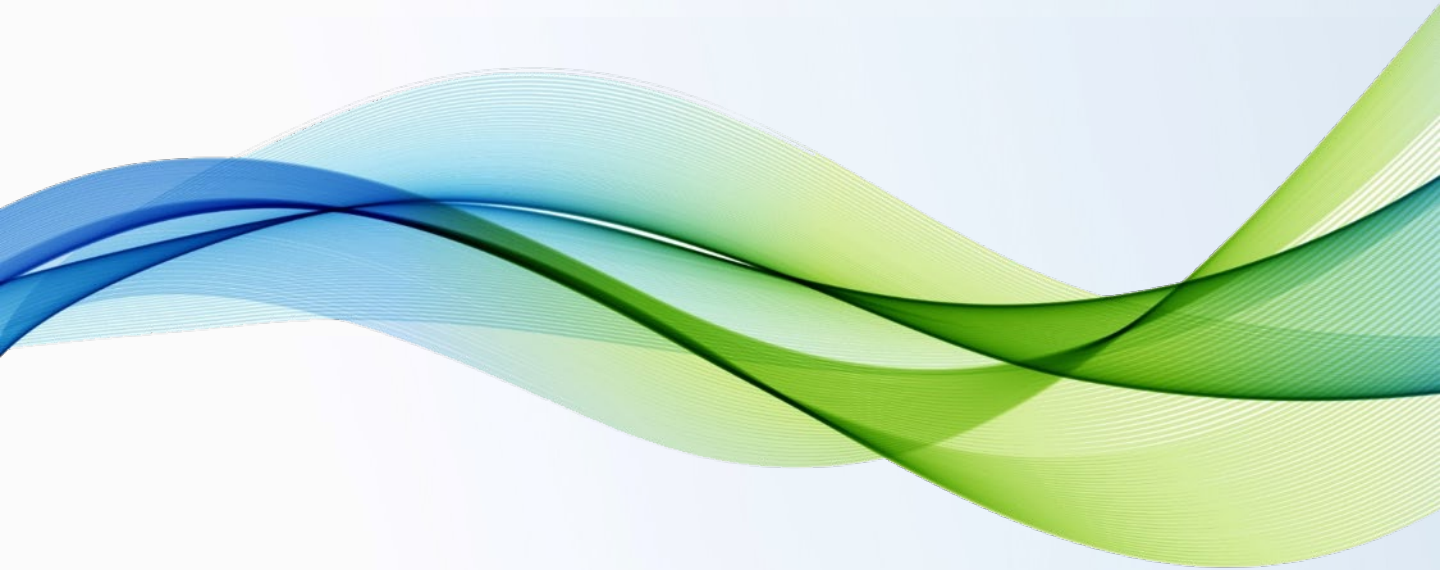


MEGH presents  
It's new sustainable technology  
product range



## MEGH - Products in harmony with the environment

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Through continuous technological progress, MEGH's range of waxes and emulsions is constantly being developed to meet the market's growing demands for ecologically sustainable materials. In line with this philosophy, MEGH focuses its efforts on developing products that are fully aligned with such environmental requirements.



### Environmental Management

Currently, our portfolio consists of waxes and emulsions that comply with ESG (Environmental, Social and Governance) principles in our various product lines:

- polyolefin waxes
- vegetable ester waxes
- natural ester waxes

Driven by the global shift in paradigms and adjustments in production methods to reduce environmental impact, MEGH began developing its product range in line with the most prominent principles on the market:

- Investment in projects with a reduced carbon footprint
- Use of carbon credits
- Use of recyclable raw materials
- Incorporation of biodegradable raw materials
- Creating biodegradable products
- More environmentally conscious production



2005	.....	Start of project to produce wax from sugar cane
2006	.....	
2007	.....	
2008	.....	Start of production of emulsions using ester wax technology CeraTec Indústria e Comércio (Porto Feliz - Brazil)
2009	.....	New polyolefin waxes (MPW brand) (MEGH Technology) Start of production of micronized waxes
2010	.....	New polyolefin wax plant (MPW brand)
2011	.....	Start-up of the pilot plant to produce wax from sugar cane
2012	.....	MEGH Indústria e Comércio (Porto Feliz - Brazil) Production of MPO oxidized polyolefin waxes (MEGH Technology)
2013	.....	
2014	.....	End of activities at the sugar cane wax pilot plant
2015	.....	
2016	.....	New natural and vegetable ester waxes (MEGH Technology)
2017	.....	Development of rice-based waxes
2018	.....	Development of natural/vegetable wax substitutes for Montan waxes (MEGH Technology)
2019	.....	
2020	.....	Development of sunflower-based waxes
2021	.....	
2022	.....	Development of waxes with ecological and ESG appeal
2023	.....	Ecowax line launched Work begins on ISO 14.001 certification



## MEGH – Ester waxes

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Using our innovative technology, MEGH has developed an extensive range of waxes from natural and vegetable sources.

This variety ranges from materials extracted directly from nature to esters with wax-like characteristics (SEW Technology), obtained through chemical reactions using raw materials of natural and vegetable origin.

### Vegetable ester waxes

Obtained directly from nature through meticulous extraction and purification processes.

- MEGH™ WAX SEW 350 - wax extracted from rice
- MEGH™ WAX SEW 370 - wax extracted from sunflower
- BIOWAX - wax extracted from sugar cane



### Vegetable ester waxes

Ester waxes obtained from the use of natural and/or vegetable raw materials, followed by a controlled esterification reaction in our units, followed by a thorough purification stage.

- MEGH™ WAX SEW 100 - ester wax substitute for carnauba wax
- MEGH™ WAX SEW 120 - modified rice ester wax
- MEGH™ WAX SEW 200 - ester wax substitute for beeswax
- MEGH™ WAX SEW 310 - ester wax substitute for Japan wax
- MEGH™ WAX SEW 400 - ester wax substitute for Candelilla wax

These are just a few of the waxes manufactured using our advanced "Ester Wax" technology.

These materials can be made available in various physical forms:



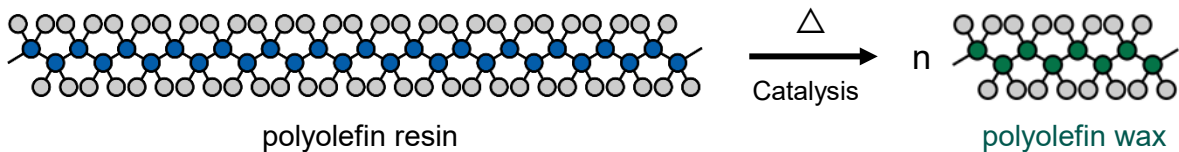
- Wax flakes
- Wax powder
- Micronized wax

For a more in-depth understanding of our SEW ester wax technology, scan the QR code and get immediate access to our specialized brochure on these materials.



In the traditional production processes for polyolefin waxes, be they polyethylene, oxidized polyethylene or polypropylene, the general rule is the polymerization of ethylene/propylene, resulting in different chain lengths for polyolefin waxes.

In MEGH technology, we take a different approach. Instead of starting with ethylene, we use a unique process of depolymerization (cracking) of PE and PP resins, resulting in waxes with carefully defined characteristics that are very similar to the materials created through polymerization.



Through this exclusive process developed by MEGH, it is possible to obtain PE/PP waxes with different molecular weights (Mw), densities, melting points, dropping points and softening points (ring ball). It also makes it possible to obtain their oxidized versions (facilitating the manufacturing of emulsions), including:

- LDPE waxes (MPW line)
- LLDPE Waxes (MPW Line)
- HDPE waxes (MPW Line)
- Homopolymer PP waxes (HPP Line)
- Oxidized LDPE Waxes (MPO Line)
- Oxidized LLDPE Waxes (MPO Line)
- Oxidized HDPE Waxes (MPO Line)

The MEGH waxes manufactured using this technology were subjected to Immediate Biodegradability tests, following the guidelines in OECD - Guideline for testing of Chemicals - 301B CO<sub>2</sub> Evolution Test - Ready Biodegradability - 1992.

**The result revealed a biodegradability rate of 100% in a maximum period of 20 days.**

MEGH waxes produced using this pioneering technology take materials that would originally take 100 to 200 years to degrade in nature and turn them into products that biodegrade in a very short time - up to 20 days.

**Despite the fossil origin of the raw materials, our process guarantees complete biodegradability, bringing substantial environmental benefits.**



**Fossil = Green**

**MEGH**  
ceras & emulsões

## MEGH - Micronized waxes

### Our expertise covers nanotechnology

MEGH operates its own wax micronization plant, located at our Porto Feliz plant in São Paulo.

This installation is very versatile, allowing the production of a wide variety of micronized materials for different markets and applications.

Using the aforementioned technology and using waxes of natural, renewable and biodegradable origin, MEGH is Able to generate a wide range of micronized waxes.



This technology translates into benefits for users of micronized waxes, as shown below:

MEGH®PRINT N line(natural/vegetable waxes)

- ✓ Rice Wax
- ✓ Sunflower Wax
- ✓ Carnauba Wax
- ✓ Ester Wax

MEGH®PRINT C or CPF line(PE waxes)

- ✓ LDPE
- ✓ LLDPE
- ✓ HDPE

MEGH®PRINT PM line (oxidized PE waxes)

- ✓ Oxidized LDPE
- ✓ Oxidized LLDPE
- ✓ Oxidized HDPE

MEGH®PRINT W line (PP waxes)

- ✓ PP Homopolymer



**With our own micronization plant, we have the capacity to produce tailor-made products, meeting our customers' specific needs precisely.**

## Ecologically sustainable emulsions and dispersions

In the context of our range of products with natural, renewable and biodegradable characteristics, MEGH stands out by producing a wide variety of emulsions and dispersions that incorporate these same properties, as detailed below:

### Emulsions

- LDPE Emulsions (MPO or Ecowax O)
- LLDPE Emulsions (MPO or Ecowax O)
- HDPE Emulsions (MPO or Ecowax O)
- Natural wax emulsions
  - ✓ Rice Wax
  - ✓ Sunflower Wax
  - ✓ Carnauba Wax
  - ✓ Ester Waxes



### Dispersions

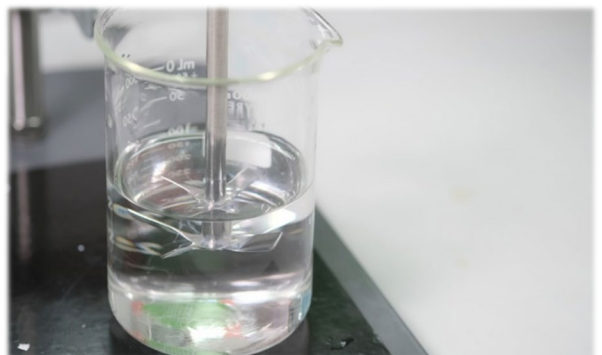
- PE dispersions
- Paraffin dispersions
- Acrylic-Ethylene Dispersions
- Natural wax dispersions



### Macro Dispersions



### Micro Dispersions





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