powerpack

GO 'FAST'
into producing your own bio resin

Dear

The market for biodegradable compostable packaging is growing worldwide with 15% to 20%. Both government regulation and environmental awareness of the consumer are pushing this new market and enhance new investments.

Worldwide the supply side of bio resins is controlled by a small group of producers with no or limited opportunities for (bag)convertors to improve their margins and become a significant player in this emerging market.

In order to counter this liability for you, **we are proud to introduce you to our FAST program**. **FAST will help you to Facilitate Access to Sustainable Technology!**

In close collaboration Powerpack nv (B) and Venus Machinery Ltd (TW) developed a new business model. We offer you a total new and proofed concept (machinery and technology) for your own production of certified (TÜV Austria) bio compostable, degradable raw materials, ready to use in your extrusion and converting department.

In this "teaser" presentation we describe you what we offer and explain you more about the business model.

For more information, don't hesitate to contact us.

Many thanks in advance for your professional feedback.

Your FAST-team,

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POWERPACK nv

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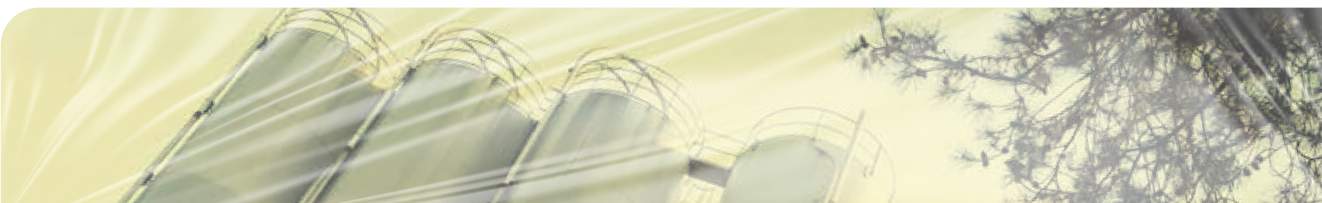
degrālia

Ecolene



F.A.S.T

Facilitate Access to
Sustainable Technology

produced with Ecolene

Have a quick look
on the production process

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powered by powerpack

What does the F.A.S.T-program mean?

Facilitate access to SME and big companies of bio technology by offering them: a total concept for the production of bio compostable, degradable raw materials

- feasibility study of the project
- a compounding line , fully configurated for production of our bio resins
- all needed guarantees of the machine producer, technical assistance and spare parts
- formulations
- TÜV certificates of our formulations
- set and start up
- integrate with your existing extrusion and converting department
- training staff
- easy access to new product developments
- use of our pilot plant in Beerse (Flanders)
- turn key projects to integrate compounding unit with your extrusion dpt

**Think global,
produce local!**

Partners

Powerpack nv
Venus Machinery Ltd

In a co-develop program:

- to develop and build a compounding co-rotating twin extruder for BIO formulations with an average output of 150 kg/hr of the certified Ecolene formulations and for which both partners are willing to exchange all existing know how, necessary for this project
- to create a special brand name for this type of machine(s): F.A.S.T-machinery
- to combine their existing commercial network, worldwide to promote and sell this product: both machinery and technology in one package deal

Potential markets

- Europe
- Turkey
- Middle East
- Asia
- Northern America
- South and Central America
- Oceania
- Africa

Roadmap to start-up production

- Sign NDA before starting negotiations
- Visit our pilot plant(s) for compounding and
- Converting
- Sign contract
- After first down payment, we start releasing confidential information (suppliers,...)
- Installment: 3 months after down payment

What do you need?

- Space for production unit: 250 sqm
- Height building: 4 meter
- E-power: max. 150 KwH
- Distilled water
- Closed water loop for cooling compounding unit
- Water connection for cooling strands
- Extraction pipe with ventilator to outside of building

Compounding

Blown film extrusion & inline converting

Converting

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Calculation model

- A tailormade calculation model to calculate the financial impact of the investment
- From starch to finished bag
- According to specific company and/or country related cost elements
- Different formulations possible

In this model the values for machinery and technology are hypothetical.
Exact sales values still have to be determined!

Assumptions

• Production capacity	0,15 MT/hour
• 1 shift	8 hours
• Production per shift	1,2 MT
• Working days per year	220
• Yearly production per shift	264 MT
• Administration cost	0 €/Year

Principles for cost calculation

• Shifts	3
• Yearly production	792 MT
• Electric power (max)	150 KwH
• Permanent use of power 75%	= 112,5 KWH
• Cost E-power	0,055 €/KwH
• Total cost E-power per shift	49,5 €

Total investment

• Compounder	400.000 €	Depreciation period: 5 years
• Dozing units	50.000 €	130.000,00 €
• Technology	200.000 €	
• Total cost	650.000 €	

Salaries

• 1 FTE	6000 €/year

Compounding cost

• Depreciation	164,14 €/MT
• E-Power	41,25 €/MT
• Salaries	22,73 €/MT
• Royalties PP	0 €/MT
• Administration	0,00 €/MT
• Packaging	0 €/MT
• Subtotal	228,12 €/MT
• Profit	0 €/MT

Total compounding cost

228,12 €/MT

All fields highlighted in green can be changed

Biobased Carbon Content 28%

Raw materials*			Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6		
	DDP Price	€/t	659,00	1.500,00	830,00	820,00	5.105,00	2.700,00		

Ecolene Pellets*			Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Total	Control
		€/t	184,52	105,00	4,15	24,60	25,53	1.647,00	1990,80	0,00
	Compounding	€/t							228,12	
	Total costs	€/t							2.218,91	0,00
	Gross margin	€/t							581,09	
		%							20,8%	
	EXW Sales pr	€/t							2.800,00	0,00
	Transport	€/t							0,00	
	DDP price	**€/t**							**2.800,00**	**0,00**

Profit ▶ **€ 581,09/ton**

Output/year ▶ **792 ton**

Gross Profit ▶ **€ 460.220,36/year**

Payback ▶ **1,41 year**

* More confidential information will be disclosed after signing an NDA

All fields highlighted in green can be changed

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T-shirt bags: Cost calculation model

• Raw Material Ecolene	2.218,91 €
• Extrusion without printing	237,00 €
• Printing	150,00 €
• Converting	232,00 €
• Recycling cost Waste Die Cut T-shirt bag	176,00 €
• Production waste	67,00 €
• Packaging	110,00 €
• Transport	113,00 €
• Subtotal	1.085,00 €
• Total cost price finished bags	3.303,91 €
• Profit	212,00 €
• Sales Price finished T-shirt bags	3.515,91 €

Remark: the individual cost price elements for extrusion and converting are different from company to company, from country to country

Delivery and payment conditions

- **Shipment machinery: 120 days after first downpayment**
- **Delivery terms: FOB**
- **Payment terms:**

  - 30% with signing contract
  - 60% before loading/shipment
  - 10% 30 days after installment

Not included: installation fee

- technician's round-trip ticket
- technician's local board and lodging
- technician's daily salary: USD 300 per day , working days start from the flight date until the date of arriving back home
- VISA fee
- transportation fee to and from the airport

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"Fasten your seat belts and get ready to start your own production of biopolymers"

For more information contact

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