Seabird

RESEARCH AND DEVELOPMENT

MANUFACTURING OF

COMPOSTABLE AND INNOVATIVE

BIOPLASTICS

SEABIRD presentation

R&D design office and compounder of biosourced and compostable/biodegradable bioplastics

→ Reduce the impact of plastics on the environment

- Located in Larmor-Plage (Brittany)
- Founded in 2011
- 5 employees
- Production and formulation of bioplastic compounds

- Marine environment
- Cosmetic
- Hygiene
- Packaging

SEABIRD's Project History

2012 BIOFIMA Project
Objective: Development of a biodegradable monofilament for marine application
Duration: 48 months
Partner: Brittany region / IRDL laboratory
Link: https://cutt.ly/gyyjJvV

2014 SEABAC Project
Objective: Development of connected and compostable fishing crate. Solution for a circular economy.
Duration: 24 months
Partner: Brittany region
Link: p.15 https://cutt.ly/ayibGiz

2015: SEA®15$_6$

2016 COMPOSTABLE Oyster cup
Objective: Development of a new bioplastic formulation for the oyster farming field.
Duration: 24 months
Partner: Comité de la Conchyliculture du Poitou Charente
Link: https://cutt.ly/3yyj5tB

2016: SEA®11$_3$

2017 OCEANWISE Interreg Project
Objective: Study of EPS (expanded polystyrene) and XPS under natural conditions; analyze and study exciting recycling and alternatives process solutions in Europe and find alternatives materials to EPS (from biobased and compostable materials).
Duration: 36 months
Partner: 15 european partners
Link: https://cutt.ly/MyyjQos

2017: SEA®21$_2$

2018 COMPOSTABLE disposable Nonwovens
Objective: Development of a formulation for the use of bioplastic to disposable nonwoven applications
Duration: 36 months
Partner: Internal project, BPI funding

2018 COMPOSTABLE Fishing net Project
Objective: Development of compostable trammel fishing nets for the sole fishing
Duration: 24 months
Partner: French Biodiversity office, PNM EPMO, Nautic conseil.

2018 COMPOUNDING LINE Inauguration

2019 BIOTEXMED Project
Objective: Development of a formulation for the use of bioplastic nonwovens used in the medical field
Duration: 48 months
Partner: Paris hospital (AP-HP)
Link: https://cutt.ly/XyyklDs

2019 SEALIVE H2020 Project
Objective: Development of compounds for Oyster bags, rigid packaging and fishing gears applications.
Duration: 48 months
Partner: 24 european partners
Link: https://cutt.ly/dyykmYK

2020 FILALTIQ project
Objective: Development of a compounds for mussels net applications
Duration: 12 months
Partner: SMIDAP

And several others private project with industrial partners in: geotextile, rope, cosmetic, packaging …

Capillary rheometer

SEABIRD missions

Selection of bioplastics available on the market

- Biodegradable/compostable
- Biosourced (partially at least)

Formulation / Compounding of granules

- Blending of bioplastics
- Addition of mineral or vegetable fillers
- Addition of additives

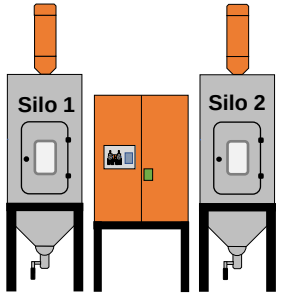
Production capacity of 200 tons per year

Transformation into finished products

- Transformers
- Industrials
- Partners

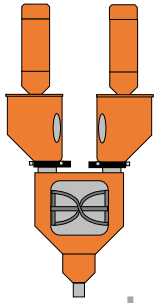
SEABIRD compounding technology

Drying system

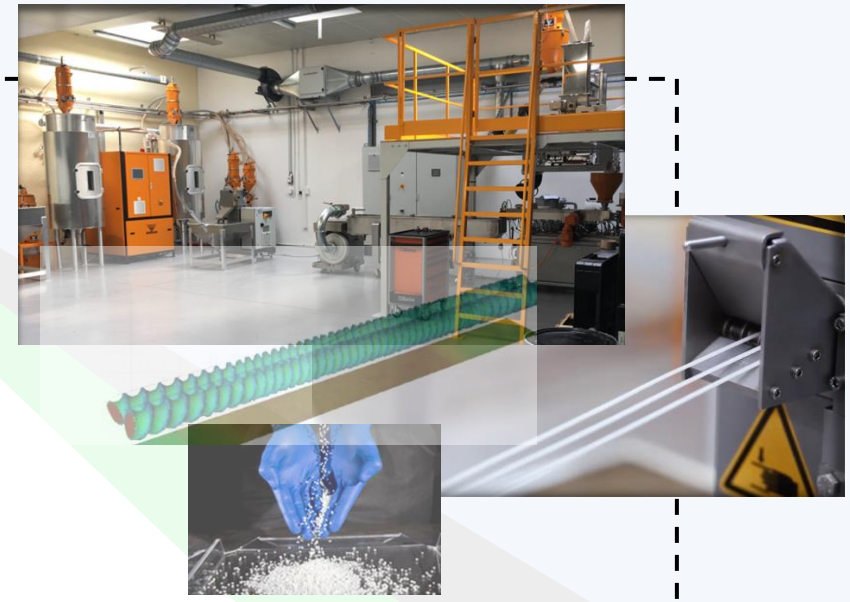


- Drying bioplastics before and after compounding

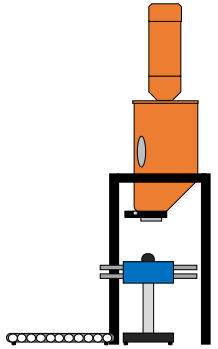
Blending system



- Blending of different bioplastic granules

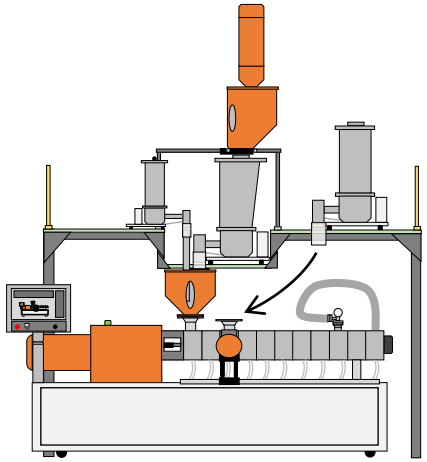


Packaging system



- Packaging on Bigbag of 150 kg or bag of 25kg
- Bag aluminum / polymer layer with under vacuum valve

Compounding system



- Compounding by corotative twin screws
- Specific screws design for bioplastics compounding
- Capacity to blend bioplastic resins with various additives and fillers (co-products)
- Compound materials in granule shape

Type of applications of compounds

Origin: 35% to 60% biobased

Use: 3 to 5 years

End-of-life: industrially compostable / biodegradable in the marine environment

SEA® I5 6

Oyster cups

SEA® 21 2

Fishing nets

SEA® I1 3

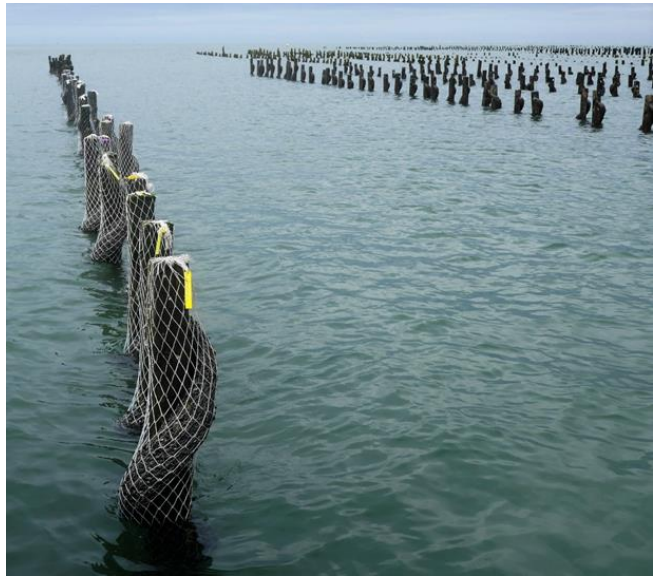
Fishing crates

Other types of applications

Oyster mesh bags

Multifilaments and nonwoven

Geotextile



Mussel nets

Rigid packaging