



# NATURAL PINE BARK

## MADE IN PORTUGAL

Since the beginning, forest has inspired us.

And has been responsible for Alfarroxo Trading's know-how and heritage; for values such as reliability, investment on renewable resources; sustainability and environmental friendly practices.

This is our commitment: Return to nature the best of what nature gives us.



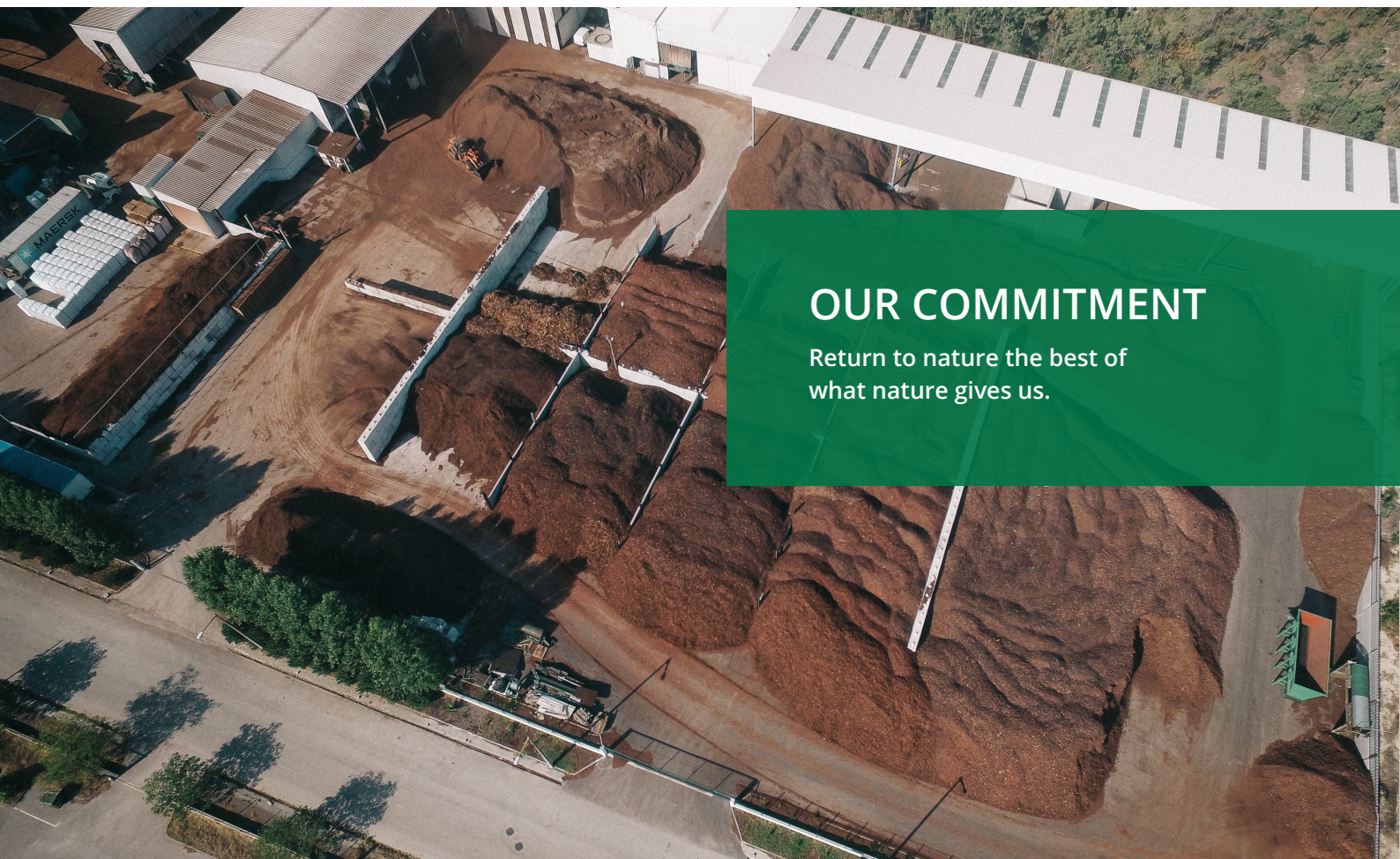
# THE COMPANY

In the early 40's, Alfarroxo Trading, a family owned company from Figueira da Foz, started its business. With a privileged location in the Centre of Portugal, where there is the largest amount of Atlantic maritime pine forest, a tree native to the Mediterranean region, Alfarroxo Trading could easily enhance its industrial and commercial activity of wood derived products.

**Its passion by forest, led Alfarroxo Trading to study and develop differentiating products, at the same time competitive and sustainable.**

Pine bark is 100% natural.

**Thanks to its innovative products and to the network formed over the years, Alfarroxo Trading became the biggest wood pine bark producer in Portugal.**



## OUR COMMITMENT

Return to nature the best of  
what nature gives us.



# PINE BARK APPLICATIONS

**Pine bark is a 100% natural product from the maritime pine (Pinus Pinaster), a tree native to the Mediterranean region.**

The maritime pine is one of the most important trees in the wood industry as, during its life cycle, it provides wood, pine cones, resin and of course, pine bark.

Originally considered a waste product, pine bark evolved from a landfill-destined product to a premium product used in agriculture, flower farming and landscaping.



## ALFARROXO PINE BARK ADVANTAGES

- › **100% natural** pine bark made in Portugal;
- › **Free** from pathogenic microorganisms, fungi and weed seeds;
- › Our pine bark **retain soil moisture**, reducing the frequency of watering and reducing water consumption;
- › **Protects** roots from frost and excessive heat;
- › **Regulates the PH of the soil** by improving the quality of plants;
- › Its **decorative element** highlights the green grass and colours in the flowers.



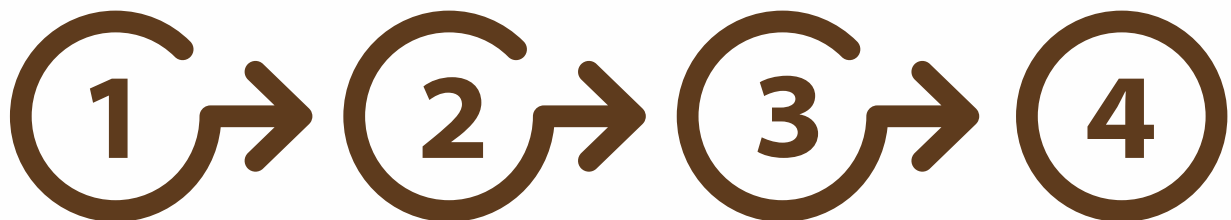
# THE PROCESS



Alfarroxo Trading has developed, over time, a commercial strategy based on market segmentation and product customization, so the calibration process shows an enormous flexibility to adapt to the demands or trends of the markets.

The whole process of manufacturing pine bark, unique throughout the world, has been improved over more than a decade of activity of Alfarroxo Trading.

The simplicity of the four phases hides numerous concerns and tasks that are important to ensure consistent quality throughout the process and total satisfaction of our customers.



**SUPPLIERS &  
RAW  
MATERIAL**

**HYGIENIZATION  
BY HEAT  
TREATMENT**

**QUALITY  
CONTROL &  
PACKING**

**EXPEDITION  
TO CLIENT  
ADDRESS**



# PHASE 1



## SUPPLIERS AND RAW MATERIAL TRANSPORTATION

Very early on, a set of parameters were defined regarding the conditions of pine bark parks which ensure the quality of raw material. Suppliers have been rigorously selected and parks periodically checked.

There is a strict control of transportation conditions, in order to prevent pine bark contamination.

On arrival, the pine bark is stored in appropriate boxes – dirty areas - away from the place where the final product is stored – clean area. Both areas have access restrictions.



## PHASE 2



Treatment chamber equipment and supervisory system are audited by the competent authorities to ensure maximum efficiency.

All the probes for temperature control are subject to calibration carried out by accredited laboratory, with biennial periodicity.



## HYGIENIZATION BY HEAT TREATMENT

Alfarroxo Trading created a task force, in partnership with official entities, to validate several options of sanitizing treatment.

This unique treatment, which Alfarroxo Trading has the patent, was approved by the European Commission with strong support from all countries.

The steam treatment process ensures a level of hygiene which enables pine barks use as agricultural product and orchid substrate free of fungi and bacteria.

This process is accomplished in accordance with the technical requirements defined and approved by the European Union Directive 2012/535/EU.



## PHASE 3



### QUALITY CONTROL AND PACKING

After heat treatment, the pine bark is directed to a sieve that uniformly collects different granulometry, ensures a perfect dust removal, and continues the pine bark screening, according to the quality standards required by the market. Then, pine bark is stored in clean and identified boxes.

Alfarroxo Trading also counts on modern automatic lines for pine bark bagging in different modalities, with its own brand or customer's brand.

When the pine bark treatment process complies with all the requirements, the product is certified with a phytosanitary passport and is ready for shipping.



# PHASE 4



## 4

### EXPEDITION TO CLIENT ADDRESS

When the pine bark treatment process complies with all the requirements, the product is certified with a phytosanitary passport and is ready for shipping.

Its excellent geographical location allows flexibility in the shipping alternatives and short-sea routes, where the container is the most used shipping method.

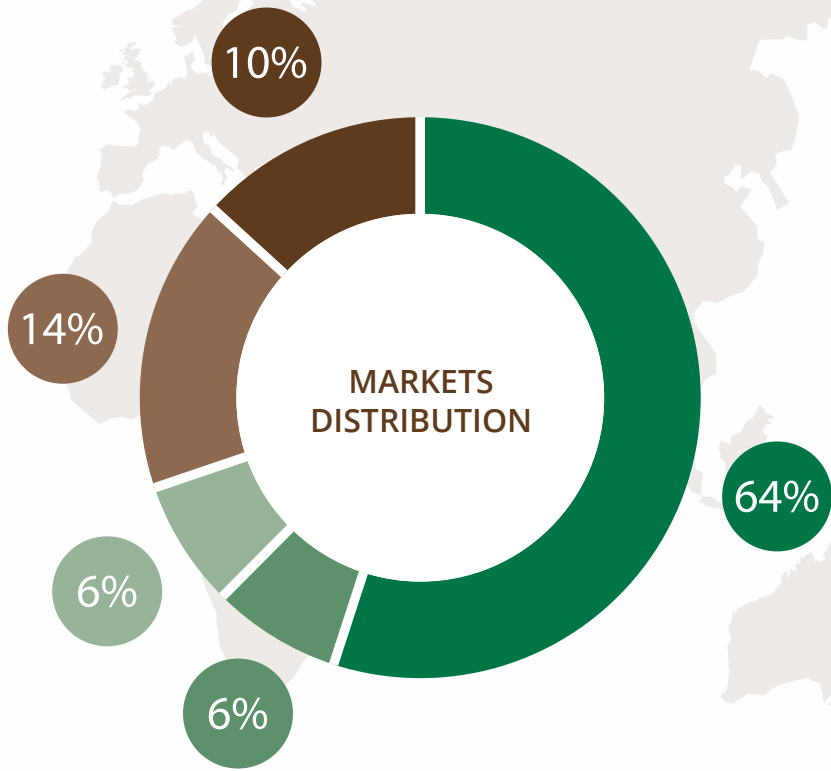
Depending on the point of discharge of the product, we always choose the fastest and most economical solution among a wide range of transport options that we have at our disposal.



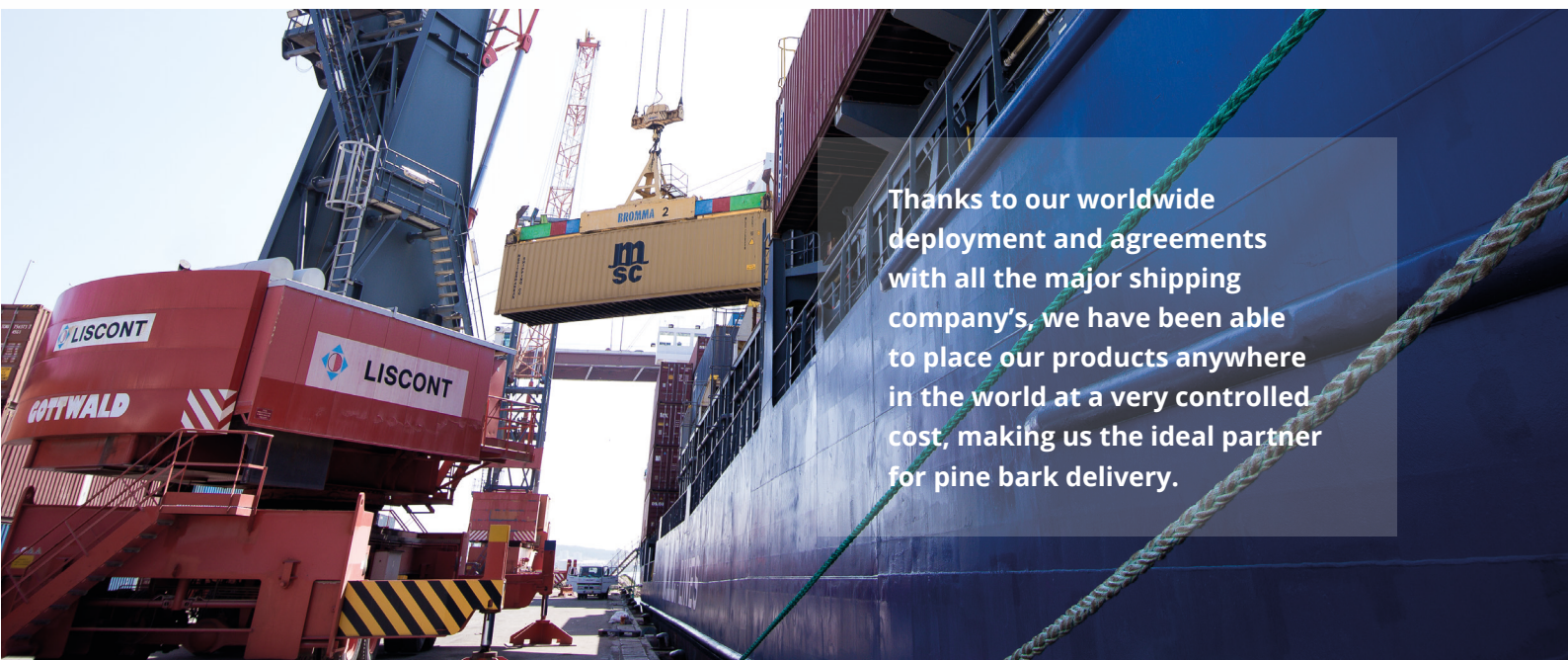
# EXPORTATION GROWTH

YEAR	VOLUME (CBM)
2006	42.686
2007	64.157
2008	80.128
2009	120.986
2010	125.842
2011	92.654
2012	93.652
2013	117.062
2014	140.606
2015	125.915
2016	149.043
2017	165.950*

\* Estimated



PORTUGAL 10% EUROPE 64% MIDDLE EAST 14% ASIA 6% NORTH AFRICA 6%



Thanks to our worldwide deployment and agreements with all the major shipping company's, we have been able to place our products anywhere in the world at a very controlled cost, making us the ideal partner for pine bark delivery.



# PRODUCTS & MARKETS

## Gardening for green areas

The global concern at the environmental level is based on water savings.

In this sense, the use of pine bark in outdoor spaces can contribute substantially to reduce the current level of irrigation.

In pursuit of this strategy, we have developed a product with adequate characteristics for coverage that guarantees the permanence of moisture in the soil for a longer period, as it avoids evaporation of water.

This bark for soil conditioner is a shell with high level of dedusting, properly sanitized and with 100% of purity.

The main advantage in its use is to hinder the growth of weeds and contribute to the maintenance of soil moisture, reducing the frequency of irrigation. In addition to these technical reasons, we would like to highlight its beauty.

### Available as:

Bag/Bulk	Brand	Fraction (mm/mm)	Capacity
Bag	Alfabark	15/25, 25/40, 25/75, 40/60	20L, 40L, 60L, 70L
Bag	"Client Bag"	15/25, 25/40, 25/75, 40/60	20L, 40L, 60L, 70L
Big Bag			1000L
Big Bale			2650L
Bulk	Container 40" HCPW	04/08, 08/12, 10/15, 12/18	24EP, 76CBM





# PRODUCTS & MARKETS

## Professional Market

**Our professional pine bark is mostly intended for professional horticulture.**

**Is widely used as raw material for orchid as part of a component in mixtures for instance in outdoor or cultivation of tree nursery stock.**

It results from a strict calibration and selection process which is also subject to our innovative hygiene process.

The bark is a hard and physically stable material so it brings durability, stability and water retention to the structures or mixtures.

Indeed, the involvement of Alfarroxo Trading in the professional sector requires a set of extraordinary procedures that control the factors of production from its origin in order to guarantee the required standard.



### MARITIME PINE BARK FOR ORCHIDS

This is a sustainable product of reliable and consistent quality that guarantees high performance.

This bark consists of a very low amount of elements like manganese. The process mainly involves the removal of cambium and weeds.

As a result, we have a bark of 100% purity.



### POT COVERING

Advantages using as Pot Covering:

- Keep moisture content in the pot decreasing the irrigation frequency (saving water);
- Makes difficult the development of weeds reducing maintenance and conservation costs;
- Values decorative aspect.



### BLUEBERRIES SUBSTRATE

We seek to monitor the development of trends in the agricultural sector on the world stage and in this way we see a steady growth in the production of red fruits. We are developing, together with an RHP accredited international organization, a suitable substrate for this culture with a high quality standard.



# PRODUCTS & MARKETS

## Professional Market

For the RHP certification for bark as raw material for substrates, our company is inspected concerning:

- Incoming raw material
- Steaming process by unique *RHP Bacillus* test
- Hygiene of the company
- Transport
- Registrations

For the RHP certification for bark as raw material for substrates, the products of Alfarroxo are very frequently analysed by an external laboratory concerning:

- EC, pH and nutrients
- Nitrogen fixation
- Heavy metals
- Purity
- Screening
- Organic matter
- Weeds
- Nematodes
- Human pathogens
- Unique growing trail for Orchids

For comparison, we present the advantages of using pine bark in comparison with other alternatives, eg: sphagnum moss

### Physically

- Is organic
- Is physical stable (not too soft)
- Can keep a bit of water but not too much

### Chemically

- Uncomplicated
- Practically inert
- pH neutral

### Phytosanitary

- Is steam sterilized so free of pathogens

### Justification why pine bark does not need to be composted

- It has already the right physical properties. When you compost bark there is a change that the air capacity is getting to low
- Composting to make it phytosanitary clean is not necessary it is steamed (from origin the bark of the *Pinus pinaster* hardly carries illnesses).

Generically speaking, our professional pine bark is mostly for orchid substrate and horticulture. (colocar o restante texto que já está no catálogo na seção "professional market")

The regular and periodical control of the physical, chemical and phytosanitary parameters assure an unique quality and add maximum value to your potting soil mixtures with Alfarroxo Trading products.

This is our business that our customers appreciate:

- It's organic additive and very uniform
- Improving the structure
- Reliable process and availability
- Renewable resource
- Sustainable process
- Delivery in time





# PRODUCTS & MARKETS

After processing various fractions remain from fine to coarse. **The goal is to achieve 100% purity bark.**

Fractioned bark holds less or more water depending on the fraction. The coarse fractions are used in professional orchid growers and are very "airy".

The air content increase strongly depends on the fraction distribution of the bark. The bark is a hard and physically stable material so it brings stability to structures of mixtures.

The best mixture is air content 40% to 45% and GBW (water in substrate) similar with 10% to 13%. The balance between these two factors results in an excellent orchid substrate.



## Fraction 03/06 mm

Smaller fraction used for small pots during early growth phase.

Bag/Bulk	Brand	Fraction (mm/mm)	Capacity
Bag	Alfabark	03/06	60L, 70L
Bag	"Client Bag"	03/06	60L, 70L
Bulk	Container 40" HCPW	03/06	24EP, 76CBM



## Fraction 06/09 mm

This fraction is more adequate for growers which like a bit more water buffer can choose for a smaller fraction. Due to water retention the cycle process will be minor and on the other hand, the flow of the residual water will be less.

Bag/Bulk	Brand	Fraction (mm/mm)	Capacity
Bag	Alfabark	06/09	60L, 70L
Bag	"Client Bag"	06/09	60L, 70L
Bulk	Container 40" HCPW	06/09	24EP, 76CBM



## Fraction 09/12 mm

With this fraction there will be a better drainage and higher air porosity. This fraction has greater stability.

Bag/Bulk	Brand	Fraction (mm/mm)	Capacity
Bag	Alfabark	09/12	60L, 70L
Bag	"Client Bag"	09/12	60L, 70L
Bulk	Container 40" HCPW	09/12	24EP, 76CBM



## Fraction 13/18 mm


Traditionally this is the most common fraction within the orchid growers because it assures a homogenous substrate and it's easier to mix with other products improving the structure. This fraction is mostly used to increase air content.

Bag/Bulk	Brand	Fraction (mm/mm)	Capacity
Bag	Alfabark	13/18	60L, 70L
Bag	"Client Bag"	13/18	60L, 70L
Bulk	Container 40" HCPW	13/18	24EP, 76CBM



# COMPANY CERTIFICATIONS

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Alfarroxo Trading is synonymous of high quality products and unmatched service and logistics which gave the company the preference of customers all over the world.

Throughout its long years of activity, the processes and products of Alfarroxo Trading are constantly recognized and evaluated by European entities that regulate the substrate sector.

At the external level, we are an active member of RHP, an organization that regulates the control of the entire production and transportation process in order to guarantee the quality of the raw material. Its criteria are based on chemical, physical and pathogenic characteristics.

The RHP quality mark guarantees the quality of the product in the chain from extraction till processing at the grower. The production site, the operating process, storage facilities and logistic processes are monitored as well the product.

In addition, we integrate the German Competence Center "Gütezeichen Substrate für Pflanzen" - GGS, which ensures and certifies the pine bark standard as well as, the integrity of the product in accordance with all technical requirements.

Finally, we are a member of the FSC and PEFC groups, taking on the commitment to implement and manage the chain of custody in accordance with the requirements of the FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification). These commitments reveal the assumption and responsibility of the product from the forest to the final consumer.



The mark of responsible forestry  
Only the products that are identified as such in this document are FSC® certified



In order to conclude, we present a main reason justifying that is Alfarroxo Trading adopting an FSC and PEFC policy.

The Forest Stewardship Council (FSC) and PEFC (Program for the Endorsement of Forest Certification Schemes) are independent and global organizations that promote sustainable forest management through forest certification.

These certifications are based on the control of products with a forest origin, that is, they originate in forests with sustainable forest management, recycled sources and / or controlled sources being the product controlled from its origin until it reaches the final consumer passing through all intermediate stages of transformation.

The purpose of these certifications is to make all stakeholders and final consumers aware of the value of forest preservation and ensure its sustainability for future generations.

Being Alfarroxo Trading a company directly linked to the forestry sector, it makes all the sense of the promoters of this vision related to a forest management and its sustainability.







### Rui Pedro Oliveira

📞 +351 967 052 056  
✉️ rui.pedro@alfarroxo.com  
📍 Parque Industrial da Gala  
Rua das Acácias, Lote 10/14  
3090-380 Figueira da Foz  
Portugal

📞 +351 233 426 384  
📞 +351 233 426 386  
🌐 [www.alfarroxo.com](http://www.alfarroxo.com)

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