BROEN-LAB WASTE SYSTEM

- Chemical resistant polypropylene





TABLE OF CONTENTS

Content

D	3		0
	a	У	C

BASII

INTRODUCTION	2
PP SINK	3-5
PP WASTE	6
PP BOTTLE TRAP	7-8
PP DRIP CUPS	9-10
PP ACCESSORIES	11
RESISTANCE CHART	12-15

BROEN-LAB WASTE SYSTEM - INTRODUCTION

PP - CHEMICAL RESISTANT POLYPROPYLENE WASTE SYSTEM

Chemical resistant sinks and waste fittings are injection moulded from polypropylene copolymer to ensure a consistent quality. Polypropylene has superior resistance to numerous acids, alkaline, reagents, solvents and also UV light making it ideal for use in today's demanding laboratories. The light weight and impact/crack resistant features of these sinks and fittings makes installation easy and accommodates to various designs and requirements of a laboratory workbench. The standard color is black and (other colours are available on request)

- High chemical resistance
- UV resistance
- Light weight
- Impact and crack resistant
- All around sink

The above mentioned advantages make the range ideal for use in many applications, such as:

- Laboratories
- Schools
- Universities
- Hospitals
- Industries with corrosive environment

PP SINK

PRODUCT NUMBER 97B0350

Remember to order 97B0073 for waste connection (see page 6)



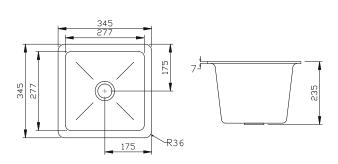


SPECIFICATIONS

Temperature range: 0-80°C

Standard colour: black (other colours available on request) **Net weight:** 1.6 kg **Dimensions:** external 345 x 345 x 235mm (tolerance ± 1mm)

Injection moulded from polypropylene copolymer resin, with a self-draining base. This square PP sink blends well into any laboratory workbench. Extremely durable.



PRODUCT NUMBER 97B0420

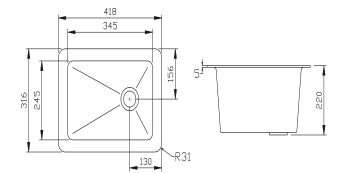
Remember to order 97B0073 for waste connection (see page 6)



SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 1.4 kg Dimensions: bxternal 418 x 316 x 220mm (tolerance ± 1mm)

Injection moulded from polypropylene copolymer resin, with a self-draining base. Designed for mounting on top or underside of the work benches.



PP SINK

PRODUCT NUMBER 97B0552

Remember to order 97B0073 for waste connection (see page 6)

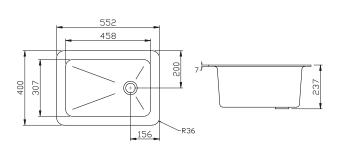




SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colors available on request) Net weight: 2.2 kg Dimensions: external 552 x 400 x 237mm (tolerance ± 1mm)

The rectangular sink with its self draining base are injection moulded from polypropylene copolymer resin. Designed for mounting on top or underside of work benches.



PRODUCT NUMBER 97B0560

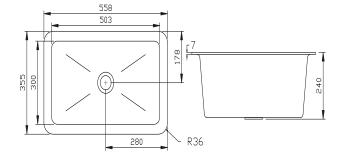
Remember to order 97B0073 for waste connection (see page 6)



SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 2.7 kg Dimensions: external 558 x 355 x 240mm (tolerance ± 1mm)

The rectangular sink is made of polypropylene copolymer resin. Lightweight and superior in chemical resistance makes this sink is ideal for use even in most demanding laboratories.



PRODUCT NUMBER 97B0810

Remember to order 97B0085 for waste connection (see page 6)

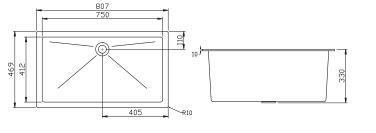


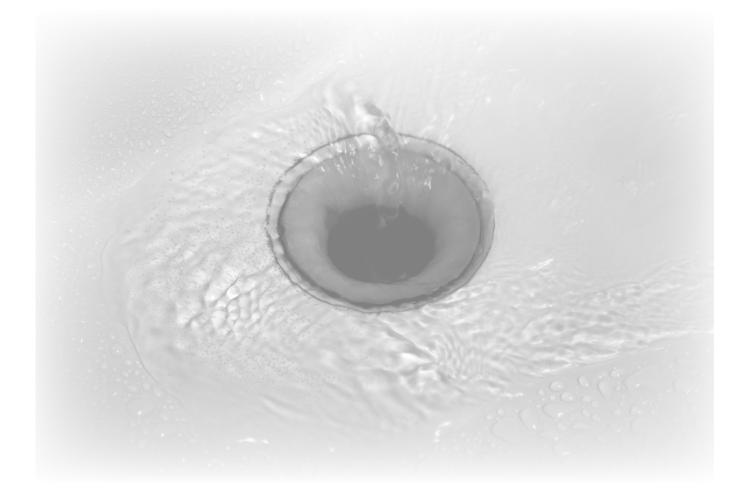


SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 5.4 kg Dimensions: external 807 x 469 x 330mm (tolerance ± 1mm)

The largest polypropylene sink offered, it is suitable for cleansing of larger items. Very widely used in island benches and teacher benches.





PP WASTE

P R O D U C T N U M B E R 9 7 B 0 0 7 3 Sink waste for item 97B0350, 97B0420, 97B0552, 97B0560

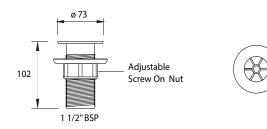




SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 0.2 kg Dimensions: Ø73, 1½" BSP (tolerance ± 1mm)

Including adjustable screw on nut



PRODUCT NUMBER 97B0085

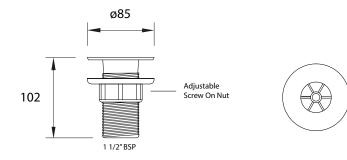
Sink waste for item 97B0810



SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 0.2 kg Dimensions: Ø85, 1½" BSP (tolerance ± 1mm)

Including adjustable screw on nut



PP BOTTLE TRAP

Inlet 1 ½"BSP

190-320

ų

PRODUCT NUMBER 97B0040





SPECIFICATIONS

 Temperature range: 0-80°C

 Standard colour: black (other colours available on request)

 Net weight: 0.5 kg

 Dimensions:
 IN:
 1½" BSP

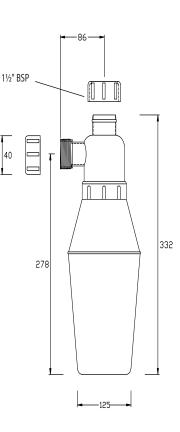
 OUT:
 40mm (metric)

Height adjustable: telescopic bottle trap

Injection moulded from polypropylene copolymer resin, this anti-siphon bottle trap come with inlet of $1\frac{1}{2}$ "BSP, with black bowl.

PRODUCT NUMBER 97B0023





SPECIFICATIONS

Temperature range: 0-80°C

Standard colour: black (other colours available on request) Net weight: 0.5 kg

Dimensions: IN: OUT: 1½" BSP 40mm (metric)

Injection moulded from polypropylene copolymer resin, this dilution recovery trap has a capacity of 2,3 liters .

PP BOTTLE TRAP

PRODUCT NUMBER 97B0095V





SPECIFICATIONS

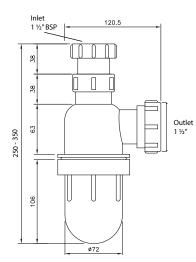
Temperature range: 0-80°C

Standard colour: black (other colours available on request) **Net weight:** 0.5 kg

Dimensions: IN: OUT: 11/2" BSP 11/2" (fractional) (nominal int. diameter: 38mm nominal ext. diameter: 48.3mm)

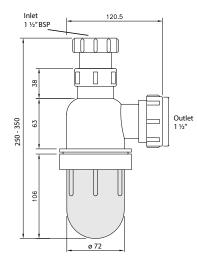
Height adjustable: telescopic bottle trap

Injection moulded from polypropylene copolymer resin, this anti-siphon bottle trap come with inlet of $1 \ensuremath{\,^{1}\!\!/}_2$ "BSP, with black bowl.



PRODUCT NUMBER 97B0095VT

As above but with a transluscent bowl



SPECIFICATIONS

Temperature range: 0-80°C

 Standard colour: black and translucent bowl (other colours available on request)

 Net weight: 0.5 kg

 Dimensions:
 IN:
 1½" BSP

 OUT:
 1½" (fractional)

 (nominal int.diameter: 38mm nominal ext. diameter: 48.3mm)

Height adjustable: telescopic bottle trap

Injection moulded from polypropylene copolymer resin, this anti-siphon bottle trap come with inlet of $1 \ensuremath{\,^{\prime\prime}\!_{2}}$ "BSP, with translucent bowl.

PP DRIP CUPS

PRODUCT NUMBER 97B0170



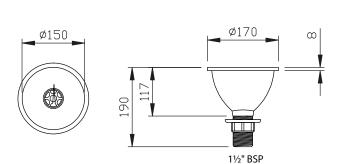


SPECIFICATIONS

Temperature range: 0-80°C Standard colour: black (other colours available on request) Net weight: 0.5 kg Dimensions: Ø170mm (tolerance ± 1mm)

Including adjustable screw on nut

Round drip cup is made of polypropylene and suitable to be used for fume hoods



PRODUCT NUMBER 97B0176

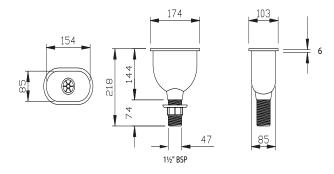


SPECIFICATIONS

Temperature range: $0-80^{\circ}$ C Standard colour: black (other colours available on request) Net weight: 0.6 kg Dimensionss: 174 x 103 x144mm (tolerance ± 1mm)

Including adjustable screw on nut

The oval-shaped drip cup is commonly used on work-tops of fume hoods. Injection moulded from Polypropylene copolymer resin



PP DRIP CUPS

PRODUCT NUMBER 97B0265



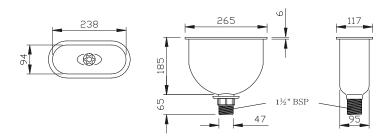


SPECIFICATIONS

Temperature range: $0-80^{\circ}C$ Standard colour: Black (other colors available on request) Net weight: 0.6 kgDimensions: $265 \times 117 \times 185 \text{mm}$ (tolerance $\pm 1 \text{mm}$)

Including adjustable screw on nut

The new PP cup is made of polypropylene and is suitable for use in fume hoods.



PRODUCT NUMBER 97B0190

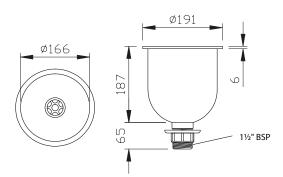


SPECIFICATIONS

Temperature range: 0-80°C Standard colour: Black (other colours available on request) Net weight: 0.7 kg Dimensions: Ø191mm (tolerance ± 1mm)

Including adjustable screw on nut

Round drip cup is made of polypropylene and suitable to be used for fume hoods.



PP ACCESSORIES

PRODUCT NUMBER 97B0821

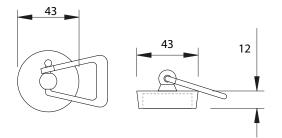




SPECIFICATIONS

Temperature range: 0-80°C Standard colour: Black Net weight: 0.1 kg Dimensions: Ø43, 12mm

Moulded from polypropylene and attached with a holder for easy removal of the plug.



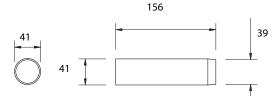
PRODUCT NUMBER 97B0158 Also available in 258mm of height, 97B0258



SPECIFICATIONS

Temperature range: 0-80°C Standard colour: Black and translucent bowl (other colours available on request) Net weight: 0.2 kg Dimensions: Ø41, 156mm

Overflow waste stand tubes are injection moulded from polypropylene copolymer resin. Used together with sink waste.





A = NEGLIGIBLE EFFECT - should be suitable for all applications.

B = LIMITED ABSORPTION OR ATTACK - should be suitable for most applications, but the user is advised to make his own tests to determine the suitability of polypropylene with the particular solution.

C = EXTENSIVE ABSORPTION AND / OR RAPID PERMEATION - should be suitable for applications where only intermittent service is involved, or where the swelling produced has no detrimental effect on the part. The user should make his own test to determine the suitability of polypropylene with the particular solution.

D = EXTENSIVE ATTACK - the specimen dissolves or disintegrates. Polypropylene is not recommended.

Reagent	Conc. %	Temperatures ^o C		
		20	60	100
Acetic acid (glacial)	97	A	B (80°C)	-
Acetic acid	50	A	A (80°C)	-
Acetic acid	40	A	-	
Acetic acid	10	A	А	-
Acetone	100	A	А	-
Acetophenone	100	В	В	-
Acriflavine	2	A	A	
(2% solution in H20)			A (80°C)	-
Acrylic emulsions		A	A	-
Aluminum chloride		A	A	-
Aluminum fluoride		A	A	-
Aluminum sulfate		A	A	_
Alums (all type)		A	A	_
Ammonia (aqueous)	30	A	-	-
Ammonia gas (dry)		A	A	-
Ammonium carbonate	Satd.	A	A	_
Ammonium chloride	Satd.	A	A	-
Ammonium fluoride	20	A	A	_
Ammonium hydroxide	10	A	A	_
Ammonium metaphosphate	Satd.	A	A	-
Ammonium nitrate	Satd.	A	А	-
Ammonium persulfate	Satd.	A	A	-
Ammonium sulfate	Satd.	A	A	-
Ammonium sulfide	Satd.	A	А	-
Ammonium thiocyanate	Satd.	A	A	-
Amyl acetate	100	В	С	-
Amyl alcohol	100	A	В	-
Amyl chloride	100	С	С	-
Aniline	100	A	A	-
Anisole	100	В	-	-
Magenta dye (Aqueous solution)	2	A some staining	A	-
Magnesium carbonate	Satd.	A	A	-
Magnesium chloride	Satd.	A	A	_

RESISTANCE CHARTS



Reagent	Conc. %	Temperatures ^o C		
		20	60	100
Magnesium hydroxide	Satd.	А	A	-
Magnesium nitrate	Satd.	А	A	-
Magnesium sulfate	Satd.	А	A	
Magnesium sulfide	Satd.	А	A	-
Meat juices	Satd.	А	A	-
Mercuric chloride	40	В	В	-
Mercuric cyanide	Satd.	А	A	
Mercurous nitrate	100	А	A	-
Mercury	100	А	A	_
Methyl alcohol	100	А	A	-
Methylene chloride	100	А	-	-
Methyl ethyl ketone	100	А	В	_
Milk and it products		A	A	А
Mineral oil	100	A	В	_
Molasses		A	A	_
Motor oil	100	A	В	_
Naphthalene	100	A	A	A
Nickel chloride	Satd.	A	A	-
Nickel nitrate	Satd.	A	A	_
Nickel sulfate	Satd.	A	A	_
Nitric acid	Fuming	D	D	D
Nitric acid	70*	C	D	
Nitric acid	60	А	D (80°C)	-
Nitric acid	10	А	A	A
50-50 HNCB-HCI	Satd.	А	D (80°C)	-
50-50 HNCB-H2S04	*	С	D (80°C)	-
Nitrobenzene	100	А	A	-
Oleic acid		А	В	D
Oleum		-	-	D
Olive oil	100	А	A	-
Oxalic acid (aqueous)	50	А	В	-
Paraffin	100	А	В	-
Paraffin wax	100	А	A	-
Petrol	100	В	С	-
Petroleum ether (Boiling point 100-140°C)	100	С	С	-
Phenol	100	А	A	
Phosphoric acid	95	А	A	-
Plating solution, brass		А	A	-

For further information please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WWW.BROEN-LAB.COM

RESISTANCE CHARTS

Reagent	Conc. %	Temperatures ^o C		
		20	60	100
Plating solution, cadmium		А	A	-
Plating solution, chromium		А	A	
Plating solution, copper		А	A	-
Plating solution, gold		А	A	-
Plating solution, indium		А	A	-
Plating solution, lead		А	A	-
Plating solution, nickel		А	A	-
Plating solution, rhodium		А	A	
Plating solution, silver		А	A	-
Silicon oil	100	А	A	_
Soap solution (concentrated)		A	A	-
Sodium acetate		А	A	-
Sodium bicarbonate	Satd.	А	A	-
Sodium bisulfate	Satd.	А	A	-
Sodium bisulfite	Satd.	А	A	-
Sodium borate		А	A	-
Sodium bromide oil solution		А	A	-
Sodium carbonate	Satd.	А	A	-
Sodium chlorate	Satd.	А	A	-
Sodium chloride	2	А	A	-
Sodium chlorite		А	A (80°C)	-
Sodium chlorite	5	А	A (80°C)	-
Sodium chlorite	10	А	A (80°C)	-
Sodium chlorite	20	А	A (80°C)	-
Sodium cyanide	Satd.		A (80°C)	-
Sodium dichromate	Satd.	A	A	-
Sodium ferricyanide	Satd.	А	A	-
Sodium ferrocyanide	Satd.	А	A	-
Sodium fluoride	50	А	A	-
Sodium hydroxide	10	А	A	-
Sodium hydroxide	20	А	A	-
Sodium hypochlorite		А	В	-
Sodium nitrate			_	
Sodium nitrite	Satd.	А	A	-
Sodium silicate	25	А	A	-
Sodium sulfate	Satd.	А	A	-
Sodium sulfide		А	A	-
Sodium sulfite	Satd.	А	A	

For further information please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

BASIC

RESISTANCE CHARTS

Reagent	Conc. %	Temperatures ° C		
		20	60	100
Stannic chloride	Satd	А	A	-
Stannous chloride		А	A	-
Starch		А	A	-
Sugar and syrups		А	A	_
Sulfamic acid Calcium and Sulfates of Magnesium Potassium		А	A (80°C)	-
Sulfur	98*	А	A	-
Sulfuric acid	60	С	-	D
Sulfuric acid		А	B (80°C)	-
Sulfuric acid	50	А	В	-
Sulfuric acid	10	А	В	D
Sulfuric acid	*	А	A	-
50-50 H2S04-HNO3		С	D (80°C)	А
Tallow		А	A	-
Tannie acid	10	А	A	-
Tartaric acid		А	A	-
Tetrahydrofuran	100	С	С	С
Tetralin	100	С	С	-
Toluene	100	С	С	-
Transformer oil	100	А	С	-
Trichloroacetic acid	100	А	A	-
Trichloroethylene	100	С	С	С
Triethanolamine	100	А	A (80°C)	_
Turpentine	100	С	С	С
Urea		А	A	-
Urine		А	A	-
Vaseline		А	A	
Vinegar		А	A	-
Water (distilled , soft, hard and vapor)		A	A	-
Wet chlorine gas		-	D (70°C)	
Whisky		А	A	А
White paraffin	100	А	B (80°C)	_
White spirit	100	В	С	-
Wines		А	A	-
Xylene	100	С	С	С
Yeast		А	A	-
Zinc chloride	Satd.	А	A	-
Zinc oxide		А	A	-
Zinc sulfate	Satd.	А	A	-

For further information please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WWW.BROEN-LAB.COM

BASIC

BROEN-LAB A/S develops, manufactures and delivers complete range of fittings for professional laboratories. Our know-how and our quality products ensure the precise flow of water, gases and air, from source to user.

BROEN-LAB A/S solutions are used by professional users in many kinds of laboratories, from the education and health sectors to industry in general. Our products are already an integrated part of many workplaces. From fittings for purified water, nitrogen, vacuum and compressed air, to the control and regulation of pure gases in critical applications such as a gas chromatography and spectrometry.

Our extensive knowledge allows us to continually develop and optimize our products so that they meet customer needs and specifications. Safety, functionality and quality are an integral part of product design and flexibility. Our insight and understanding of working environments and safety in laboratories allow us to develop custom solutions for projects around the world. Use us to plan your project so we can advise you on laboratory layout and design.

HEAD OFFICE

BROEN-LAB A/S

Drejervænget 2• DK-5610 Assens Tel. +45 6471 2095 • Fax +45 6471 2476 E-mail: lab@broen-lab.com

Deutscher Kontakt

Tel. +45 6373 2252 • Fax +45 6471 2476 E-mail: lab@broen-lab.com



BROEN LAB GROUP ISO 9001 certification

In September 1991 BROEN LAB GROUP was certified according to ISO 9001 as one of the first Danish companies. The certification was carried out by Bureau Veritas, Denmark, for our Danish site at Assens. The quality management system of BROEN LAB

GROUP now complies with detailed specifications laid down by the internationally acknowledged EN ISO 9001:2008. This certification will further contribute to BROEN LAB GROUP's reputation for quality and reliability.

www.BROEN-LAB.com

INTERNATIONAL OFFICES

BROEN-LAB Ltd.

Unit 9 Navigation Point, Golds Hill Way Tipton • West Midlands DY4 OPY • U.K. Tel. +44 121 522 4515 • Fax +44 121 522 4535 E-mail: broenvalves@broen-lab.com

BROEN-LAB Singapore Pte. Ltd.

10 Bukit Batok Crescent #10-02 • The Spire • Singapore 658079 Tel: +65 6298 0662 • Fax: +65 6298 0468 E-mail: sales@broen-lab.com

BROEN-LAB