

Multi-Safe disposal boxes

Safe disposal



Multi-Safe



From blood collection through to “Multi-Safe” disposal – easy and safe!

As a renowned manufacturer of laboratory and medical devices, we consider it our duty to supply safe disposal options for our disposable products.

As different levels of waste is generated in practices, hospitals and universities, our extensive product range lets users choose from various disposal options. A variety of choice that is reflected in the different volumes, openings and shapes through to the final closure.



We ensure that all boxes meet the TRBA 250 (German regulations) as a minimum requirement so that we can guarantee the safe handling of the disposal box. Our Multi-Safe disposal boxes naturally also fulfil the international regulations, such as the UN and ISO 23907. These differ from the TRBA 250 in that they usually not only define the shape or appearance but also the durability (wall thickness, fall tests from 1.20 m, etc.).

In addition, the UN certification regulates whether the disposal box can be filled with dangerous goods. A UN-certified box can be recognised by the multi-digit UN code that is normally stamped in the top of the lid.

All our Multi-Safe disposal boxes are made of polypropylene so that disposal by burning is environmentally friendly: no harmful substances are produced by combustion.

Around the world, health care workers are at constant risk of infection from needlestick injuries (NSI). This is a particular concern when disposing of sharp and pointed objects. The most common viruses are hepatitis B (HBV), hepatitis C (HCV) and HIV. An estimated 500,000 needlestick injuries occur in Germany alone, resulting in around 50 million euros in consequential costs. Medical personnel (approx. 39%) are most likely to suffer a needlestick injury, followed by nursing staff (approx. 34%).¹⁾

These figures once again clearly show just how important it is to use high-quality disposal boxes!

To avoid incorrect applications in this area, we believe it is important to make sure that users handle Multi-Safe disposal boxes safely by providing instructions for use and internal training.

¹⁾ Deutsches Ärzteblatt 2007, Vol. 104, p. A3102-3107

For more information or an overview of several Multi-Safe disposal boxes (see p. 34/35), simply scan the QR code and visit our website www.SARSTEDT.com

Your partner in medicine and science worldwide

SARSTEDT, one of the world's leading providers of laboratory and medical equipment, develops, manufactures and sells equipment and consumables in the field of medicine and science.

Ever since the company's foundation in 1961, we have continued to grow to the point where we now employ a workforce of 2,900. Our Sarstedt Group with its head office in Nümbrecht, North Rhine-Westphalia, comprises 34 sales organisations and 15 production sites in Europe, North and South America and Australia.

Please use the contact form provided to get in touch with us if you have further questions or suggestions. Or simply give us a call using the toll-free Service **Hotline 0800 / 0 83 305-0**. (Available from the German landline and mobile phone network)

Multi-Safe *sani & mini*



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Multi-Safe *vario*



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Multi-Safe *twin plus*



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Multi-Safe *euroMATIC*[®]



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Multi-Safe *medi*



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Multi-Safe *eco*



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Multi-Safe *steri*



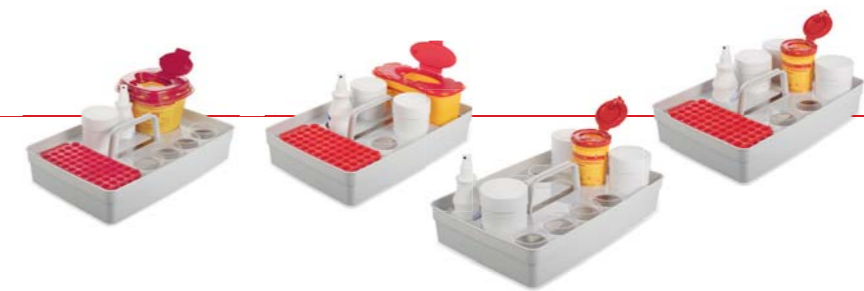
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Multi-Safe "custom products"



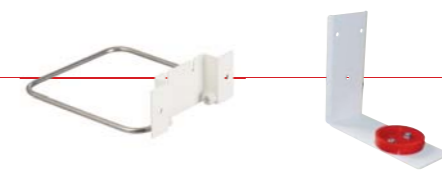
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Safety-Tray

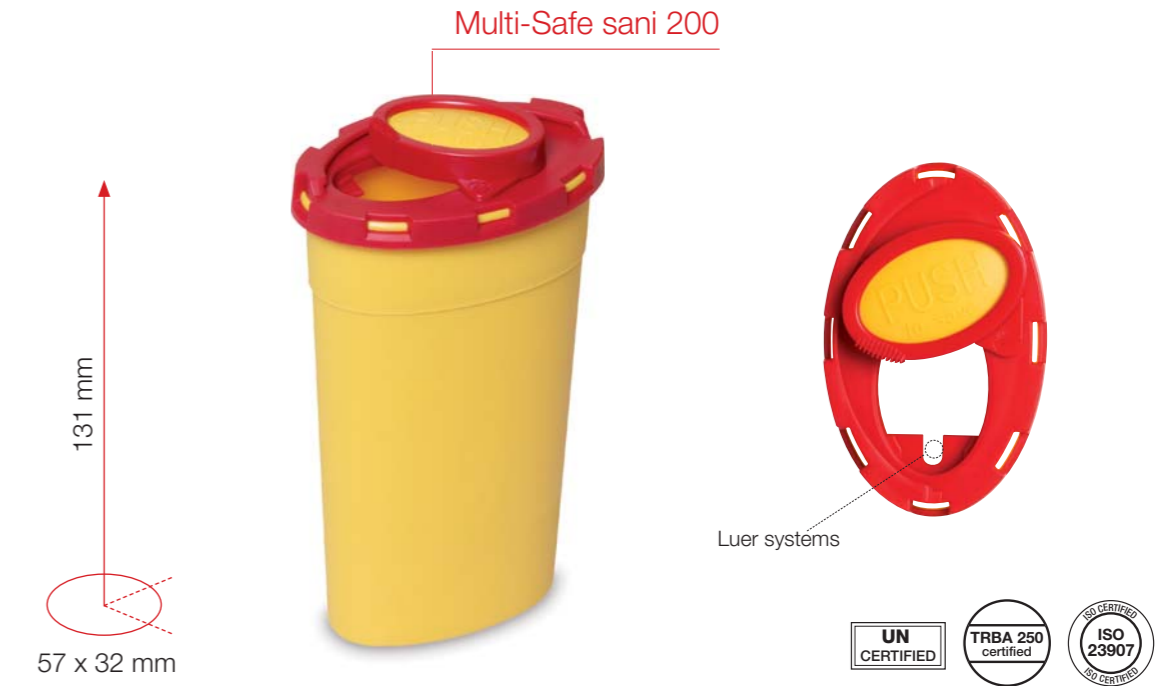


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Multi-Safe accessories



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Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3890.002	Multi-Safe sani 200	0.2	Polypropylene	110	3,300	40 x 40 x 60	120 x 80 x 195

Multi-Safe *sani & mini*

Multi-Safe for on the go - the "littlies" with the big job

- Safe needle box for on the go
- Suitable for outpatient use by doctors, nurses and rescue services or for doctor's and medical cases
- One-handed opening and closing of the day and final closure
- Lid already assembled
- Compact

You can find the certifications of the boxes in the overview on page 26.



Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3890.003	Multi-Safe mini 300	0.3	Polypropylene	135	2,700	31.7 x 40 x 60	120 x 80 x 195

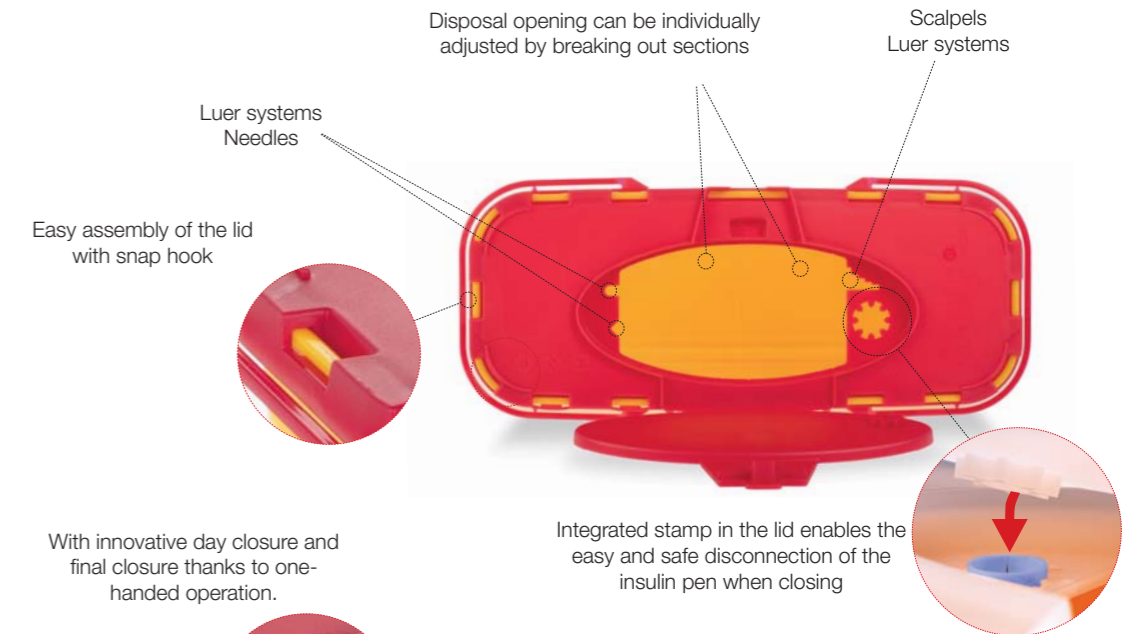


Multi-Safe *vario* 2000

Multi-Safe vario 2000 - large opening 2.0

- Easy assembly of the lid with snap-hook. Disposal opening can be individually adjusted by breaking out sections. Please break out before use.
- Day closure and final closure enables one-handed operation
- IML label (in-mould labelling) stamped directly during production with product labelling in 9 languages
- The stamped label allows for the content of the box to be easily compared with the filling level mark
- QR code on the box enables quick and direct access to the instructions for use
- Various removal and turning aids for needles, Luer systems and insulin pens
- Integrated stamp in the lid enables the easy and safe disconnection of the insulin pen when closing
- Also available as version with biohazard labelling
- Compatible with commercially available trays
- Certified in line with DIN ISO 23907, UN 3291 and TRBA 250

vario accessories (see p. 24)



Filling level clearly marked with new label design



Integrated QR code for direct online access to the operating instructions



Also available with biohazard labelling



Compatible with commercially available trays



Ordering information

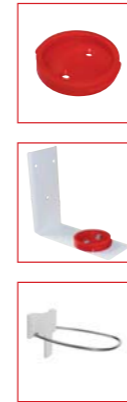
REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3893.020	Multi-Safe vario 2000	2.0 l	PP	50	1,000	59.4 x 39.4 x 34.3	120 x 80 x 195
77.3893.120	Multi-Safe vario 2000 with biohazard label	2.0 l	PP	50	1,000	59.4 x 39.4 x 34.3	120 x 80 x 195

You can find the certifications of the boxes in the overview on page 26.

New! The innovative disposal box with added safety!



twin accessories (see p. 24)



With innovative day closure and final closure with one-handed operation and "Press for final closure" imprint

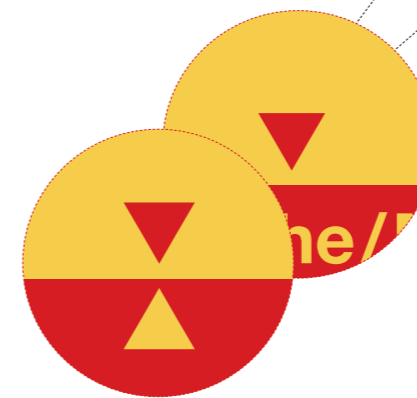


Directly integrated label in 9 languages – label also available as customised solution

Multi-Safe *twin plus*

Multi-Safe twin plus - innovative design for optimal handling and greater safety

- Optimised assembly of the lid with snap hook
- Innovative lid: the day closure and final closure enable one-handed operation
- Disposal opening can be gradually enlarged by breaking out the sections. Please break out before use.
- IML label (in-mould labelling) stamped directly during production with product labelling in 9 languages
- The stamped label allows for the content of the box to be easily compared with the filling level mark
- QR code on the box enables quick and direct access to the instructions for use
- Various removal and turning aids
- In particular, the integrated stamp for insulin pens introduces significant benefits as, by pressing down the lid, the stamp pushes the insulin pens completely into the box
- Various table and wall holders provide the option of fastening the boxes in different areas and prevent toppling (see accessories p. 24)
- Also available as version with biohazard labelling
- Certified in line with DIN ISO 23907, UN 3291 and TRBA 250



Filling level clearly marked with new label design



Also available with biohazard labelling



Integrated QR code for direct online access to the operating instructions



You can find the certifications of the boxes in the overview on page 26.



twin accessories (see p. 24)



Ordering information

REF	REF Biohazard	Multi-Safe twin plus	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3884.005	77.3884.105	500	0.5	Polypropylene	126	3,024	59 x 27 x 45	120 x 80 x 195
77.3884.015	77.3884.115	1500	1.5	Polypropylene	94	1,128	80 x 40 x 38	120 x 80 x 195
77.3884.020	77.3884.120	2000	2.0	Polypropylene	80	960	80 x 40 x 38	120 x 80 x 195
77.3884.025	77.3884.125	2500	2.5	Polypropylene	70	840	80 x 40 x 38	120 x 80 x 195
77.3884.030	77.3884.130	3000	3.0	Polypropylene	62	744	80 x 40 x 38	120 x 80 x 195
77.3884.050	77.3884.150	5000	5.0	Polypropylene	34	408	80 x 40 x 38	120 x 80 x 195

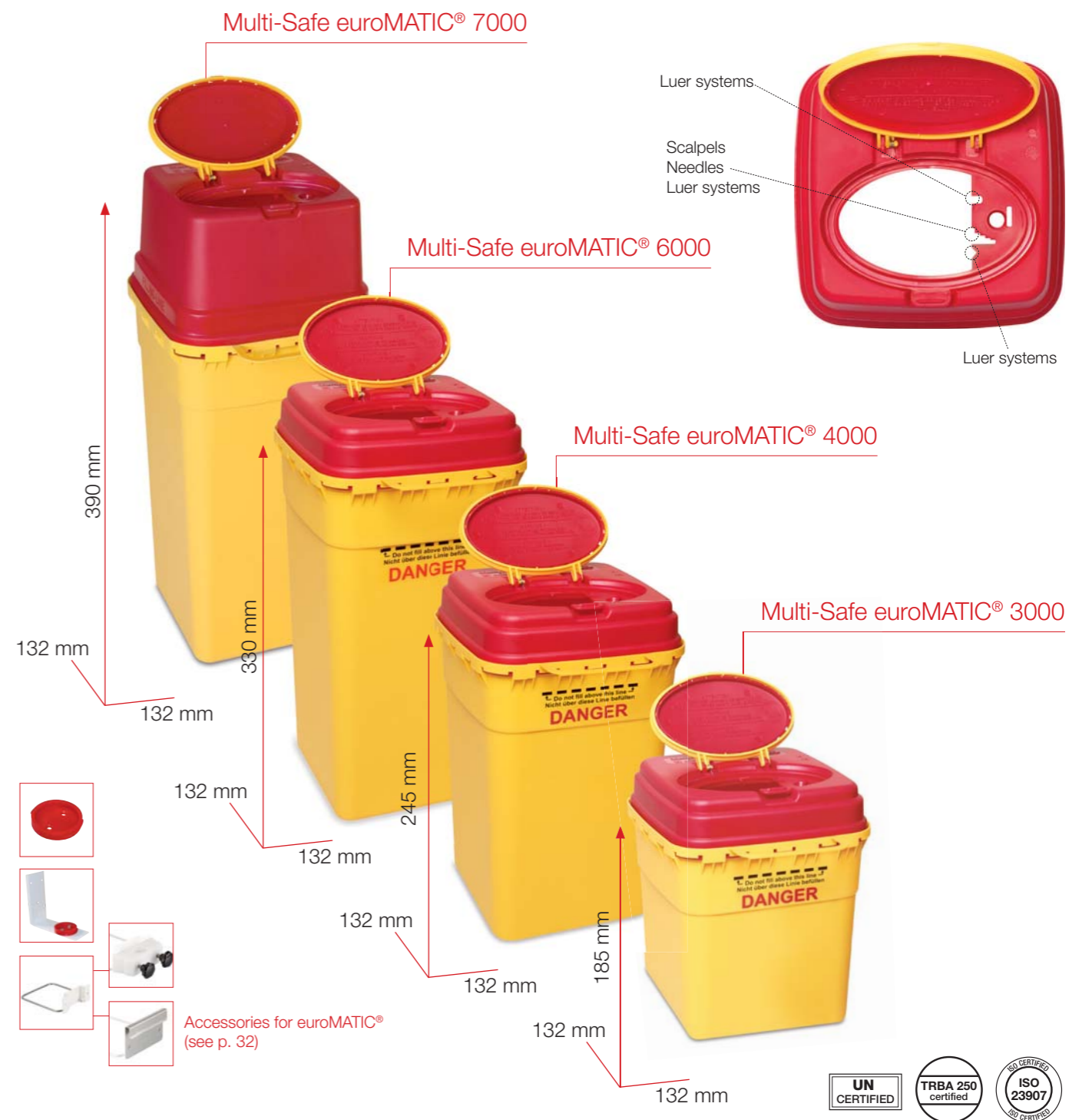


Multi-Safe *euroMatic*®

Multi-Safe euroMATIC® - sophisticated and innovative: the premium model

- Square container shape
- Tough container and lid
- Adhesive adapter and/or wall holder prevents toppling (see accessories on page 32)
- Innovative day and final closure allows one-handed operation of the lid (pressing the red “buttons” automatically opens the lid)
- Hinges on the day lid enable multiple opening/closing operations, while the secure final closure is visible by folding out the yellow ring
- One-hand operation and large disposal opening enable fast and safe disposal of bulky objects
- Side grooves at the top edge visually confirm the closure of the container
- Side handle
- Various removal and turning aids

You can find the certifications of the boxes in the overview on page 26.



Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3897.070	Multi-Safe euroMATIC® 7000	7.0	Polypropylene	37	333	51 x 39 x 80	120 x 80 x 195
77.3897.060	Multi-Safe euroMATIC® 6000	6.0	Polypropylene	40	360	51 x 39 x 80	120 x 80 x 195
77.3897.040	Multi-Safe euroMATIC® 4000	4.0	Polypropylene	50	450	51 x 39 x 80	120 x 80 x 195
77.3897.030	Multi-Safe euroMATIC® 3000	3.0	Polypropylene	55	495	51 x 39 x 80	120 x 80 x 195

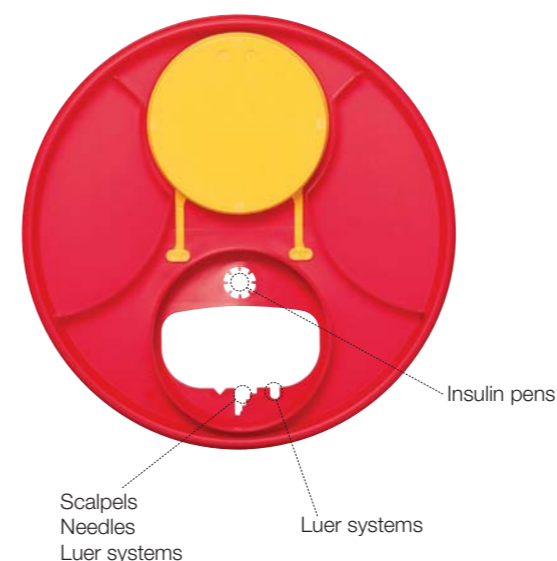
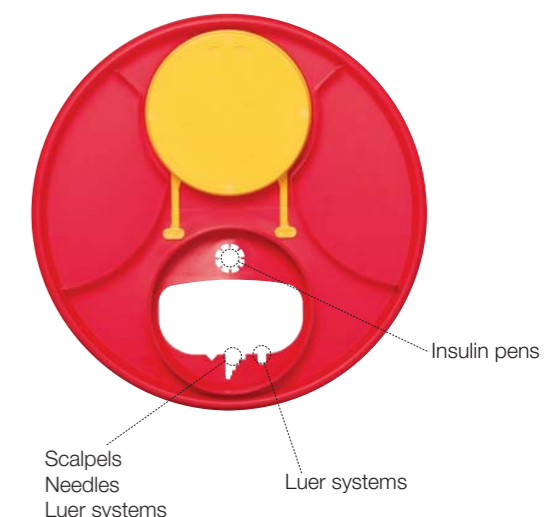


Multi-Safe *medi*

Large-volume box with handle and label

- Round container shape
- No additional holders needed thanks to the large circular footprint
- Various designs (with or without handle, additional label)
- Closures were developed so that they automatically fall backwards when opening to provide a clear disposal opening
- Side grooves at the top edge visually confirm the closure of the container
- Various removal and turning aids

You can find the certifications of the boxes in the overview on page 26.



Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3898.011	Multi-Safe medi 11	11.0	Polypropylene	-	250	-	120 x 80 x 195
77.3898.511				10	160	40 x 40 x 60	120 x 80 x 195
77.3898.111	Multi-Safe medi 11 with handle	11.0	Polypropylene	-	250	-	120 x 80 x 195
77.3898.006	Multi-Safe medi 6	6.0	Polypropylene	-	480	-	120 x 80 x 195
77.3898.506				21	336	40 x 40 x 60	120 x 80 x 195
77.3898.106	Multi-Safe medi 6 with handle	6.0	Polypropylene	-	480	-	120 x 80 x 195
77.3898.206	Multi-Safe medi 6 with handle and label	6.0	Polypropylene	21	336	40 x 40 x 60	120 x 80 x 195

*UN testing only medi 6, medi 6 with handle, medi 6 with handle and label



Multi-Safe *eco*

A safe and stable container for the disposal of clinical waste

- Rectangular container shape
- No additional holders needed thanks to the large footprint
- Various designs
- Multi-Safe 25 & 50 - lid-in-lid system provides variable disposal opening
- Liquid-tight final closure thanks to the adhesive strip fastened on the side of the lid
- Side grooves at the edge visually confirm the closure of the container
- Can be stacked empty and full
- Suitable for oncological waste, cytostatic drugs
- Collection and transport container for small disposal boxes

You can find the certifications of the boxes in the overview on page 26.



Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3899.050	Multi-Safe eco 50	50.0	Polypropylene	-	125	-	120 x 80 x 195
77.3899.025	Multi-Safe eco 25	25.0	Polypropylene	-	160	-	120 x 80 x 195
77.3899.150	Multi-Safe 50	50.0	Polypropylene	-	125	-	120 x 80 x 195
77.3899.125	Multi-Safe 25	25.0	Polypropylene	-	160	-	120 x 80 x 195



Multi-Safe *steri*

Multi-Safe steri - huge, practical, (autoclave-)safe

- Rectangular container
- No additional holders needed thanks to the large footprint
- Safe and stable for the disposal of infectious waste
- Autoclave-safe at 121°C to 134°C
- Small lid melts at around 90°C and releases the autoclave process through a grid
- The small lids can be purchased to label boxes that have already been autoclaved (77.3888.800 - yellow; other colours are possible)
- Easy to transport with handles in the bottom and top part
- Side grooves on the lid visually confirm the closure
- Can be stacked empty and full
- Collection and transport container for small disposal boxes

You can find the certifications of the boxes in the overview on page 26.



Ordering information

REF	Article name	Volume in l	Material	Units per case	Units per pallet	Case dimensions [cm]	Pallet dimensions [cm]
77.3899.060	Multi-Safe steri 60	60.0	Polypropylene	-	120	-	120 x 80 x 240
77.3899.035	Multi-Safe steri 35	35.0	Polypropylene	-	150	-	120 x 80 x 240

Customised Multi-Safe disposal box

- Please note that above a specific quantity, it is possible to order custom-made Multi-Safe disposal boxes (e.g. different colours, personalised labels, etc.).
- Additional certification with your company address exclusively for your Multi-Safe disposal box can also be requested.
- Multi-Safe and Multi-Safe eco are not available in special colours

Please contact our hotline if you have any questions on this topic.



Safety Tray – streamlined work processes through selective stocking

- Tailored to the requirements of blood collection, you can put the Safety Tray together in various flexible versions.
- Note: The accessories illustrated are not part of the standard delivery and must be ordered separately.

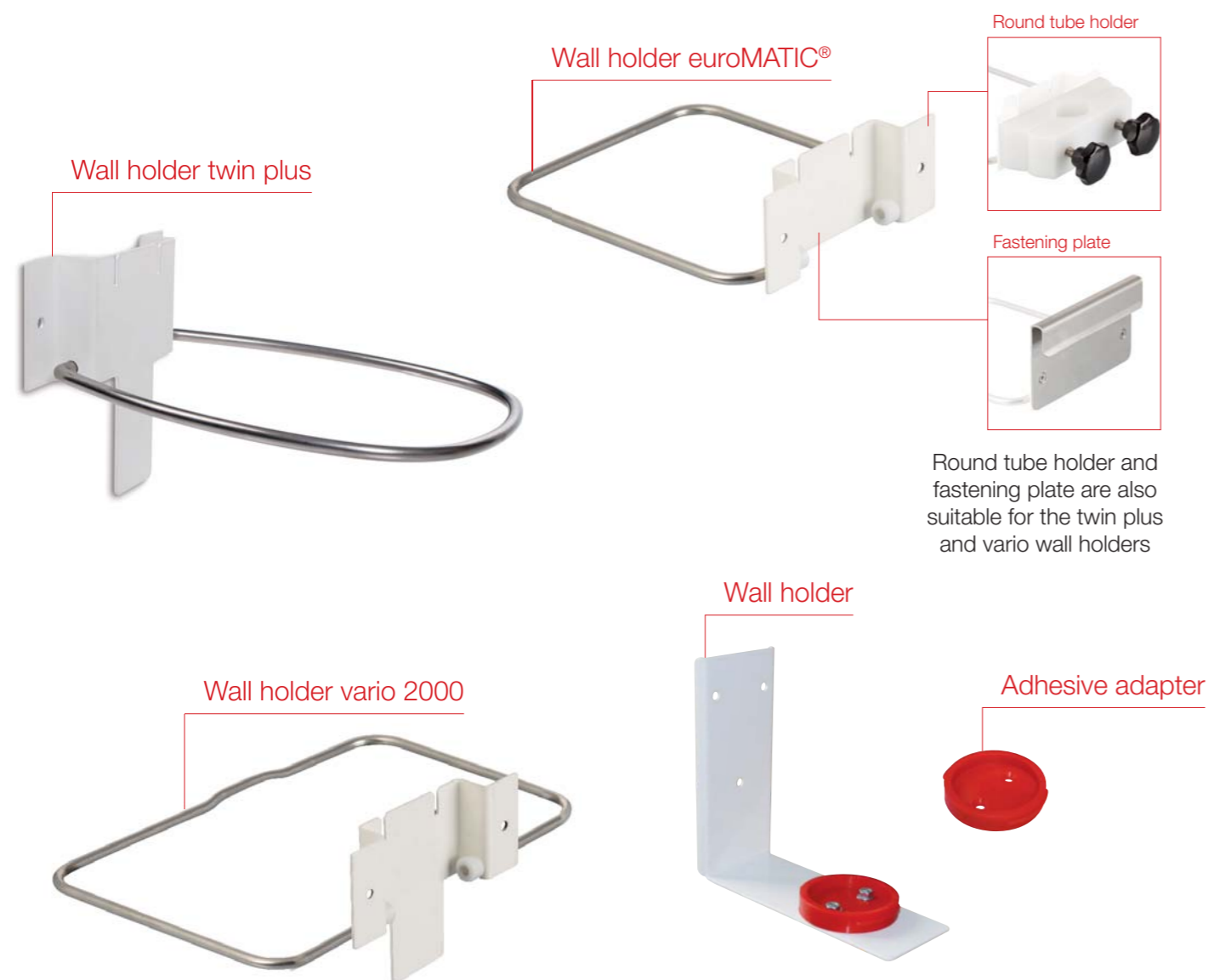


REF	Design		Units per case
93.1650	Safety tray without insertion plate 429 x 283 x 80 mm		1/box
93.1650.010	Version I 1x S-Monovette® rack D17 with handle 2x dispenser box with lid 1x Multi-Safe twin plus 500 3x multi-purpose cup 1x disinfection spray		1/box
93.1650.020	Version II 2x dispenser box with lid 1x Multi-Safe vario 2000 6x multi-purpose cup 1x disinfection spray		1/box
93.1650.030	Version III 2x dispenser box with lid 1x Multi-Safe twin plus 500 8x multi-purpose cup 1x disinfection spray		1/box
93.1650.040	Version IV 1x S-Monovette® rack D17 with handle 2x dispenser box with lid 1x Multi-Safe vario 2000 1x multi-purpose cup 1x disinfection spray		1/box
93.1650.050	Version V 1x S-Monovette® rack D17 with handle 1x dispenser box with lid 1x Multi-Safe Box twin plus 2000 4x multi-purpose cup 1x disinfection spray		1/box

Accessories

REF	Article name	Design	Units per case
77.3884.005	Multi-Safe twin plus 500	0.5 l suitable for versions I and III	126/box
77.3893.020	Multi-Safe vario 2000	2.0 l suitable for versions II and IV	50/box
77.3884.020	Multi-Safe twin plus 2000	2.0 l suitable for version V	50/box
95.813.001	Dispenser box	With lid for Safety Tray	35/box
75.1355	Multi-purpose cup	125 ml for Safety Tray	1,000/box
93.851	Block rack D17	With handle, grey	12/box
93.851.171	Block rack D17	With handle, red	
93.851.172	Block rack D17	With handle, yellow	
93.851.173	Block rack D17	With handle, green	
93.851.174	Block rack D17	With handle, blue	
93.851.175	Block rack D17	With handle, orange	

For easy and safe assembly of the Multi-Safe safety containers on the wall, table or smooth surfaces



Round tube holder and fastening plate are also suitable for the twin plus and vario wall holders

Ordering information

REF	Article name	Material	Units per case	Suitable for series
95.963.007	Wall holder twin plus	Stainless steel	20	twin plus
95.963.001	Wall holder/euroMatic®	Stainless steel	20	euroMATIC®
95.965.001	Adhesive adapter	Polypropylene	150	twin plus, euroMATIC®
95.963.006	Round tube holder	POM	10	twin plus, euroMATIC®, vario
95.963.005	Fastening plate	Stainless steel	20	twin plus, euroMATIC®, vario
95.963.020	Wall holder vario 2000	Stainless steel	5	vario

Absorbent materials (ISO 23907)

ISO 23907 requires the following absorbent materials to be placed in the disposal box to prevent the leakage of liquid residue (does not apply for twin plus series). It is important to ensure that adequate absorbent material is used to cover the entire fill volume of a box.



Ordering information

REF	Absorption	Minimum order volume	for Multi-Safe
78.669	16 ml per unit	1,000	euroMatic®, twin plus
78.684	8 ml per unit	2,000	sani, mini
95.1712	1200 ml per unit	100	euroMatic® (6.0 and 7.0 litres), medi

Multi-Safe label

In addition to the disposal boxes, the following label can be ordered:



Ordering information

REF	Article name	Units per inner box	Units per outer box
84.1390.022	Label 70 x 80 mm	2000	8000

Box type	REF	REF w. biohazard	Tests		
			TRBA 250	UN	ISO 23907
Multi-Safe sani 200	77.3890.002		✓	✓	✓
Multi-Safe mini 300	77.3890.003		✓	✓	✓
Multi-Safe vario 2000	77.3893.020	77.3893.120	✓	✓	✓
Multi-Safe twin plus 500	77.3884.005	77.3884.105	✓	✓	✓
Multi-Safe twin plus 1500	77.3884.015	77.3884.115	✓	✓	✓
Multi-Safe twin plus 2000	77.3884.020	77.3884.120	✓	✓	✓
Multi-Safe twin plus 2500	77.3884.025	77.3884.125	✓	✓	✓
Multi-Safe twin plus 3000	77.3884.030	77.3884.130	✓	✓	✓
Multi-Safe twin plus 5000	77.3884.050	77.3884.150	✓	✓	✓
Multi-Safe euroMATIC® 3000	77.3897.030		✓	✓	✓
Multi-Safe euroMATIC® 4000	77.3897.040		✓	✓	✓
Multi-Safe euroMATIC® 6000	77.3897.060		✓	✓	✓
Multi-Safe euroMATIC® 7000	77.3897.070		✓	✓	✓
Multi-Safe medi 6	77.3898.006		✓	✓	✓
Multi-Safe medi 11	77.3898.011		✓	-	✓
Multi-Safe medi 6	77.3898.506		✓	✓	✓
Multi-Safe medi 6 with handle	77.3898.106		✓	✓	✓
Multi-Safe medi 11 with handle	77.3898.111		✓	-	✓
Multi-Safe medi 6, handle, label	77.3898.206		✓	✓	✓
Multi-Safe medi 11	77.3898.511		✓	-	✓
Multi-Safe eco 25	77.3899.025		-	✓	-
Multi-Safe eco 50	77.3899.050		-	✓	-
Multi-Safe steri 35	77.3899.035		-	✓	-
Multi-Safe steri 60	77.3899.060		-	✓	-
Multi-Safe 25	77.3899.125		-	✓	-
Multi-Safe 50	77.3899.150		-	✓	-

Volume in l	Height [mm]	Ø lid [mm]	Ø base [mm]	Units per case	Units per pallet
0.2	131	75 x 47	57 x 32	110	3,300
0.3	160	98	41 x 77	135	2,700
2.0	140	243 x 102	95 x 240	50	800
0.5	162	89	57	126	3,024
1.5	125	179 x 176	112	94	1,128
2.0	162	179 x 176	112	80	960
2.5	197	179 x 176	112	70	840
3.0	233	179 x 176	112	62	744
5.0	379	179 x 176	112	34	408
3.0	185	166 x 43	132 x 132	55	495
4.0	245	166 x 43	132 x 132	50	450
6.0	330	166 x 43	132 x 132	40	360
7.0	390	166 x 43	132 x 132	37	333
6.0	195	230	190	-	480
11.0	220	290	257	-	250
6.0	195	230	190	21	336
6.0	195	230	190	-	480
11.0	220	290	257	-	250
6.0	195	230	190	21	336
11.0	220	290	257	10	160
25.0	260	295 x 395	230 x 330	-	160
50.0	500	295 x 395	230 x 330	-	125
35.0	330	393 x 393	340 x 340	-	150
60.0	520	393 x 393	340 x 340	-	120
25.0	260	295 x 395	230 x 330	-	160
50.0	500	295 x 395	230 x 330	-	125

Safe handling of disposal boxes

euroMATIC®, *steri*, *eco*, *twin plus*

Position the lid centred on the bottom part of the box. The red day lid and handle face forwards.

Simultaneously push on the opposite corners of the lid to connect it with the bottom part.

The edge of the lid must be firmly inserted around the entire circumference, until it audibly and visibly (see detail circle) locks into place.



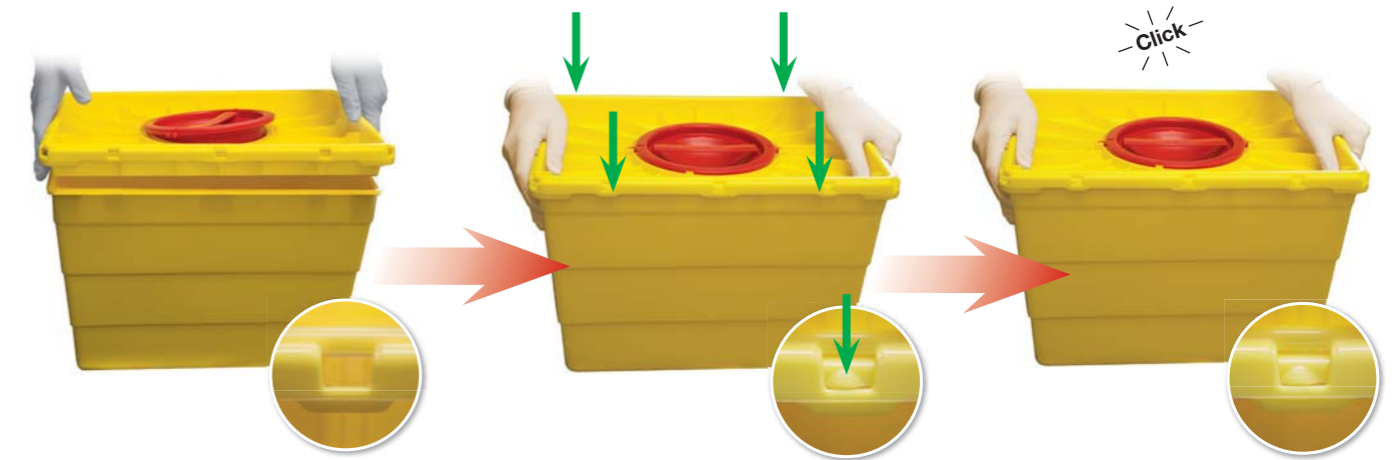
Safe handling of disposal boxes

eco / Multi-Safe (Lid-in-lid)

Position the lid centred on the bottom part of the box.

Simultaneously push on the opposite sides of the lid to join it with the bottom part.

The edge of the lid must be firmly inserted around the entire circumference, until it audibly and visibly locks into place.



Safe handling of disposal boxes

medi

Position the lid centred on the bottom part of the box. The yellow day lid faces forwards.

Simultaneously push on the opposite sides of the lid to join it with the bottom part.

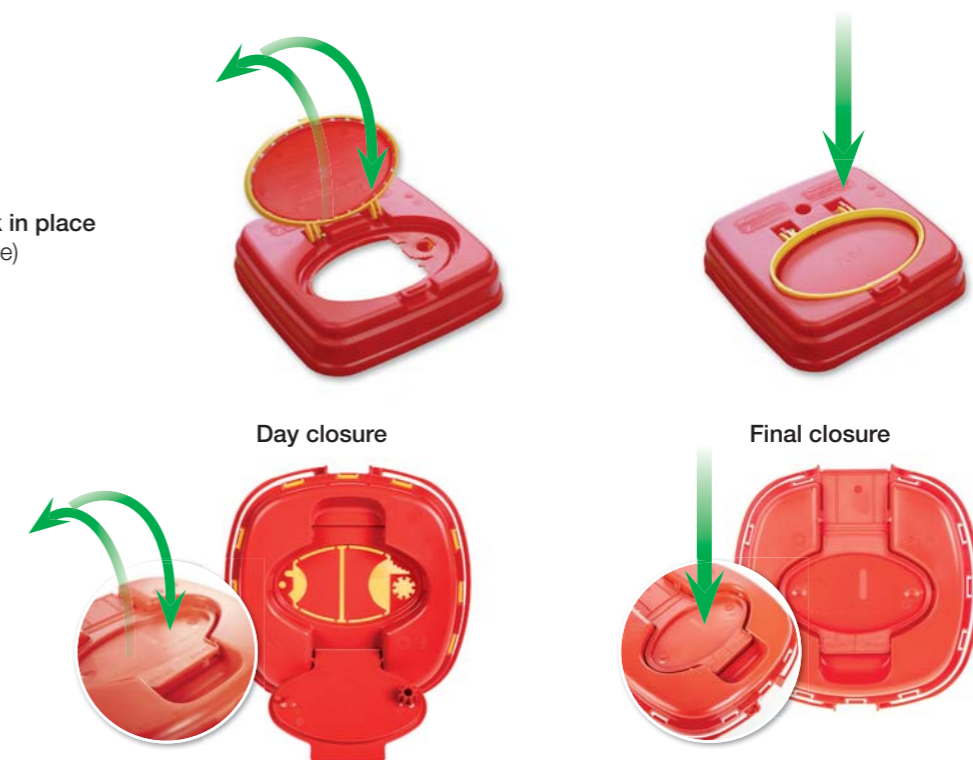
The edge of the lid must be firmly inserted around the entire circumference, until it audibly and visibly locks into place.



Day closure/final closure

1 x lock in place (for reuse)

2 x lock in place (completely sealed)



Multi-Safe instructions for use

Intended use

The disposal container is exclusively intended to dispose of pointed and sharp objects, such as needles and scalpel blades from the medical field.

Safety instructions

- Only use containers of a size that is suitable for holding the items to be disposed of.
- Store the box out of the reach of children.
- The lid must be on the container and locked into place before it is filled.
- Connect containers with the recommended adhesive adapter by rotating or hanging in the wall holder to prevent accidents.
- Do not use the day lid to press down the items to be disposed of.
- Scalpels must be disposed of in the container with particular care. If too much force is used when throwing scalpels in or if other items are placed on top, there is a risk of the angle changing and damaging the container walls or the base of the container.
- Only place items to be disposed of upright in the container.
- Do not press items into the container with force.
- Do not place any liquids in the container.
- Do not fill the box over the fill line (risk of injury).
- Do not place hands or any other objects in the container (risk of injury).
- Do not throw the box. Do not shake the box. Do not drop the box.
- Before sealing the container, ensure that no items are projecting through the opening.
- Close the box by hand, without applying too much force.
- Do not push the box against your body (e.g. chest) for the final closure.
- Do not compress a full box.
- Use the handle.
- Before disposing of the container, carefully check that the lid is tightly sealed.



ISO 23907

One of the absorbent liners from page 33 must be used to ensure the compliant use of the box.

Disposal and the environment

- ✓ Plastics used in our products are environmentally neutral in terms of disposal.
- ✓ The plastic can be sent to landfill, as they do not release any harmful substances into the air, earth or water.
- ✓ When disposed of in incinerators, the plastics PS, PP, PC and PE serve as valuable sources of energy to maintain the temperature in the combustion chamber - the more plastic in the waste, the less heating oil is used. Burning these plastics does not release any hazardous emissions.

	Polystyrene	Polypropylene	Polycarbonate	Polyethylene
Abbreviation	PS	PP	PC	HD-PE High Density LD-PE Low Density
Optical properties	transparent, shiny surface with 90% light transmission (at 400-800 nm)	translucent, shiny surface	transparent, 88% light transmission (at 400-800 nm)	translucent to opaque, waxy surface
General mechanical properties	Low elongation at break and thermal resistance, very good electrical insulating properties, not suitable for high centrifugal accelerations	high breaking strength, resistant to stress cracking, stable form and high rigidity	very good mechanical, optical, electrical and thermal properties, can be autoclaved and sterilised	Relatively low tensile strength and surface hardness, high toughness, soft to firm, sensitive to stress cracking, water-repellent
Autoclavability	Not suitable	Products made of PP can be autoclaved up to 121°C without any appreciable loss of mechanical properties. The user must check whether other product characteristics are affected in terms of the desired use.	Products made of PC can be autoclaved up to 121°C without any appreciable loss of mechanical properties. The user must check whether other product characteristics are affected in terms of the desired use.	Not suitable
Max. continuous use temperature*1	60 - 70°C	100 - 110°C	115 - 125°C	HD-PE 70 - 80°C LD-PE 60 - 75°C
Temporary maximum use temperature*1	75 - 80°C	120 - 140°C	125 - 140°C	HD-PE 90 - 120°C LD-PE 80 - 90°C
Use at sub-zero temperatures*2	Not well-suited	Limited suitability*1	down to -80°C	Limited suitability*1
Thickness g/cm³	1.05	0.90	1.19	HD-PE 0.95 LD-PE 0.92
Flammability	Flammable	Flammable	Flammable	Flammable
Ignition temperature*1	300 - 400°C	300 - 360°C	380 - 450°C	350 - 360°C
Moisture absorption	< 0.1%	< 0.1%	0.1 - 0.3%	< 0.1%
General resistance to chemicals	PS is resistant to saline solutions, bases, non-oxidising acids, alkalis and alcohols. Benzene, volatile oils, strongly oxidising agents and flavourings attack PS, forming stress cracks.	PP is resistant to aqueous solutions of inorganic salts, acids, alkalis and to organic solvents up to 60°C. Alcohols, esters and ketones also do not attack PP. Aromatic and halogenated hydrocarbons, oxidising substances such as concentrated nitric acid and fats, oils and waxes at high temperatures cause PP to swell.	PC is resistant to higher concentrations of mineral acids, many organic acids (e.g. carbonic acid, oleic acid and citric acid), oxidants, reducing agents, neutral and acidic saline solutions, a range of fats and oils, saturated, aliphatic and cycloaliphatic hydrocarbons and alcohols (except methanol). Bases, ammonia gas and solution as well as amines attack PC. PC is soluble in a range of industrial solvents. Other organic compounds like benzene, acetone and carbon tetrachloride eventually lead to expansion or swelling.	PE has a high resistance to chemicals. The chemical resistance of HD-PE is generally higher than that of LD-PE. Diluted acids, alkalis, alcohol, oil and water and saline solutions do not affect PE. Concentrated, oxidising acids, such as nitric acid and halogens have a corrosive effect.
Disposal	PS is a pure hydrocarbon and thus environmentally neutral in terms of disposal. The controlled burning of this plastic does not release any hazardous emissions.	PP is a pure hydrocarbon and thus environmentally neutral in terms of disposal. The controlled burning of this plastic does not release any hazardous emissions.	PC is a pure hydrocarbon and thus environmentally neutral in terms of disposal. The controlled burning of this plastic does not release any hazardous emissions.	PE is a pure hydrocarbon and thus environmentally neutral in terms of disposal. The controlled burning of this plastic does not release any hazardous emissions.

*1 Suitability depends on the type of plastic used and the type of stress.

*2 Attention: The plastic becomes brittle at sub-zero temperatures. The use of products at sub-zero temperatures should be tested in advance for the relevant application. This information should serve as a guide and does not guarantee product properties.

*If you have any questions,
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