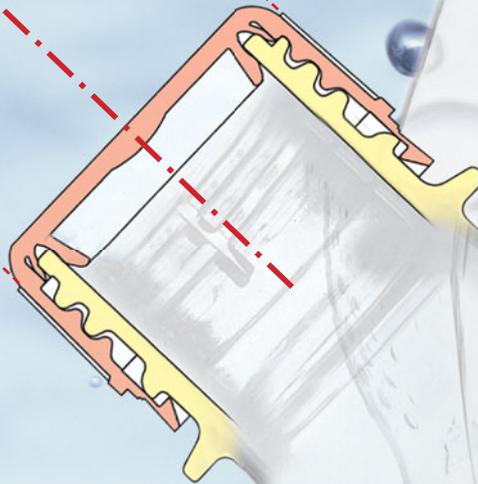


BERICAP Technology

for carbonated beverages



DOUBLESEAL
for PCO 1810





Printing

We can customise DoubleSeal™ by printing the top surface with up to three colours. We can also assist with artwork origination to ensure maximum impact whilst recognising the constraints of printing on plastic closures.



Embossing

DoubleSeal™ can be embossed on the top surface. This option usually requires large production lots to justify the cost of mould inserts and downtime to change the inserts.



Promotions

DoubleSeal™ can be UTC laser printed on the inner surface of the top plate of the closure. Laser printing gives a variety of options, including numbers, letters and symbols.



Please note laser printing is not yet available at all BERICAP factories.

Colours

BERICAP offers a comprehensive colour-matching service. However it is important to bear in mind that pigments can have an influence on taste and odour, must be approved for direct contact with food, and have a major impact on the moulding process and hence the dimensions of the closure.

BERICAP has already tested and approved about 50 different pigments to give our customers an "off the shelf" range of colours to choose from.



Capping

The BERICAP DoubleSeal™ can be handled on virtually any appropriately designed and correctly set capper. BERICAP is proud to offer high level technical assistance and has developed a state-of-the-art capping head to guarantee consistent and convenient removal torques. We can also provide bespoke chucks for all of the most common capping heads.





DOUBLESEAL

The BERICAP DoubleSeal™ technology was developed to achieve an outstandingly secure seal on PET bottles. Unavoidable damage to PET bottle necks can occur from time to time, small scratches on the inside bore or dents on the outside surface of the neck. DoubleSeal™ technology, as the name implies, copes with this minor damage by virtue of having two seals, one on the inner surface and one on the outer. DoubleSeal™ can thus accommodate the minor damage encountered more easily than competitive products.

The DoubleSeal™ is not just another linerless closure; it is an outstanding concept. This linerless closure performs better than conventional lined closures. Eliminating the liner means avoiding all risks related to a liner like off-taste, angel hair, flakes, gushing, too low heat resistance at elevated temperatures that can occur during transportation and storage.



The DoubleSeal™ technology is in use for CSD, still products with or without nitrogen, hot filled or aseptically filled products and in all situations requiring enhanced sealability of the package.

The DoubleSeal™ for CSD high carbonation has been used commercially since 1998 in all climatic zones, for example in Russia, Germany, Turkey, Sudan, India, Brazil, Florida US and China. It has proven its quality in hot and cold climate, on good and bad roads, in supermarkets, very basic retail outlets and vending machines. Many billions are produced every year in the various BERICAP locations.

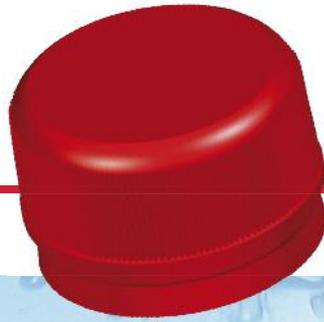
Key advantages

- 1-piece closure with safe outside seal
- in addition a safe inner boresal – hence DoubleSeal™
- accommodates slightly damaged bottlenecks
- moulded in organoleptic resin – no off taste
- slit TE band for enhanced tamper-evidence
- comparatively tolerant application due to slit TE band
- consistent and convenient removal torques
- excellent CO₂ retention at ambient and elevated temperature due to DoubleSeal™ system
- resistant to temperature peaks during transport
- large variety of approved pigments
- up to three colour top printing
- embossment on top possible
- UTC printing by laser
- hotfill and aseptic application possible for still drinks
- oxygen scavenging feature available
- enhanced gas-barrier available
- antisabotage feature for non CSD versions

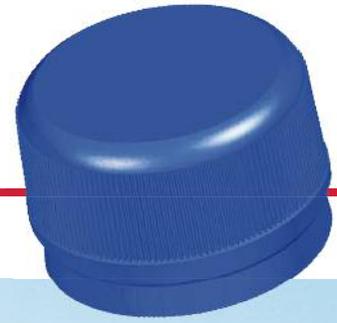




DoubleSeal™ O₂S



DoubleSeal™



DoubleSeal™

DOUBLESEAL

PET

	standard	eco	eco light	still	hotfill	vent
PET-neck	PCO 28 & BPF	PCO 28 & BPF	PCO 28 & BPF	PCO 28 & BPF	H195/ENG-00-005947	PCO 28
non refillable / refillable	nr	nr	nr	nr	nr	nr
tamper evidency	enhanced	enhanced	enhanced	enhanced	enhanced	enhanced
removal torque in inch/lbs	12 to 15	12 to 15	12 to 15	10 to 15	10 to 15	12 to 15
resin	organoleptic	organoleptic	organoleptic	organoleptic	organoleptic	organoleptic
CO ₂ g/ltr	8 g	8 g	5,0g	-	-	5,0g
CO ₂ loss % / days						
CO ₂ at ambient	exceeds standard	standard	standard	-	-	standard
CO ₂ at 42 °C	exceeds standard	standard	-	-	-	-
CO ₂ at 50 °C	exceeds standard	standard	-	-	-	-
temp. resistance	50 °C	40 °C	40 °C	50 °C	86 °C/5 min	40 °C
temp. alternation 60 °C/35 °C	3 cycles	up to 3 cycles	-	3 cycles	-	-
caps/head 350 rpm/hour	2500 +	2500 +	2500 +	2500 +	2500 +	2500 +
slip agent	yes	optional	optional	optional	optional	none
nitrogene flush 1 bar possible	yes	yes	yes	yes	yes	yes
aseptic application	yes	yes	yes	yes	-	yes
pasteurisation at 65 °C	yes	no	no	not tested	-	not tested
promotion by UTC laser	yes	yes	yes	yes	yes	yes
hotfill	yes	to be tested	no	no	yes	no
antisobotage	no	no	no	yes	yes	no
O ₂ S optional	3 mg	3 mg	3 mg	3 mg	-	3 mg

All values in this table are specific for the bottles tested together with our closures. The values are indicative and require testing with bottles selected for a purpose.

The success of DoubleSeal™ has prompted us to develop other variations to suit other specific applications.

1. The **DoubleSeal™ standard** for high carbonation (8g/litre) is a 3,2g closure designed and tested to comply with all known climatic conditions around the globe. There are versions for both non-refillable bottle variants. The DoubleSeal™ standard can be pasteurised under certain conditions.
2. The **DoubleSeal™ eco** is a 2,8g closure for carbonation up to 8g/litre designed and tested to comply with moderate climatic conditions. It can be used for low carbonation (4 to 5g/litre CSD) in all climatic conditions.
3. The **DoubleSeal™ eco light** with 2,1g is a light weight and cost saving closure for carbonation up to 5g/litre designed and tested to comply with moderate climatic conditions.
4. The **DoubleSeal™ O₂S** is a closure with an O₂S scavenging capacity. O₂ scavenging can be added to all versions of DoubleSeal™. All other characteristics of the DoubleSeal™ remain unchanged.
5. The **DoubleSeal™ Vent** is a closure designed for beverages with risk of fermentation after first opening. Once reaching 6-9 bar inside the bottle the closure releases automatically.
6. The closure design of **DoubleSeal™ hotfill** takes the thicker wall of a bottle into consideration which is suitable for withstanding high filling temperatures of up to 86°C. One piece hotfill closures on thick wall PET neck finishes are mainly used in Asia and Europe.

No liner = less risk
DoubleSeal™ = double safety