

## Frequently Asked Questions: DURAN® YOUTILITY

### a) YOUTILITY Glass Bottle FAQs

#### 1. Will the DURAN Group continue to offer the DURAN® original GL 45 bottles?

Yes, YOUTILITY will be sold alongside the DURAN® original GL 45 bottles. Many of our customer have validated the DURAN® original GL 45 bottles in their processes, and we have no intention of discontinuing this well established product range.

#### 2. Are the YOUTILITY bottles made from the same glass as the DURAN® original GL 45 bottles?

Yes, the glass is identical. The YOUTILITY bottles are made from DURAN® borosilicate 3.3 glass and have identical performance characteristics, in terms of chemical and thermal resistance as the DURAN® original GL 45 bottles.

#### 3. Do the YOUTILITY bottles have the same DURAN® glass thickness as the DURAN® original GL 45 bottles?

The YOUTILITY bottles have the same base thickness, but in some places, slightly thicker side walls. However, the performance characteristics, in terms of thermal shock resistance are almost identical to the DURAN® original GL 45 bottles.

| Characteristic       | 1000ml DURAN® original GL 45 bottle (218015455) | 1000ml DURAN® YOUTILITY bottle (218815457) |
|----------------------|---|--|
| Wall thickness range | 2.0 – 4.0 mm                                    | 2.0 – 5.0 mm                               |
| Base thickness range | 2.5 – 7.5 mm                                    | 2.5 – 7.5 mm                               |
| Weight of glass      | 510 gram  | 575 gram                                   |

#### 4. Do the YOUTILITY bottles have the same volume of head space as the DURAN® original GL 45 bottles?

Additional headspace (above the nominal volume) is important in case of foaming and for effective mixing. In fact, the YOUTILITY bottles have slightly larger headspace than the DURAN original GL 45 bottles.

#### 5. Is the shortened YOUTILITY glass and cap thread compatible with the DIN standard GL 45 threads and components?

Yes, the shortened YOUTILITY glass and cap threads are fully compatible with the DIN 168-1 GL 45 standard. The YOUTILITY caps can be used on DURAN® original GL 45 bottles, and the GL 45 caps can be safely used with the YOUTILITY glass bottles.

#### 6. Will the taller 1000ml YOUTILITY bottle fit into my autoclave?

To accommodate the ergonomic grip zones, the YOUTILITY bottle is slightly taller than standard DURAN® GL 45 bottles. We are aware that there are a number of the smaller table top autoclaves that are too small to accept 1000ml YOUTILITY bottle. However we have found that with the majority of larger autoclaves, it is possible to fit in more YOUTILITY bottles than the original GL 45 bottles. We are

working with several major autoclave manufacturers to ensure that modifications can be made to baskets and shelving to optimise the packing of the new YOUTILITY bottles in the autoclaves.

**7. Do the YOUTILITY Bottles have flat bottoms; and are suitable to use on magnetic stirrer?**

Yes, the YOUTILITY bottles are suitable for use with magnetic stirrers / stir bars. The bottom profiles of the YOUTILITY bottles are comparable to the DURAN® original GL 45 bottles. But the inner surface is not totally flat due to the blow moulding process.

**8. Will the YOUTILITY bottles also be available with the “protect” safety coated?**

Yes we plan to increase the range of YOUTILITY bottles in future.

**9. Are the YOUTILITY bottles and caps “clean” when we receive them or do you recommend additional cleaning before use?**

No, neither the YOUTILITY bottles nor the caps are guaranteed to be clean. We do not take any special precautions after manufacture to ensure cleanliness. We always recommend that our customers clean the YOUTILITY bottles and caps in a validated washing system before use.

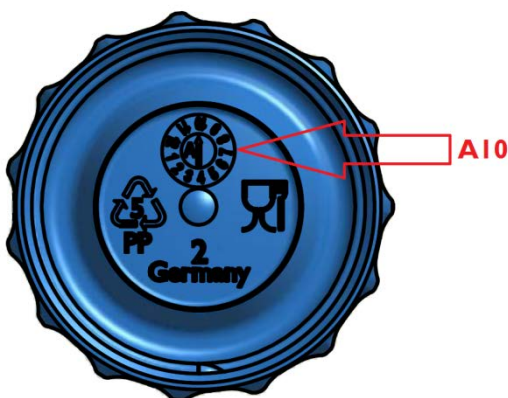
**b) YOUTILITY Screw Cap FAQs**

**1. How do I determine the Retrace code on the Cyan YOUTILITY cap?**

The Retrace code is located on the **inside** of the YOUTILITY cap. There is a moulded “clock” showing a letter (A-Z) and numbers (1 - 12). The Retrace code is either a 2- or 3-character code in this format: Letter + Number - A1, A2...A12, B1, B2....B12 etc.

Enter the 2- or 3-character code together with the order code / article number (either the YOUTILITY Bottle order code or the cap order code 292292802) at

<http://www.duran-group.com>



**2. What material are the cyan coloured YOUTILITY caps made from?**

The cyan coloured YOUTILITY caps are moulded from a food grade, virgin polypropylene homopolymer.

### ***3. Will the YOUTILITY GL 45 cap be available in other materials, apart from polypropylene?***

No. We have no current plans to introduce a YOUTILITY GL 45 cap in any other materials, apart from polypropylene.

### ***4. Will other YOUTILITY GL 45 cap accessories be available?***

Yes. We are developing a range of YOUTILITY GL 45 cap accessories.

## **c) DURAN® GL 45 Bottle Tag FAQs**

### ***1. What could the coloured GL 45 Bottle Tags be used for?***

The GL 45 Bottle Tags are available in a range of eight colours (red, orange, yellow, green, blue, purple, black and white) and are a temporary way to easily colour code / tag the YOUTILITY Bottles (or any other GL 45 Bottles). They offer a semi-permanent solution to the marking of bottles and avoid the damage caused by “scratch marking” the glass surface. The silicone is chemically robust, heat resistant, fully autoclavable, machine washable and re-usable.

There are many potential uses such:

- In a shared lab, you can tag all your own YOUTILITY bottles with your favourite colour.
- Tag all the YOUTILITY bottles that will be used in one experiment
- If there is a central wash facility, you could tag the YOUTILITY bottles to ensure that you get your own bottles returned!
- Use specific colours on bottles used in different applications such as cell culture, PCR, or virology.
- Use specific colours to identify media used for particular cell lines.
- Identify all the bottles used for one batch of media with one colour.
- Identify different batches of media produced in a central facility.

### ***2. What material are the coloured GL 45 Bottle Tags made from?***

The GL 45 Bottle Tags are moulded from a food grade silicone rubber.

### ***3. Will the GL 45 Bottle Tags be available in additional colours?***

Maybe in the future, let us know what colours you think we should offer.

### ***4. How chemically resistance are the coloured GL 45 Bottle Tags?***

The silicone rubber used for the GL 45 Bottle Tags has an excellent resistance to solvents and other chemicals. It is virtually unaffected by polar organic solvents, or dilute acids or dilute alkalis. The silicone rubber will swell and soften in non-polar organic solvents, but does not dissolve or decompose. Strong acids and alkalis will attack silicone rubber and should be avoided.

### ***5. What is the heat resistance of the coloured GL 45 Bottle Tags?***

The recommended usage temperature range for the GL 45 Bottle Tags is -30 °C to +200 °C. At temperatures below -30 °C the material will become brittle, and above about +220 °C the material will begin to decompose.

### ***6. What is the recommended method of cleaning the GL 45 Bottle Tags?***

The Bottle Tags may be cleaned either by hand or in an automatic washing process using neutral (around pH 7.0) detergents. Do not use cleaners containing solvents, or chlorine.

## **d) YOUTILITY Label FAQs**

### ***1. What material are the YOUTILITY self-adhesive labels made from?***

The YOUTILITY self-adhesive labels are made from writable / printable white polyester with a high strength adhesive.

### ***2. How robust are the YOUTILITY self-adhesive labels?***

The YOUTILITY self-adhesive labels are designed to be stay on during autoclaving processes, storage in fridges and freezers, and submersion in water baths.

### ***3. What is the heat resistance of the YOUTILITY self-adhesive labels?***

The YOUTILITY self-adhesive labels can be used over a wide temperature range from - 40 to 150 °C. For the best bond, the YOUTILITY bottles and caps should be labelled at room temperature or higher. The minimum temperature that the labels should be applied is +5 °C. Lower temperature surfaces will prevent the adhesive for developing the maximum contact with the substrate. We recommend that to achieve the maximum bond the labels are rubbed down using finger pressure.

### ***4. What pens and markers do you recommend to use with the YOUTILITY self-adhesive labels?***

We have tested a wide range of standard laboratory markers and found that black general laboratory markers worked best with the labels. The labels can also be printed in ink jet or laser printers.

### ***5. How should the YOUTILITY self-adhesive labels be stored?***

The YOUTILITY self-adhesive labels should be stored in dark and dry conditions at room temperature 21 °C (+/- 10 °C) and 50% (+/-15%) relative humidity.

### ***6. How should the YOUTILITY self-adhesive labels be removed from the YOUTILITY bottles and caps?***

The combination of polyester and adhesive mean that the labels can be peeled off in one piece. However care must be taken to ensure the labels are peeled smoothly and slowly to avoid tearing the labels.

**7. Sometimes there is a small amount of adhesive left on the glass after the YOUTILITY label has been peeled off. How should this be removed?**

If the labels have been subjected to longer than usual autoclave cycles or high temperature heating cycles, the adhesive near the label edges does sometimes remain on the glass. This residue can be easily removed using acetone, isopropanol or ethanol.

**8. What is the chemical resistance of the YOUTILITY self-adhesive labels?**

The labels are resistant to limited exposure to the following chemicals (as tested under defined conditions\*):

- Deionized water
- 1X Phosphate buffered saline
- 10% Bleach solution (1:10 v/v)
- 70% Ethanol
- 70% Isopropyl alcohol
- 10% Sodium hydroxide solution
- 10% Sulphuric acid solution
- 10% Hydrogen peroxide solution

\*YOUTILITY Labels marked by pen were laminated to DURAN® glass bottles. Tests were performed at room temperature. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute recovery period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

**9. What exactly is the “Integrated autoclave process indicator” on the YOUTILITY labels? How can I tell when the YOUTILITY labels have been autoclaved?**

The YOUTILITY labels conveniently combine the flexibility of a blank writable label with an autoclave / steam sterilisation Class 1 process indicator (ANSI/AAMI/ISO 11140-1:2005)\*. This indicator does NOT guarantee sterility, but shows whether an item has been processed or not. After an autoclave cycle (Of a minimum of 15 min at 121 °C), the diagonal stripes printed along the bottom of the cap and bottle labels change from white (or light brown) to black. High temperature steam is needed to chemically produce the colour change to the final black indicator colour.

\*Class 1: Process Indicators ANSI/AAMI/ISO 11140-1: 2005 Definition

“Process indicators are intended for use with individual units, (e.g., packs, containers) to indicate that the unit has been directly exposed to the sterilization process and to distinguish between processed and unprocessed units. They shall be designed to react to one or more of the critical process variables.”

**10. The autoclave indicator stripes on my YOUTILITY labels have changed from white to brown, yet the labels have not been autoclaved. Why is this? Does this change affect the performance of the autoclave indicator stripes?**

The heat sensitive ink used on the YOUTILITY labels is susceptible to darkening over time. Ideally the YOUTILITY labels should be kept in the dark until use. Any browning will eventually stop and the stripes will not darken to the black indicator colour unless treated with high temperature steam. The YOUTILITY labels will still function as an ISO 11140-1 Class 1 Process Indicator even if “browning” has occurred. Only treatment with high temperature steam (for example, in an autoclave for a minimum of 15 min at 121 °C) will produce the colour change to the final black indicator colour.

**11. *What is the difference between the autoclave indicator stripes on the YOUTILITY labels and the stripes on "autoclave tape"?***

None, the type of heat sensitive ink used is the same. Both function as ISO 11140-1 Class 1 Process Indicators. And for both products, treatment with high temperature steam is required to chemically produce the colour change to black.

**12. *Are the YOUTILITY labels hazardous in any way?***

No. The labels are non-hazardous, and free of toxic heavy metals. The printed labels are safe to dispose in general waste stream.

**13. *Do the YOUTILITY labels have an expiry date?***

Yes. The labels should be used within 24 months of the date of manufacture. The use by date is clearly indicated on a sticker attached to the label roll.