

Bi-Bung

An innovative concept of bung to allow the Reduction of contamination during barrel ageing

Variation of haloanisole component in wine between Bi-Bung and Silicon Bung

Haloanisoles Bung types	TCA •ng.L ⁻¹	TeCA •ng.L ⁻¹	PCA •ng.L ⁻¹	TBA •ng.L ⁻¹
Silicon 1	3,2	nd*	0,7	0,5
Silicon 2	2,4	nd*	0,9	0,6
Silicon 3	1,3	nd*	0,8	nd*
Moy. Silicon	2,3	nd*	0,8	0,36
Bi Bung 1	0,8	nd*	0,9	nd*
Bi Bung 2	0,8	nd*	0,8	nd*
Bi Bung 3	0,7	nd*	0,8	nd*
Moy. Bi Bung	0,77	nd*	0,83	nd*

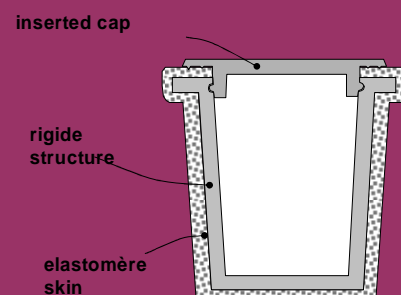
nd*: not detected

Conclusion:

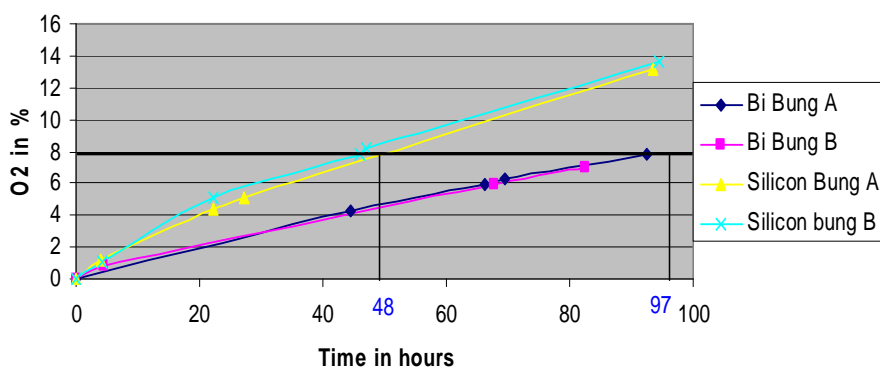
A Bi Bung exposed to a TCA contaminated environment releases on average 3 times fewer contaminating molecules than an equivalent silicon bung. The values measured on silicon bungs are very heterogenous. The inertia levels recorded for the Bi Bung are 3 or 4 times higher.

Bi Bung is a bung made by injecting two thermoplastic materials:

- a thermoplastic providing the structure of the bung and ensuring its rigidity
- a supple elastomer super-injected over the outer surface of the bung structure, ensuring its tight sealing with the rim of the barrel hole



Variation in oxygen concentration (in %) over time



Results:

Two series of measurements are carried out with the Bi Bungs and two series with the silicon bungs. The changing values of oxygen concentration are displayed in the graphic below.

