M·A·SILVA

Premium Cork Stoppers

Naturally about technology

M·A·SILVA
Premium Cork Stoppers

Between nature and technology

In 2022, we celebrate 50 years of technological leadership. 50 years embracing nature with the best technology, which contributes to the maximum quality of the cork stoppers we deliver.

At M.A.SILVA, quality has always been, and continues to be, our North. It dictates our path, our choices and our investments in Research, Development & Innovation. All so that our cork stoppers are naturally the best, those that contribute most efficiently to the preservation and evolution of wines and sparkling wines.

It all starts in Alentejo, in the cork oak forest we manage, with the dedication of those who look after their greatest asset. This is where the quality of our cork stoppers is born, and it is at our Raw Material Centre, in Alter-do-Chão, that we select the best raw material, naturally.

Only the best cork travels from here to our production centres. The one that allows us to ensure the quality of our production process, with a guarantee of non-detectable TCA.

Our technology portfolio is vast and includes cutting-edge technologies internationally recognised and awarded by leading bodies in the cork industry.

Each one, with its own characteristics, naturally brings its benefits to the cork stoppers it processes. When these cork stoppers are subjected to different technologies, the result is naturally even better.

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At M.A.SILVA, we have naturally been technological leaders since 1972.

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ONEBYONE®

Premium Individual Cork Testing Technology

Individual stoppers analysis

The revolutionary ONEBYONE® technology enables the individual analysis of natural cork stoppers, through a fully automated process, which reveals our maximum commitment to the performance and quality of premium cork stoppers.

The process works through a gas-phase spectroscopy system, and inspects cork stoppers one by one, in order to detect traces of TCA*.
This technology is associated with the 'Bottle buy back commitment' guarantee, which ensures reimbursement of the value of the bottle at retail price, if after analysing the wine and the stopper, at the M.A.SILVA laboratory, TCA ≥ 0.5 ng/L derived from the stopper is detected.

*Releasable TCA content below the quantification limit of 0.5 ng/l; analysis carried out according to ISO 20752.

Benefits and characteristics

- Individual stoppers analysis (One by One)
- State-of-the-art gas-phase spectroscopy technology for TCA detection
- Fully automated process
- Award-winning technology
- 5-second analysis per stopper

Stoppers that use this technology:
NATURAL Stoppers

ONEBYONE 1BY1 BOTTLE BUY BACK COMMITMENT

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NEOTECH®

Premium Cork Granules Sterilization Technology

Sterilisation and vaporisation of granules

The NEOTECH® technology is the most recent innovation by M.A.SILVA, and has revolutionised the market for technical stoppers, through a continuous and automatic process which uses controlled steam and pressure to expel TCA and other volatile compounds from the cork granules.

It is used to guarantee high quality in SILKTOP® stoppers and Sparkling Wine stoppers, as well as in micro-agglomerated NEO® stoppers.

All granules come from carefully selected raw materials at the raw material centre, located in the heart of Alentejo.

Advantages of the technology

No mechanical intervention
- Granules are shifted through vibration.
- Natural elastic memory of the granules.

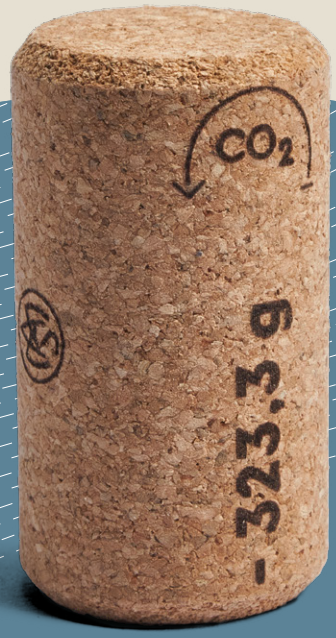
Ecological and sustainable
- No chemical solvents;
- Use of controlled pressure and steam.

The granulate is treated with fluidised bed technology for molecular interaction with the gaseous substance.
- The gaseous flow goes through and involves all the cork particles, thus creating conditions for rapid mixing, turbulence and sterilisation.
- Highly optimised TCA removal, to ND levels.

Uniform granules
- Functional treatment in various granule sizes;
- Consistency and natural appearance of the granules preserved without cellular destruction.

High mass and heat transfer
- Product consistency;
- Improved effectiveness and technical performance of the final product.

Rehumidification and treatment cycles
- Humidity is under constant monitoring;
- Physical performance of the granules is ensured.



Stoppers that use this technology:
VIVA® Sparkling Wine Stoppers
SILKTOP® Technical Stoppers
NEO® Micro-Agglomerate Stoppers

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DYNAVOX®
Premium Cork Boiling Technology

Sterilisation and vaporisation of the raw material

The DYNAVOX® technology allows the sterilisation and vaporisation of the raw material.

All our raw material is subject to intense steam and pressure and submerged in clean water, through our DYNAVOX® system, so as to remove any unwanted substances from the innermost part of the cork. The process guarantees the elimination of microorganisms without using chemicals.

Using the DYNAVOX® technology, anisoles such as TCA are reduced, along with other odour-causing compounds, as well as tannins and anisole precursor phenols, increasing the thickness and elasticity of the cork.

Advantages of the technology

Increased tca removal capacity
The boiling is done under pressure, at 105°C. It penetrates the cork structure, drags and volatilises TCA, as well as other anisoles and phenols.

TCA is constantly removed during boiling
If the steam contains TCA, it is removed by degassing during the one-hour boiling cycle.

The cork stabilisation period is short and safe
After the boiling process, cork planks are removed with around 17% moisture content. This significant reduction in residual humidity allows for the stabilisation period to be shortened from two weeks to two days.

Water filtration and continuous monitoring
Water is filtered by a 100-micron filtration system. The DYNAVOX® system continuously measures the pH of water, to monitor the level of tannins.

Stoppers that use this technology:
NATURAL stoppers
VIVA® Sparkling Wine Stoppers
SILKTOP® Technical Stoppers
NEO® Micro-Agglomerate Stoppers
EVACORK® Colmated Stoppers

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SARA ADVANCED®

Premium Cork Volatiles Extraction Technology

Extraction of volatiles and sensory uniformity

The SARA ADVANCED® technology allows the extraction of volatiles and sensory uniformity. This is one of the most advanced sterilisation technologies on the market. It serves to improve performance and quality in the post-punching process. The SARA ADVANCED® technology uses the elastic memory of cork, allowing steam to penetrate the pores and eliminate TCA and other possible phenols during the production process and as the cork expands.

Advantages of the technology

Pore dilation
Using the elastic memory of cork, which allows the volatilisation and extraction of unwanted compounds through controlled steam.

Drastic reduction in TCA
Use of pressurised steam to volatilise TCA and other phenols.

Safe, continuous and automatic process
Dry steam extraction avoids any risk of cross-contamination by microorganisms, while maintaining an optimal moisture content to facilitate the production process.

Stoppers that use this technology:
NATURAL stoppers
VIVA® Sparkling Wine Stoppers
SILKTOP® Technical Stoppers

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MASZONE®
Premium Cork Granules Washing Technology

Sterilisation and elimination of microorganisms

The MASZONE® technology enables the sterilisation and elimination of microorganisms. It is used in the production process of all cork stoppers - natural and technical - produced and marketed by M.A.SILVA. All our cork stoppers are subject to a washing and sterilisation process, which uses not only ozone but also the most powerful peroxone, a combination of ozone and hydrogen peroxide, to disinfect and clean cork stoppers.

Advantages of the technology

Eliminates microorganisms and spores
3.000 times faster than chlorine.

Inhibits the development of TCA
Finished stoppers are sterile from microorganisms.

No residue
Ozone rapidly breaks down into inert oxygen molecules.

Improves the capillarity of the stopper, facilitating bottling
The cleaning and washing system reaches the cork's pores.

Improves the appearance of cork
Allows better quality printing of the customer's branding and a more uniform surface.

Stoppers that use this technology:
NATURAL stoppers
VIVA® Sparkling Wine Stoppers
SILKTOP® Technical Stoppers
NEO® Micro-Agglomerate Stoppers
EVACORK® Colmated Stoppers

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SARAADVANCED®

ONEBYONE®

NEOTECH®

MASZONE®

DYNAVOX®

+

In all our choices, we naturally guarantee the best.

M·A·SILVA
Premium Cork Stoppers

Naturally rigorous from start to end

At M.A.SILVA, we guarantee the total verticalisation of the production process, through a demanding and rigorous circuit which includes different stages, depending on the cork stoppers to be produced: natural stoppers or technical stoppers.

Full control of the production process represents two major advantages for the customer, naturally related to the quality of the cork stoppers:
. Traceability of the best cork;
. Quality control, from the cork oak forest to final delivery.

Our production process

Naturally we embrace nature with the best technology

ONEBYONE®
Individual cork testing

NEOTECH®
Sterilisation and vaporisation of granules

DYNAVOX®
Raw material sterilization and vaporization

SARA ADVANCED®
Extraction of volatiles and sensory standardization

MASZONE®
Elimination of microorganisms

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Production Flow

	NATURAL | EVACORK®	VIVA.2® | VIVA.1® SILKTOP® SILKTOP ADVANCED®	NEO PLUS® | NEO PRESTIGE® NEO II® | VIVA NEO PLUS® VIVA NEO PRESTIGE®
RAW MATERIAL	**CORK OAK STRIPPING** [Cork planks are stripped from cork oak trees.]	**CORK OAK STRIPPING** [Cork planks are stripped from cork oak trees.]	**CORK OAK STRIPPING** [Cork planks are stripped from cork oak trees.]
	GC / MS TCA CONTROL	**GC / MS TCA CONTROL**	**GC / MS TCA CONTROL**
	YARD STABILIZATION [Planks are stored from 6 to 9 months on a concrete floor.]	**YARD STABILIZATION** [Planks are stored from 6 to 9 months on a concrete floor.]	**YARD STABILIZATION** [Planks are stored from 6 to 9 months on a concrete floor.]
	BOILING | DYNAVOX® SYSTEM [Planks are sterilized and disinfected through a vaporized pressure system.]	**BOILING | DYNAVOX® SYSTEM** [Planks are sterilized and disinfected through a vaporized pressure system.]	**BOILING | DYNAVOX® SYSTEM** [Planks are sterilized and disinfected through a vaporized pressure system.]
	GC / MS TCA CONTROL	**GC / MS TCA CONTROL**	**GC / MS TCA CONTROL**
	STABILIZATION AFTER BOILING [Stabilization period after vaporization]	**STABILIZATION AFTER BOILING** [Stabilization period after vaporization]	**STABILIZATION AFTER BOILING** [Stabilization period after vaporization]
	CORK PLANKS SORTING FOR PRODUCTION [First sorting of planks for production]	**CORK PLANKS SORTING FOR PRODUCTION** [First sorting of planks for production]	**CORK PLANKS SORTING FOR PRODUCTION** [First sorting of planks for production]
PRODUCTION	**CORK PLANK CUTTING** [Planks are cut into strips]	**GRINDING** [Cork granule production process]	**GRINDING** [Cork granule production process]
	PUNCHING [Punching of cork strips]	**STERILIZATION | NEOTECH® SYSTEM** [Cork granules are vaporized and sterilized]	**STERILIZATION | NEOTECH® SYSTEM** [Cork granules are vaporized and sterilized]
	STERILIZATION | SARA ADVANCED® SYSTEM [Natural cork stoppers are vaporized and sterilized]	**GC / MS TCA CONTROL**	**GC / MS TCA CONTROL**
	PRE-DRYING [First moisture level definition]	**AGLOMERATION** [Production of agglomerated bodies]	**AGLOMERATION** [Production of agglomerated bodies]
	GC / MS TCA CONTROL	**GC / MS TCA CONTROL**	**GC / MS TCA CONTROL**
	CORRECTION OF SIZES [Precise correction of corks sizes]	**DISC PRODUCTION** [Thinner strips of cork are punched for disc purposes]	
	ELECTRONIC GRADING | 2D AND 3D [First electronic sorting to determine visual classes.]	**ELECTRONIC GRADING | 2D AND 3D** [Electronic sorting to determine visual classes of the discs.]	
	WASHING | MASZONE® SYSTEM [Washing and sterilization]	**STERILIZATION | SARA ADVANCED® SYSTEM** [Cork stoppers are vaporized and sterilized]	
	GC / MS TCA CONTROL	**GC / MS TCA CONTROL**	
	DRYING [Final moisture definition]	**GLUING** [Assembly of agglomerated bodies and discs with grade glue]	
	ELECTRONIC GRADING | 2D AND 3D [Second electronic sorting to determine visual classes.]	**GC / MS TCA CONTROL**	
	MANUAL SORTING [Final visual grading control]	**CORRECTION OF SIZES** [Precise correction of corks sizes]	**CORRECTION OF SIZES** [Precise correction of corks sizes]
		DUSTING DOWN	**DUSTING DOWN**
		WASHING | MASZONE® SYSTEM [Washing and sterilization]	**WASHING | MASZONE® SYSTEM** [Washing and sterilization]
		GC / MS TCA CONTROL	**GC / MS TCA CONTROL**
		DRYING [Final moisture definition]	**DRYING** [Final moisture definition]
		ELECTRONIC GRADING | 2D AND 3D [Electronic sorting to determine visual classes.]	**ELECTRONIC GRADING | 2D AND 3D** [Electronic sorting to determine visual classes.]
CUSTOMIZATION AND PACKAGING	**PRINTING** [Customized printing on stoppers]	**FINAL TREATMENT** [To facilitate the bottling process]	**GC / MS TCA CONTROL**	**PACKAGING** [According to specifications]

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Naturally Better