

TECHNOLOGICAL CLOSURE: THE IDEAL CORK!



For many years, the cork closure has been the least bad option for closing a bottle of wine. It has of course played an important role and continues to do so. However, it's not an entirely problem-free way of preserving wine.

In the early 80s, Laurent Ponsot started to look for an alternative to cork closures.

His first idea was to identify the perfect cork closure in terms of density, elasticity and porosity. These are the three most important factors and yet they can vary enormously from one cork to another.

After more than ten years of research, analyses and tastings, the perfect closure was born and the values of these three factors were identified to simply try and copy them.

Technological advances at the end of the twentieth century made this possible and the company Guala, now Ardea Seal, is in charge of producing these technological closures.

Now a reality, Laurent Ponsot SAS uses the closure on all its bottles.

It reacts exactly like a cork closure to heat and cold, it lets the wine breathe, it prevents it from leaking, it protects it, and so on. Say goodbye to corked wines and variations between two bottles after ageing. It's no longer necessary to lay bottles on their side to keep the cork moist. And although made of polymer, it's completely recyclable... in short, our closure has all the qualities of a natural cork, but without the drawbacks!

Furthermore, our closure offers the same bottle opening ritual and is extracted with a traditional corkscrew, producing the usual "pop". NB: make sure that the screw of your opener penetrates the shield for perfect extraction.

The stopper can be repositioned by placing it in the mouth of the bottle and pressing down to insert it.

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One of the most controversial subjects of modern winemaking, and one that's becoming increasingly important, is the gas permeability of the different closures available on the market, and more particularly the identification and control of the oxygen being transferred from outside to inside the bottle.

The major problem, and one which is unresolved by conventional synthetic alternatives (extruded, co-extruded or injection moulded closures) is the elongation of the cork over time once positioned in the neck of the bottle.

The radial thrust exerted by the cork along the length of the bottle neck and which acts as a seal against gases, gets weaker and weaker over time. This results in high and dangerous levels of oxygen passing through the closure system.

The closure concept we use has an internal frame made from a rigid technical polymer with high mechanical resistance, combined with an expanded thermoplastic elastomer on the outside, and this gives the closure a structure that prevents any elongation, whether due to the bottling phase or its prolonged presence in the neck of the bottle.

In this way, we eliminate the gradual loss of interference between the cork and the neck of the bottle, and the increased exchange of gases caused by elongation, which would lead to premature oxidation of the wine.

After completing numerous studies on the structure of this type of cork and its effects, the Ardea Seal closure now guarantees low levels of oxygen exchange falling within a very narrow range from 0.009 to 0.018 cm³ of oxygen per 24 hours. The difference between these two values is mainly due to variations and imperfections in the internal profile of the bottle necks.

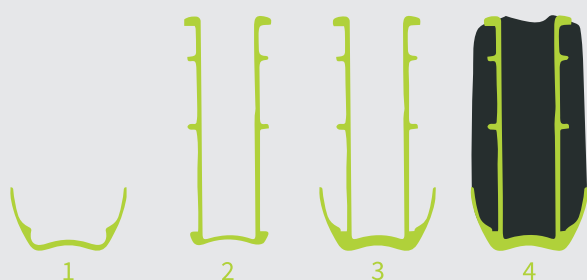
It is now recognised that contamination by molecules from the TCA family and certain moulds are a known problem for natural cork, whereas alternative closures offer high levels of chemical inertia.

In order to further improve this inertia and provide complete protection for the wine, a special kind of shield has been added to the Ardea Seal closure. Made from a technical polymer chosen for its high levels of chemical inertia, it provides a complete barrier against any type of compound getting into the wine.

The same material is used in the manufacture of artificial hearts.

Oenology laboratories have subjected the product to the most stringent long-term ageing and oxygen measurement tests. All tests have been conducted in comparison with natural corks. The results in favour of the Ardea Seal are excellent both in terms of the properties it offers and their consistency.

We therefore have the scientific proof that this closure has the same capacities as a hypothetical ideal natural cork closure with a view to very long-term ageing.



1. Shield

Function: element in contact with the wine and modulator of oxygen permeability
Material: technical polymer with total chemical inertia

2. Frame

Function: rigid support and bracing element
Material: highly rigid technical polymer

3. Assembled frame and shield before moulding of the body

4. In grey, the body of the closure is moulded around the frame
Function: element providing interference with the glass and interaction with the corkscrew
Material: thermoplastic elastomer



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