



TECHNICAL DATA SHEET POLYPROPYLENE SQUARE BOTTLE

TECHNICAL SPECIFICATIONS

Trade Name	Polypropylene (PP) square bottle
Use	Suitable for sampling water and/or foodstuffs to be analyzed microbiologically, in the environmental, microbiology and industry sectors.
Raw material	Body: PP – polypropylene; Cap: HDPE – High density polyethylene
Transparency	Body: translucent; Cap: natural.
Other features	Square section base for greater stability; Drop resistant (unbreakable); Sealed cap, with high-grip ribs to facilitate opening and closing even with gloves. Labeled with lot number and expiration date: red, for bottle with buffer solution; blue, for bottle without buffering solution.
Buffer solution (only for codes where provided)	Sodium thiosulfate equal to 20mg/litre. For more information, see the "Indication for better use" section

DIMENSIONAL SPECIFICATIONS

Nominal capacity ml.	Base mm.	Height mm.	Total height mm. (with cap)	Mouth diameter mm.	Graduation ml
125	55 x 55	88	110	50	each 25
250	60 x 60	110	115	50	each 50
500	70 x 70	143	145	50	each 100
1000	90 x 90	170	175	50	each 200

ITEMS CODE AND PACKAGING

Code	Capacity ml.	Thiosulfate Y/N	Sterile Y/N	Packaging	Qty per box (minimum sales package)	Expiry date (months)
299148	125	Y	Y	-	350	24
299248	125	N	Y	-	350	60
299348	125	Y	Y	Single	350	24
299448	125	N	Y	Single	350	60
292148	250	Y	Y	-	216	24
292248	250	N	Y	-	216	60
292348	250	Y	Y	Single	216	24
292448	250	N	Y	Single	216	60
295148	500	Y	Y	-	120	24
295248	500	N	Y	-	120	60
295348	500	Y	Y	Single	120	24
295448	500	N	Y	Single	120	60
291148	1000	Y	Y	-	72	24
291248	1000	N	Y	-	72	60
291348	1000	Y	Y	Single	72	24
291448	1000	N	Y	Single	72	60

*Dimensions and volumes indicated are nominal. All specifications are subject to change without notice.
Once use is complete, dispose of the product according to the Regulations in force*



REGULATORY SPECIFICATIONS

CE mark	No
Regulatory Standard	n.a.
Classification	n.a.
Base UDI-DI	n.a.
Microbiological condition	Sterile
Suitable for contact with food or substances for personal use	Yes, according to: -Regulation CE1935/2004/EC; -Regulation 10/2011/EC; -Italian D.M. 21/03/1973 and subsequent amendments; -Italian D.P.R. 777/82 and subsequent updates.

SUGGESTIONS FOR BETTER USE

General suggestions

Following the withdrawal, microbiological analysis of water samples must always be performed within the shortest possible time after sampling. In fact, many factors can influence its bacterial contents, all of them related to the quality of the water: presence of toxic or nutritive substances for bacterial flora, saltness, pH and so on.

As a general guideline, it suggests to transport and store samples at a temperature of (+4 to +10°C) and to analyse them within 24 hours.

General information on buffering ratios

Scientific literature provides that with bactericidal, sporicidal, fungicidal and virocidal functions, an oxidizing agent is added to the water, usually a sodium salt (hypochlorite NaClO and/or chlorite NaClO₂) or, more frequently, a mixture of the two.

In the sampling of chlorinated water it is advisable to neutralize the free chlorine present, to prevent its bactericidal action during the transport and storage of the sample, which would alter the reliability of the test.

For this reason, LP bottles are produced both empty and pre-dosed with Sodium Thiosulfate, which buffers the action of free chlorine, in compliance with: the ISO 19458 standard and/or the French standard NFT 90-40.

However, it is not a priori possible to know either the composition of the mixture or the quantity of dissolved salts; therefore normally it is not known how much free chlorine must be "buffered".

Furthermore, depending on the inactivation dynamics, it is difficult to say what quantity of sodium thiosulphate (Na₂S₂O₃) is necessary to neutralize an even known quantity of free residual chlorine.

It is therefore suggested to take into account the following indications:

buffering ratio of thiosulfate to hypochlorite → 1 Mole: 1 Mole

buffering ratio of thiosulfate to chlorite → 4 Mole: 1 Mole

To know the actual weight ratios, these ratios must refer to the respective molecular weights, but quantitative indications are not provided here because they could be misleading or not pertinent to the case of the individual user.

We limit ourselves to pointing out that, in the extreme case (all chlorite), an approximately quadruple quantity of thiosulphate will be required compared to the opposite case of "all hypochlorite".

In general it should be considered that 18 mg of sodium thiosulfate are sufficient to buffer from 2 to 5 mg of chlorine.

For cases of sampling of highly chlorinated water it is also possible, at the request of the user, to supply bottles containing greater quantities of thiosulphate.

The canonical solution, for these applications, is 100 mg/l, however, since a slight increase in the concentration of buffering salt does not affect the quality of the sample, bottles containing salt up to 120 mg/l are prepared, typically for the sampling of swimming pool waters.

Since thiosulphate has no effect on the sample, it is possible to use bottles containing sodium thiosulphate even in the case of non-chlorinated water samples.

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QA&RA Manager
 Massimiliano Capitano