



MATER-BI

MATER-BI FOR MULCHING

SOLUTIONS FOR BIODEGRADABILITY
IN THE SOIL



MATER-BI FOR MULCHING

MATER-BI is a family of fully **biodegradable and compostable** bioplastics which use renewable resources to provide a solution with low environmental impact and to solve specific environmental problems in various sectors, such as agriculture, foodservice, packaging and the separate collection of organic waste.

Mulching film made of MATER-BI is the leading choice of biodegradable and compostable film among farmers and provides optimal processing and agronomic performance, together with excellent environmental biodegradability.

Our materials for mulching are designed to be biodegradable in the soil and have obtained compostability certification according to standard UNI EN 13432.



compatible with standard extrusion systems



good agronomic results



environmentally friendly



economic benefits



biodegrades in the soil

INNOVATIVE MATERIAL WITH SUBSTANTIAL TECHNICAL BENEFITS

Excellent stability and processability **on common blown extrusion systems** used for traditional plastics, with a wide range of thicknesses (from 10 to 200 µm).

Optimisation of specifically developed pigmented masterbatches, guaranteeing high compatibility and good performance

In the processing by standard plants for traditional plastics and the possibility of including up to 10% of regenerated material in mulching films without altering the mechanical characteristics and performance in the field.

Excellent mechanical properties, with high resistance and toughness (see table).

NOTE: range of properties relating to MATER-BI mulching film with thickness from 12 to 18 µm.

THE ECONOMIC AND ENVIRONMENTAL ADVANTAGES OF BIODEGRADABLE MULCHING FILM MADE OF MATER-BI

Excellent performance in the field in controlling weeds and in terms of agronomic yield and product quality, comparable with traditional plastic films.

Excellent versatility for use and mechanisation: can be used with the same laying and laying-perforating machinery used for traditional plastics and at the same speed.

Excellent agronomic versatility and compatibility: MATER-BI mulching film can be used in a wide range of crops in varying environmental and climatic conditions.

High level of environmental performance: MATER-BI film biodegrades in the soil. At the end of the crop cycle mulching film does not have to be collected and disposed of, instead it is incorporated into the soil where it biodegrades, transforming into carbon dioxide, water and biomass.

Excellent economic and management savings in the crop cycle: MATER-BI mulching film generates savings as it does not have to be disposed of at the end of the crop and it also cuts the time required for crop management.

BIODEGRADABILITY IN THE SOIL

A biodegradable material for agriculture must be **biodegradable in the environment** it will be left in: **agricultural soil**.

MATER-BI mulching film is **OK Biodegradable Soil certified** by the Austrian certification TÜV institute.

OK Biodegradable Soil is a specific programme which guarantees the complete biodegradability of MATER-BI mulching film and the absence of toxic effects in the soil and in the environment.

In addition, MATER-BI mulching film complies with the principles on biodegradation and environmental impact laid down in International standards. (European standard UNI EN 13432:2002, UNI EN 14995:2007; American standard ASTM 6400:04).

Typical characteristics of MATER-BI mulching materials	Value	Method
Tensile strength (MPa)	20÷40	ISO 527-3
Elongation at break (%)	250÷500	ISO 527-3
Young modulus (MPa)	100÷300	ISO 527-3
Density (g/cm ³)	from 1,23 to 1,29	ASTM D792
MFR (g/10')	from 3 to 7	ASTM D1238

Find out more about MATER-BI for mulching: www.materbi.com

