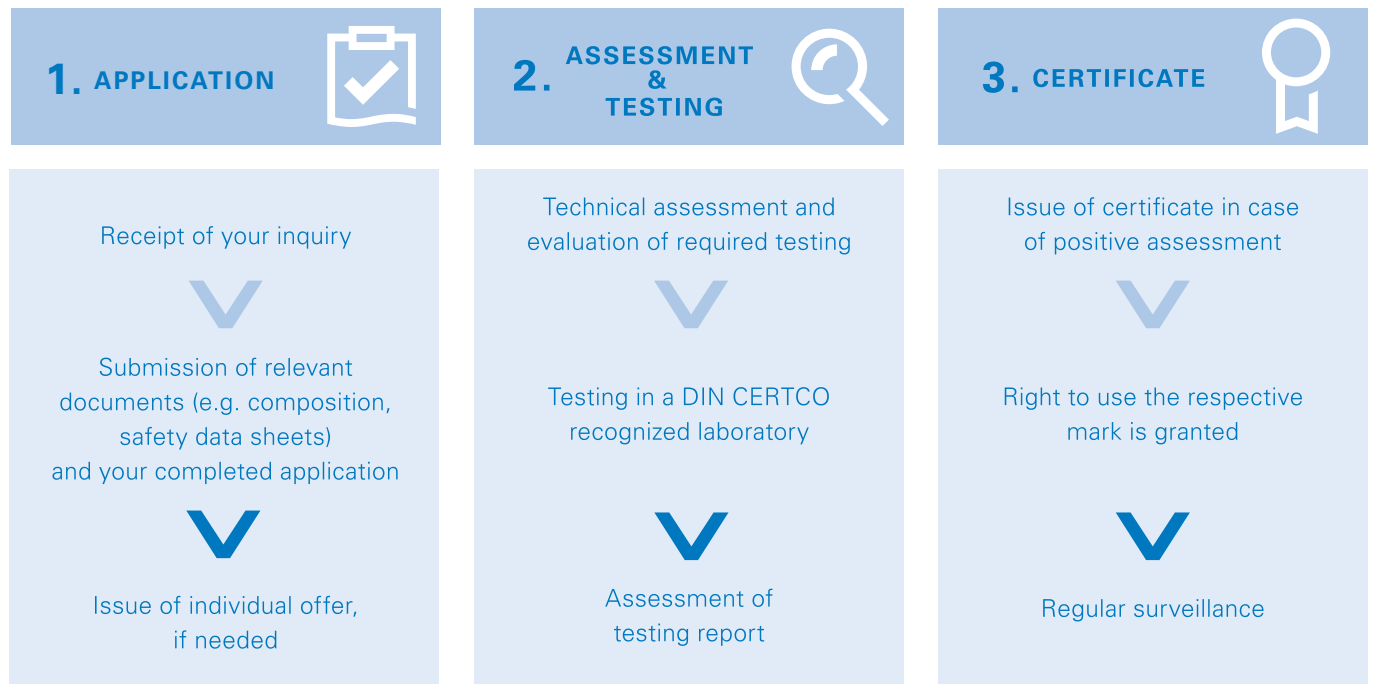
Source: European Bioplastics, nova-Institute (2018)
More information: www.european-bioplastics.org/market and www.bio-based.eu/markets

Global production capacities of bioplastics in 2018 (by region)



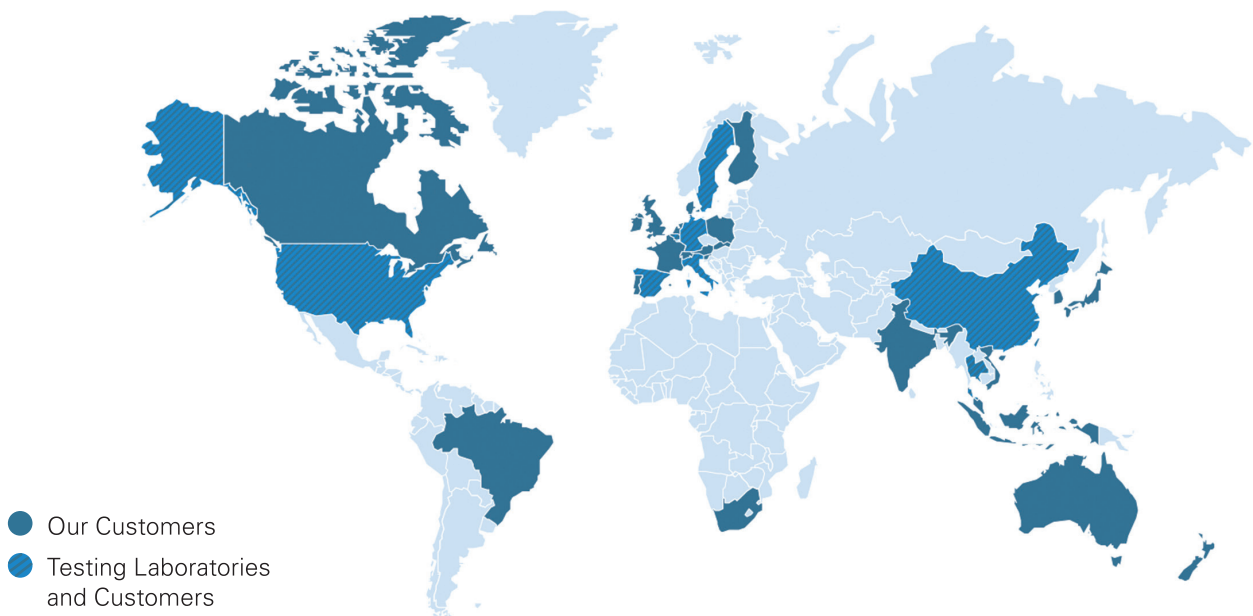
How to get Certified?

DIN CERTCO offers certification along the whole supply chain:
From raw materials through intermediates to the final products.



DIN CERTCO worldwide

Compostable + Biobased Certification



Compostable and Biobased Product Certification by DIN CERTCO

Our internationally recognized certification marks for your market access worldwide.

USA / CANADA

Applicable standards are ASTM D 6400 or ASTM D 6868. Since 2017 DIN CERTCO cooperates with the Biodegradable Products Institute (BPI). BPI operates North America's leading certification system for compostable products providing you access to the North American markets.



AUSTRALIA / NEW ZEALAND

Certification according to the Australian standards AS 4736 for industrial compostability and AS 5810 for home compostability, respectively. DIN CERTCO cooperates with the ABA (Australasian Bioplastics Association) on industrial and home compostable certification.



EUROPE / CHINA

The standard in Europe for industrial compostability is EN 13432. For industrial compostable products, the "DIN-Geprüft industrial compostable" mark can be achieved, in addition to the well-established "Seedling" which DIN CERTCO grants under agreement with European Bioplastics for more than 20 years. For home compostable products, the French standard NF T 51-800 and the Australian standard AS 5810 can be chosen for "DIN-Geprüft home compostable" certification.



REST OF THE WORLD

For industrial compostability, the standards ISO 17088 and ISO 18606 can be applied if the country of interest has harmonized these ISO standards.



Our new test marks in the field of compostable and biobased products.

ADDITIVES FOR COMPOSTABILITY ACCORDING TO EN 13432.

Harmless additives, such as printing inks, master-batches, lubricants or other biodegradable additives can as well be certified by DIN CERTCO for their compostability according to EN 13432 and other relevant standards.



BIODEGRADABILITY IN SOIL PRODUCT CERTIFICATION ACCORDING TO EN 17033.

Mulch films, semi-finished products and materials can be certified as "DIN-Geprüft Biodegradable in Soil" according to EN 17033. Biodegradable mulch films have long been used as an alternative in agriculture and horticulture. The newly developed "EN 17033 Plastics - Biodegradable mulch films for use in agriculture and horticulture" is the standard for certification valid for the European market.



Biobased Product Certification

With these marks, you document the use of renewable raw materials and demonstrate the proportion of biobased carbon. In using our internationally recognized "DIN-Geprüft biobased" label or the new "biobased" label of the Dutch NEN, you also secure the trust of your customers and business partners. Tests are based on ASTM D 6866, ISO 16620, or EN 16785-1.

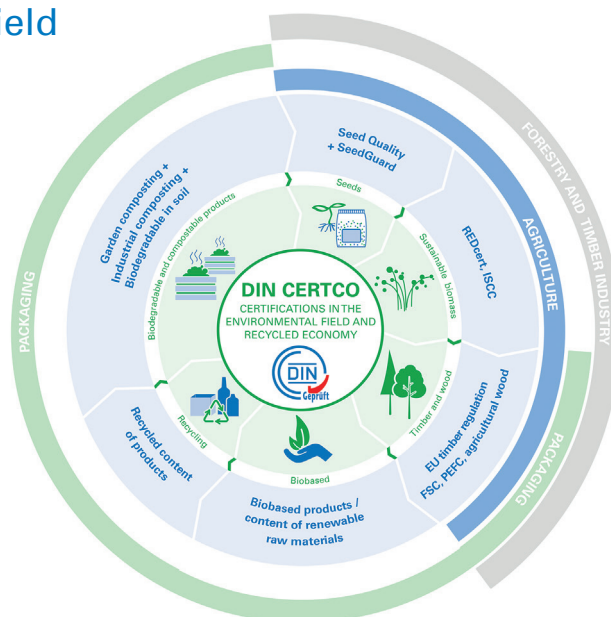


biobased %

Our Certifications in the Environmental Field

For more information about DIN CERTCO's certifications and services in the environmental field, visit: www.dincertco.de/en/environment

DIN CERTCO is a certification body of the TÜV Rheinland Group. It is highly regarded at home and abroad for its independence, neutrality, competence and more than 40 years of experience in the field of environmental certification. Show the difference - with a certification mark of DIN CERTCO.



DIN CERTCO Gesellschaft für
Konformitätsbewertung mbH
Alboinstr. 56
12103 Berlin, Germany
info@dincertco.de
Phone +49 30 7562-1131

www.dincertco.de/en



TÜVRheinland®

DIN CERTCO

Precisely Right.