

AQUENCE GL

Casein-based adhesives for glass labeling applications



Excellence is our Passion

Sustainability

Developing higher value products with reduced footprint

More Value

2015 interim target: +30% Efficiency



Reduced Footprint

Zinc and borax free AQUENCE GL labeling range



higher condensation water resistance
adds customer value



hazard elimination through the removal of
Borax



cleaner waste water & lower environmental
impact by removing Zn



less water needed to clean mixing
vessels

Sustainability

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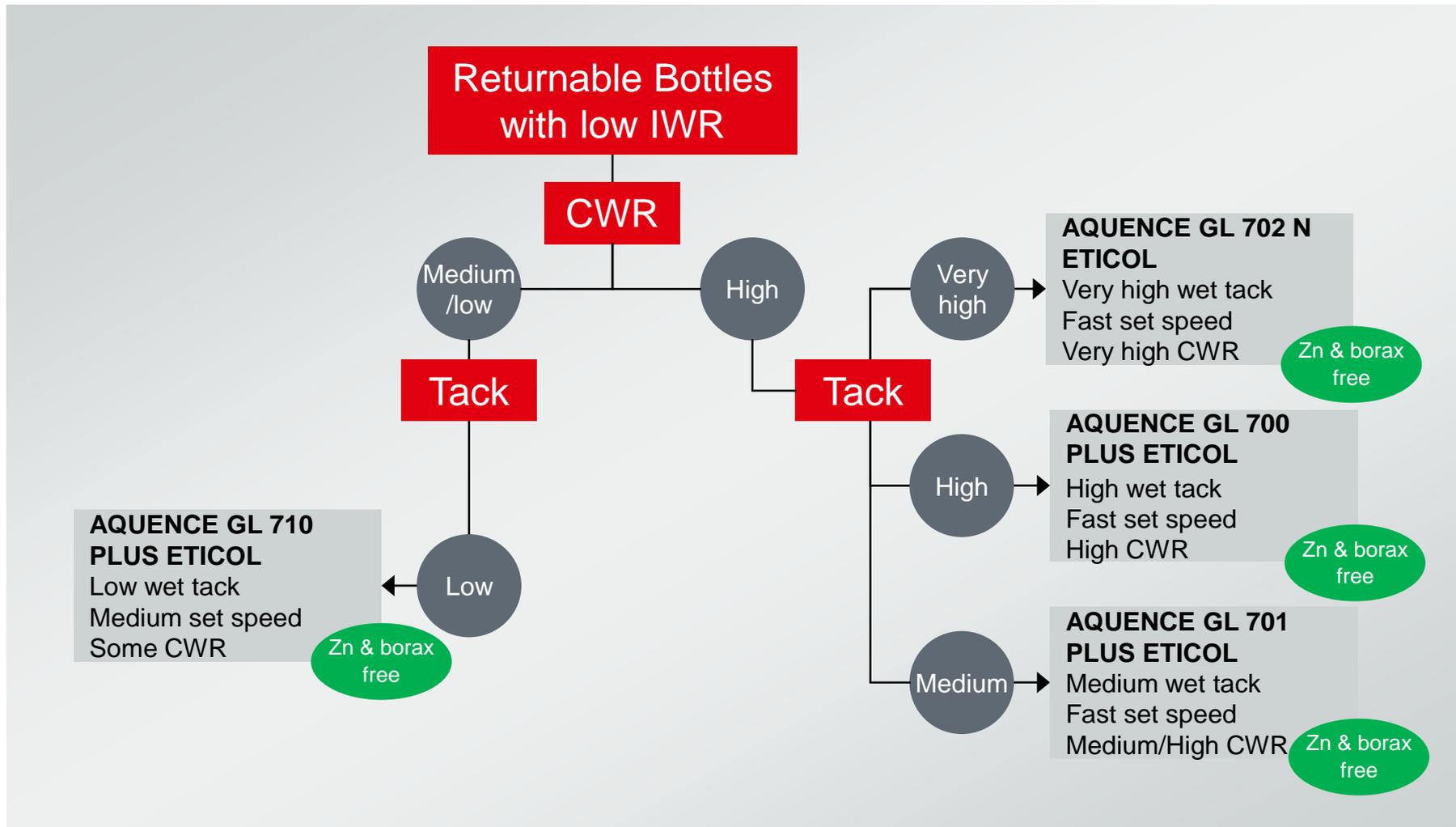
Our AQUENCE GL range has build up an impressive reputation in the beverage industry over the last 25 years.

The new AQUENCE GL product range has been formulated without using Zn, or Borax, which means that:

- a) the new product range is safer for the user
- b) the contamination risk of wastewater and bottles during the wash-off process of returnable food & drink containers has been eliminated

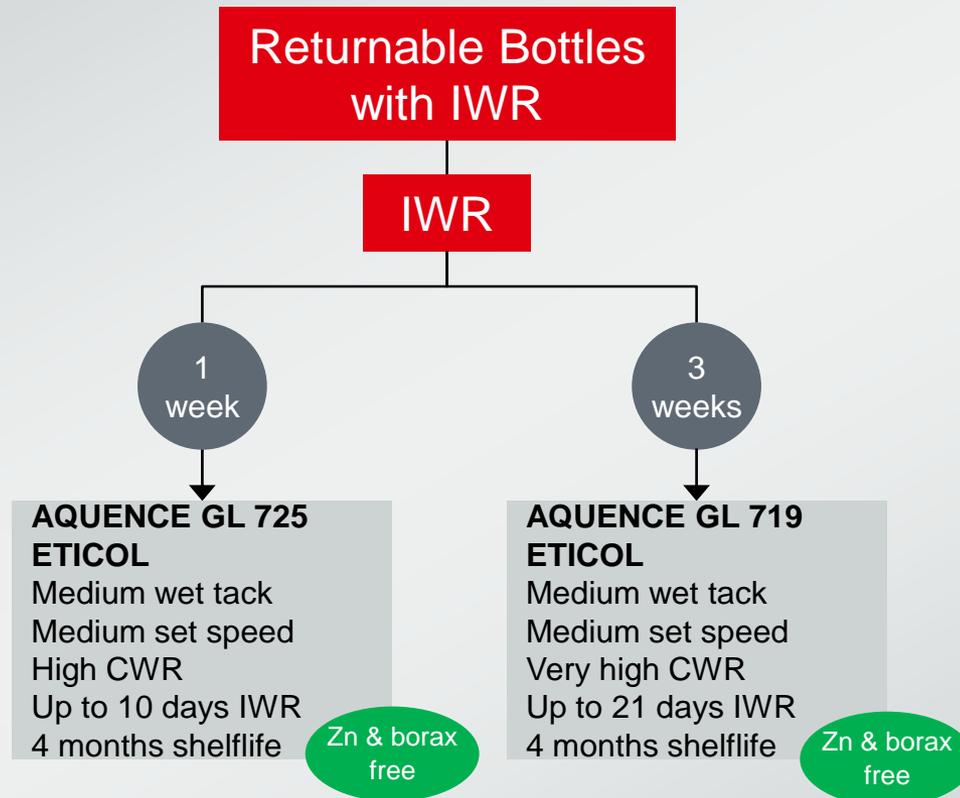
ETICOL product range with low IWR

New, sustainable product range



ETICOL product range for IWR requirements

New, sustainable product range



Casein product range

Why are we removing Borax from formulations?

- » Borax has been used for a long time in casein adhesives.
- » Formulations containing > 8.5% borax have been re-classified as:
 - T: Reprotoxic, Category II
- » Old AQUENCE GL casein adhesives contain borax, but far below the above limits and are therefore not classified as reprotoxic. If Borax is used, this is declared in the MSDS:

3. Composition / information on ingredients			
Declaration of ingredients according to (EC) No 1907/2006:			
Hazardous components CAS-No.	EINECS ELINCS	content	Classification
Disodium tetraborate, anhydrous 1330-43-4	215-540-4	< 4,5 %	Toxic for reproduction - category 2.: R60, R61

- » The new AQUENCE GL product range **DOES NOT** use Borax technology

Casein product range

Why are we removing Zinc Oxide from formulations?

- » Zinc Oxide has been used for a long time in casein adhesives with high IWR
- » Formulations containing >2.5% ZnO have been re-classified as:
 - N: Dangerous for the environment
- » Some old AQUENCE GL casein adhesives contain ZnO, but below the regulatory limits and are therefore not classified as environmentally dangerous. If ZnO is used, this is declared in the MSDS:

3. Composition / information on ingredients			
Declaration of ingredients according to (EC) No 1907/2006:			
Hazardous components CAS-No.	EINECS ELINCS	content	Classification
zinc oxide 1314-13-2	215-222-5	1 - 2,5 %	N - Dangerous for the environment, R50, R53

- » The new AQUENCE GL product range **DOES NOT** use Zinc technology

Ready for a trial?



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