

TECHNICAL SPECIFICATIONS (a)

METHOD	PARAMETERS	SPECIFICATIONS				TOLERANCES
		DIAM 1	DIAM 3	DIAM 5	DIAM 10	
<b>ORGANOLEPTIC CHARACTERISTICS</b>						
Soak test in 12% hydro-alcoholic solution acidified to pH 3.5 / 25 corks SPME/GC/MS	2,4,6-TCA releasable (ng/L)	≤ QL (b)	≤ QL (b)	≤ QL (b)	≤ QL (b)	
	2,3,4,6-TeCA releasable (ng/L)	≤ QL (b)	≤ QL (b)	≤ QL (b)	≤ QL (b)	
	PCA releasable (ng/L)	≤ QL (b)	≤ QL (b)	≤ QL (b)	≤ QL (b)	
	2,4,6-TBA releasable (ng/L)	≤ QL (b)	≤ QL (b)	≤ QL (b)	≤ QL (b)	
<b>DIMENSIONAL CHARACTERISTICS</b>						
Calliper gauge / 32 corks Diam 1 : L : 38/44 mm Ø : 23,5/24,5 mm	Length (mm)	L ±0,4	L ±0,4	L ±0,4	L ±0,4	NQA 1,5 (A1/R2)
	Diameter (mm)	D ±0,3	D ±0,3	D ±0,3	D ±0,3	NQA 1,5 (A1/R2)
Diam 3 : L : 38/44 mm Ø : 23,5/24,2 mm	Chamfer (mm)	2,0 ±0,5	2,0 ±0,5	1,0 ±0,5 (P. Low)	1,0 ±0,5	NQA 2,5 (A2/R3) (c)
				2,0 ±0,5 (P. Medium)		
<b>PERMEABILITY</b>						
Manometric internal methodology (8 corks) (d)	OTR ratio (Oxygen Transfer Rate) (cm <sup>3</sup> /day)	Diam 1 / 3 / 5 : ratio to choose from = 0,15 (Low) / 0,35 (Medium) Diam 10 : ratio = 0,07 (Very low)				
MOCON method	OTR ratio (Oxygen Transfer Rate) (cm <sup>3</sup> /day)	Diam 1 / 3 / 5 : ratio = 0,0008 or 0,0019 Diam 10 : ratio = 0,0004				
<b>PHYSICAL CHARACTERISTICS</b>						
4 jaw corks / 5 corks	Dimensional recovery / 30sec. (%) (e)	≥ 90 %	≥ 96 %	≥ 97 %	≥ 97 %	NQA 2,5 (A0/R1)
Traction compression machine / 5 corks	Elastic recovery (N/cm <sup>2</sup> ) (e)	> 1,6	> 2,2	> 2,5	> 2,8	NQA 2,5 (A0/R1)
Calibrated tubes / 6 corks	Liquid tightness (%) (e)	100% > 1,5 bar	100% > 1,5 bar	100% > 1,5 bar	100% > 1,5 bar	
On CETIE bottle neck / 5 corks	Extraction force (daN)	15 < 100% < 35 (f)	18 < 100% < 35 (f)	18 < 100% < 35 (f)	20 < 100% < 40 (f)	
By stirring and filtering / 4 corks	Dust content (mg/bch)	≤ 0,3	≤ 0,3	≤ 0,3	≤ 0,3	
By titration / 4 corks	Residual peroxide (mg/bch)	≤ 0,1	≤ 0,1	≤ 0,1	≤ 0,1	
<b>THE ABOVE TECHNICAL SPECIFICATIONS ARE VALID</b>		<b>24 months</b>	<b>36 months</b>	<b>60 months</b>	<b>120 months</b>	

They comply with FDA standards (CFR21 code) and 2002/72/CE and 94/62/CE European regulations.

(a) The above specifications assume compliance with manufacturer's bottling and storage guidelines.

(b) QUANTIFICATION LIMIT (QL): the quantification limit by SPME/GC/MS is 0.3ng/L for TCA, it is 1ng/L for TeCA and PCA and it is 2ng/L for TBA. This is an indicative value based on internal methodology, available upon request.

(c) ACCEPTABLE QUALITY LEVEL (AQL): A2/R3 implies that for 32 corks tested: the batch is accepted if a maximum of 2 corks only, show results outside our specifications and the batch is refused if 3 or more corks show results outside our specifications.

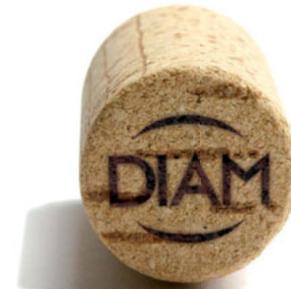
(d) Internal methodology, available on request.

(e) The follow up frequency of this parameter is established in order to regularly evaluate our production batches.

(f) Values are established for corks with a diameter between 23,9 and 24,5 mm (length = 44 mm) with a silicone-based surface treatment.

DIAMANT, an DIAM BOUCHAGE / CEA technology (PATENT EP 1 216 123 B1).

# The guardian of aromas



Guaranteed without cork taint

and other flavour modifying factors

Tailored permeability

to match every wine's requirements

Batch consistency

Identical ageing from one bottle to the next



The nobility of cork

Consumers love cork best

Eco-accountable manufacturing

Environment-friendly

Protects flavour and aroma



diam-cork.com

## Revolutionary technology.

DIAMANT®  
technology

It took 7 years of research to apply supercritical CO<sub>2</sub> technology to cork and giving rise to DIAMANT® technology, a proprietary cork cleaning process.

### Guaranteed without cork taint.

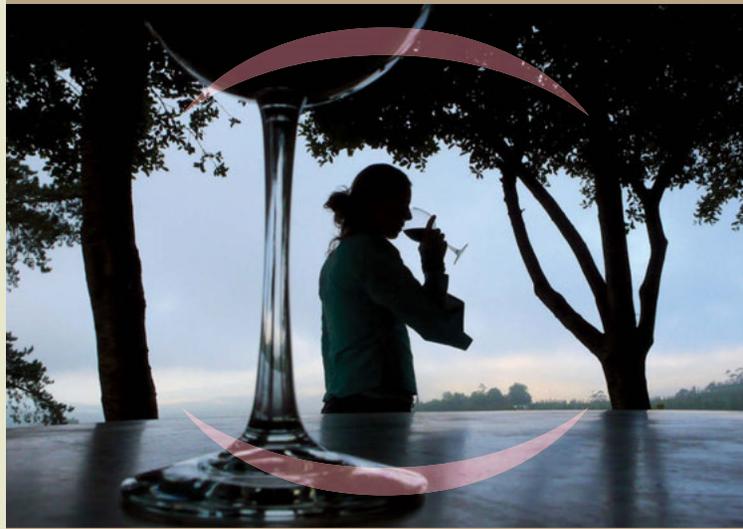
Thanks to this proprietary CO<sub>2</sub> cork cleaning process, Diam® closures are free of 2,4,6-TCA (the molecule behind cork taint) and many other molecules responsible for flavour modification. Stringent testing at all stages of production means that Diam® is the only cork individually guaranteed free of releasable TCA. (Releasable TCA ≤ to measurable limit of 0.3 ng/l.)

### Tailored, controlled permeability.

Each wine has its own special cork permeability requirements, and the winemaker knows exactly what's best for their wine. The Diam® range delivers a spectrum of permeability options to suit each style of wine and its cellaring potential.

### Consistency batch after batch.

The Diam® manufacturing process delivers consistent cork performance every time. This makes for smooth bottling line operation, absence of dust and suspended particles and eliminates leaking, seeping bottles and damp corks through capillary action. Consistency also improves the way wines age in the bottle: compared to other closures, Diam® provides the most consistently aged wines from one bottle to the next after 5 years in the cellar (AWRI 2002 study).



## Diam®, a tribute to the winegrower's art.

- Because they are free of flavour, Diam® closures are completely taste-inert. They protect even the subtlest notes and aromas of the wine.
- Different permeability levels let you control gas exchange and select the best cork for each wine and its lifetime in the cellar.
- Seamless consistency from batch to batch guarantees smooth bottling line operation and identical ageing of all bottles from the same vintage.

## Diam®, a tribute to the consumer's expectations.

- Put a stop on the "cork taste syndrome" and the damage it does to wine and producer's image alike.
- A real cork closure is incontestably recognized as a distinctive sign of quality by consumers. Diam® is made of cork and perceived as cork by consumers (IPSOS INSTITUTE 2009).
- Because Diam® protects flavour and aroma, you know consumers are getting the taste experience the wine was designed to give them, bottle after bottle, year after year.

## Diam®, a tribute to nature's gift.

- Fine cork, the raw material used to make Diam®, is a sustainable, long-lasting resource and the supercritical CO<sub>2</sub> process is a clean technology.
- The CO<sub>2</sub> is used in a closed circuit (CO<sub>2</sub> is recycled after undergoing purification). Its bacteriostatic and antifungal properties mean that no chemical washing with peroxide is required.
- Diam® is the first cork to commit to a carbon footprint approach aimed at measuring and reducing greenhouse gas emissions. Diam® improved its carbon footprint by a further 12% from 2006 to 2008.