

SCHÜTZ ECOBULK







Full System Solution.

As a logistics tool, the SCHÜTZ ECOBULK is the very heart of a global concept that combines the benefits of one-way packaging with those of a closed-loop system.

In addition to offering safety, efficiency and sustainability, SCHÜTZ packaging comes as a zero-administration system, which means that customers and users all over the world can keep their packaging and logistics costs to a minimum while at the same time benefiting from maximum flexibility.



SCHÜTZ develops, designs and produces the SCHÜTZ ECOBULK as a packaging solution for worldwide use.

To ensure globally consistent quality and compatibility,

we base our production system on maximum possible in-house manufacture and consistent standardisation.

For full process control and reliability within our worldwide production network, we develop and build all the necessary production equipment, machinery and moulds ourselves.

That is why SCHÜTZ ECOBULKs offer maximum transport safety and continuously controlled product quality complete with hazardous goods certification.



INNOVATIVE. RELIABLE. SUSTAINABLE. GLOBAL.

Individual configurability guarantees that the

requirements of your filling goods and subsequent supply chain processes can be met by means of appropriate adjustments to the IBC.

The global SCHÜTZ network provides free collection of used ECOBULKs under the SCHÜTZ TICKET SERVICE.

Natural resources are preserved and carbon emissions reduced thanks to eco-efficient reconditioning in SCHÜTZ' own certified plants.

Worldwide Availability.



Here at SCHÜTZ we take the principle of "customer proximity" literally.

We have made it our goal to guarantee continual and seamless availability of our innovative packaging products and intelligent services. That is why we have our own production plants and service centres on all continents and are constantly expanding the SCHÜTZ network.



Our production plants and service centres in all major industrial regions of the world guarantee short distances and low logistic expenditure.

Just-in-time production and strategic capacity reserves within the SCHÜTZ network guarantee **maximum supply security and flexibility.**

Our highly efficient infrastructure and IT systems guarantee **globally standardised article and specification management** – which form the basis of our simple and fully transparent ordering system.

We ensure the **steady supply of the necessary materials** for the production of SCHÜTZ products all over the world by operating our own steel service centres and plastic components factories in Europe, Asia and the Americas and pursuing our strategic purchasing policy.

The new SCHÜTZ ECOBULK is the benchmark in terms of safety, strength and user friendliness.



Handling and Performance.

Efficient space utilisation and low weight combined with maximum safety and user friendliness – the benefits of the versatile SCHÜTZ IBC system make the ECOBULK the most frequently used IBC type. Customer feedback from all areas of industry and application and the results of complex load analyses and innovative design ideas all help us to shape the further development of our IBCs.

Dynamic and static load

In particular, the IBC's resilience in typical load situations was further optimised. The new series even survives with no adverse effects a three-hour vibration test and many tons of excess weight in the stacking pressure resistance test. These results by far exceed the statutory requirements and provide important safety reserves in day-to-day use.



Increased collision resilience during forklift operation

The new steel pallet demonstrates far greater resilience even in the toughest conditions. Thanks to their entirely new design, the corner and central blocks, produced using an innovative deep-drawing method, provide greater all-round protection from damage caused during forklift operation.

Convincing drop test results

Optimisation of all components and their interaction as well as new manufacturing methods – e.g., 4-point welding of the vertical and horizontal tubes of the steel grid – have further increased the safety and reliability of the new ECOBULK line.

Improved stacking resistance and safety thanks to 30% greater surface contact

The new corner blocks feature an optimised geometry and new centring aids. This, in combination with the new top profile of the steel grid, results in one-third more surface contact and altogether a great improvement in the nesting of stacked containers.

Quality and Reliability.



Our products are required to meet the most exacting demands in day-to-day use all over the world. The globally standardised SCHÜTZ Safety, Health, Environment and Quality Management System (SHEQ) is certified according to international standards. It is designed to ensure that all statutory and technical requirements are met and to ensure lasting superior product performance.

All QM-relevant processes and parameters are GLOBALLY STANDARDISED and subject to constant quality monitoring for compliance with SCHÜTZ SHEQ policy.

We ourselves produce all of the key components for our packaging products on the basis of THE HIGHEST POSSIBLE VERTICAL RANGE OF MANUFACTURE.



Innovative Technologies.

As a technological and innovation leader, we possess extensive know-how and apply it in a variety of ways to our packaging models. For example, we not only develop and manufacture our products, but also design and build all equipment, machinery and tools necessary for their production. As our product and production expertise are tightly intermeshed, we regularly succeed in responding quickly to market demand with newly developed cutting-edge technical innovations.





We use only **cutting-edge production technology** – all of the equipment, machinery and processes we use are constantly assessed and optimised for both economic and ecological efficiency.

Our exceptional combination of manufacturing and product expertise forms the basis for a **holistic innovation process** encompassing new products and ongoing process optimisation.

We are constantly further developing all individual components and their interaction as part of an **ongoing optimisation process**.

of IBCs, SCHÜTZ use

Carbon Nanotubes

in the serial production of electrically conductive IBC valves.





a continuous blow-moulding process developed by SCHÜTZ, SCHÜTZ ECOBULKs have unique properties and applications.



SCHÜTZ offers customers an integrated general concept and professional advice on all packaging and transport questions. Choosing the right packaging offers great potential for cutting process and logistics costs.



We help our customers to **optimise their supply chain** by analysing with them all processes and points along their supply chain – from both an economic and ecological point of view. For more information on supply chain optimisation, visit: www.schuetz.net/sco

Local SCHÜTZ sales teams all around the world and our central key account management department for our major international clients guarantee optimum sales support.

Our Technical Customer Service department offers customers its extensive technical expertise and support in many areas, including:

- product selection and optimisation
- suitability for filling goods and hazardous materials
- specification management
- standardisation of packaging
- handling, transport and securing of loads

We offer solutions for the **return and reconditioning** of emptied IBCs – among other things, with the aid of our MSDS (material safety data sheet) database, which lists over 100,000 substances.

Product Diversity.

Туре	Certification (optional)	Volume Dimensions Label plates		ites
	Hazardous goods certification UN 31HA1/Y	LX 1000 1,000 litres (275 gal) 1,200 x 1,000 x 1,160 (LxWxH)	4-field 6-field 8-field	Trong a
Maximum density 1.6			12-field	
	Hazardous goods certification ■ UN 31HA1/Y	MX 640 640 litres (170 gal)	4-field	
Maximum density 1.9	Food safety certification SCHÜTZ FOODCERT	1,200 x 800 x 1,000 (LxWxH) MX 820 820 litres (220 gal) 1,200 x 1,000 x 1,000 (LxWxH)	6-field 8-field	Times; is
	Technical cleanliness ■ SCHÜTZ CLEANCERT	MX 1000 1,000 litres (275 gal) 1,200 x 1,000 x 1,160 (LxWxH)	12-field	199673
	Ex-zone certification I for zones 1 and 2	MX 1250 1,250 litres (330 gal) 1,200 x 1,000 x 1,350 (LxWxH)		
	Hazardous goods certification ■ UN 31HA1/Y	SX-EX 1000 1,000 litres (275 gal) 1,200 x 1,000 x 1,160 (LxWxH)	4-field	Y
Maximum density	Food safety certification SCHÜTZ FOODCERT		6-field 8-field	
	Technical cleanliness ■ SCHÜTZ CLEANCERT		12-field	1999 18
16	Total and a second			

Ex-zone certification ■ for zones 1 and 2

Due to the modular structure and variety of their components and technical features, SCHÜTZ ECOBULKS can be ideally configured for an extensive range of filling goods and applications.

Tubular steel frame	PE-HD inner bottle	Filling opening	Outlet valve		Pallet
Robust tubular steel grid frame	2-layer UV protection (optional)	DN 150 S 165 x 7 AG DN 225 S 245 x 6 AG	Integrated butterfly valve DN 50	5	No bottom plate, 4-way entry wood plastic composite
Robust tubular steel grid frame	2-layer • UV protection (optional)	DN 150 S 165 x 7 AG	Integrated butterfly valve DN 50	5	With integrated bottom plate, 4-way entry
	3-layer conductive or antistatic outer layer	DN 225 S 245 x 6 AG	Screwable ball valve DN 50		steel frame
	UV protection (optional) 6-layer	DN 400 with clamp-ring	Screwable butterfly valve DN 50	•	steel skid_
	EVOH permeation barrier ■ conductive or antistatic outer layer (optional) ■ UV protection (optional)	lid	DN 150		plastic skid
					plastic-skiu
Robust tubular steel grid frame with	2-layer • UV protection (optional)	DN 150 S 165 x 7 AG	Earthed integrated butterfly valve	<u></u>	With integrated bottom plate,
additional steel case	6-layer	DN 225	DN 50	4-way entry	
	EVOH permeation barrier UV protection (optional)	S 245 x 6 AG	Earthed screwable butterfly valve DN 50	6	steel frame
					steel skid

Special Applications.



REQUIREMENTS:

- compliance with all food law requirements
- maximum food safety of material, product and process
- complete traceability of production processes and materials used



REQUIREMENTS:

- technical cleanliness of packaging is of the utmost importance
- product purity and zero contamination must already be ensured during the production process
- complete traceability of production processes and materials used
- material of components that come into contact with the filling good free of silicones

EXAMPLE PRODUCT SOLUTION:

ECOBULK MX FC

- system certification according to FSSC 22000 (Food Safety System Certification, based on ISO 22000 in combination with ISO/TS 22002-4)
- certification recognised by GFSI (Global Food Safety Initiative)
- halal and kosher certification

EXAMPLE PRODUCT SOLUTION:

ECOBULK MX CC

- top standards of cleanliness and safety apply to material, product and production processes
- extensive prevention programmes based on HACCP

CHOICE OF FURTHER OPTIONS:

- protection from visible light and UV radiation
- EVOH permeation barrier
- extremely hygienic full-plastic-pallet



CHOICE OF FURTHER OPTIONS:

- protection from visible light and UV radiation
- EVOH permeation barrier



REQUIREMENTS:

- suitability for filling products with a low flash point of ≤ 60° C
- suitability for use in areas with explosive gaseous or vaporous atmospheres
- no electrostatic charge during filling, emptying and transportation

EXAMPLE PRODUCT SOLUTION:

ECOBULK MX-EX CONDUCTIVE

- certified for use in ex-zones 1 and 2
- electrostatically safe in accordance with IEC/TS 60079-32-1:2013 and TRGS 727:2016
- outer layer in black, conductive HDPE
- dissipation of electrostatic charge of filling goods via outlet valve

CHOICE OF FURTHER OPTIONS

- antistatic outer layer (MX-EX antistatic)
- robust plastic skid pallet (earthed)
- electrically conduction due to integrated carbon nanotubes
- EVOH permeation barrier



REQUIREMENTS:

- protection of filling products (e.g., foods) from alteration/oxidation due to penetration of air from outside
- protection of ambient atmosphere from escaping substances (e.g., solvents)
- protection of packaging material from contamination by the filling goods (e.g., crop protection substances)
- extended shelf life of packaged products (e.g., resins and additives)

EXAMPLE PRODUCT SOLUTION:

ECOBULK MX-EV

- 6-layer inner bottle with integrated EVOH barrier
- reliable prevention of filling good permeation
- prevention of gases, such as oxygen,
 carbon dioxide and nitrogen, entering or escaping
- no permeation of flavours or odours
- barrier for oils and grease
- barrier preventing the diffusion of solvents

CHOICE OF FURTHER OPTIONS:

- UN certification
- explosion protection
- available as FOODCERT or CLEANCERT model

Efficiency Benefits.

The economic efficiency of a packaging is not determined by its purchase price alone but also, and especially, by the subsequent costs of transport, handling, storage, return and reconditioning that arise.



Customers benefit with the ECOBULK from a completely administration-free packaging system. Across the entire supply chain and within the global SCHÜTZ network, it offers considerable cost benefits – depending on the transport scenario, up to 50% – as compared with other packaging types.

- optimum utilisation of existing transport space because cube-shaped
- speedy filling and discharge processes using conventional equipment
- also ideal for use with automatic filling and transport systems
- large label plates for fast, easy labelling
- no additional material required for outer packaging/packing
- perfect stackability and ideal suitability for high-bay storage systems
- low-cost distribution to end user even overseas thanks to transport in ISO box containers
- simple discharge processes and very good evacuation of residues
- worldwide collection and reconditioning of packaging by SCHÜTZ
- I no cost-intensive administration, tracking or return of empty packaging



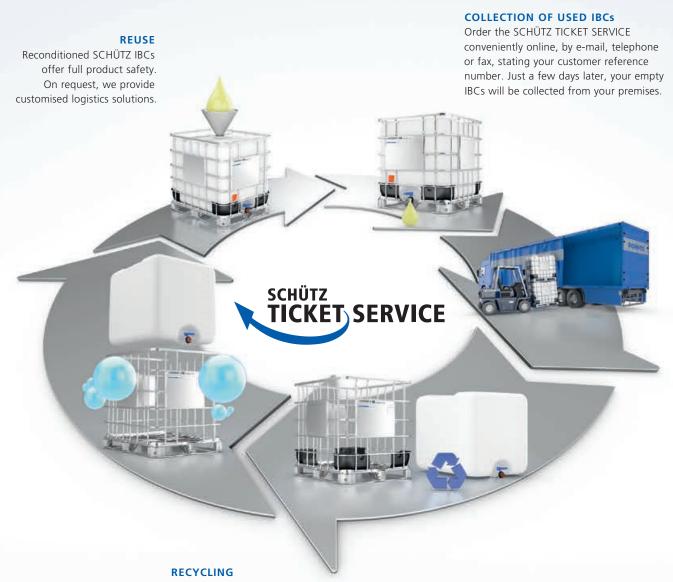












Within our closed-loop system, the materials of the plastic parts and steel components we replace are recycled for further use.

RECONDITIONING

We recondition SCHÜTZ IBCs using a globally standardised process and replace with original SCHÜTZ components all components that come into contact with the filling product. Once reconditioned, the IBCs receive UN certification for a further five years.

Collection and Reconditioning.

Thanks to the global SCHÜTZ reconditioning network, we are THE expert partner for end users of IBCs worldwide. As a unique, manufacturer-run closed-loop system, the SCHÜTZ TICKET SERVICE offers both economic and ecological advantages.

Fast

- convenient collection request online, by e-mail, telephone or fax
- collection of used IBCs within a few working days

Flexible

- collection of anything from small quantities to full truckloads
- compliance with customer specifications e.g., specific collection times and logistics solutions

Worldwide

- manufacturer-run global network of reconditioning and production sites
- collection and reconditioning in all major industrial regions

Sustainable

- globally consistent standards of service quality
- reconditioning processes in compliance with top environmental and safety standards
- preservation of precious natural resources thanks to recycling of used materials with the added guarantee of recycling traceability

As a composite packaging, the IBC owes its quality and performance to the perfect interplay of its individual components.

That is why customers using reconditioned SCHÜTZ ECOBULKS should make sure that only OEM parts were used in the reconditioning process.



Safety & Originality.



As there are practically no IBC components that do not affect the safety of the container, SCHÜTZ develops and tests all components for possible interactions throughout the full packaging life cycle. Use of SCHÜTZ OEM parts to replace components earns the container new UN certification for a further five years.

The SCHÜTZ TICKET SERVICE always offers the top reconditioning standard:

- inner bottles along with screw caps and valves are replaced by new original components.
- because all parts which come into contact with the filling goods are replaced, our reconditioned IBCs meet the same high standards of quality and safety as new SCHÜTZ IBCs.

Ecological Sustainability.

The entire system consisting of SCHÜTZ IBCs and SCHÜTZ TICKET SERVICE is designed to provide customers with not only the most efficient but also the ecologically best packaging and logistics solution. Our goal is to further reduce the amount of resources and energy required per produced unit and to continuously optimise the eco-efficiency of our packaging system.

The new full-plastic-pallet.

The premium product among pallets is an excellent example of how SCHÜTZ combines top product performance with ecological sustainability. The glass-fibre-reinforced plastic used in the pallet is made from high-grade plastic material recovered and recycled by the SCHÜTZ TICKET SERVICE. In conjunction with the innovative design of the bottom plate, the pallet guarantees a previously unattained degree of stability and strength.







SCHÜTZ GmbH & Co. KGaA

Schützstraße 12 D-56242 Selters

Phone +49 (0) 2626/77-0 Fax +49 (0) 2626/77-365 E-mail info1@schuetz.net

www.schuetz.net

AMERICAS

Headquarters USA SCHÜTZ Container Systems, Inc. 200 Aspen Hill Road US-North Branch, New Jersey 08876 Phone (+1) 908-526-6161

SCHÜTZ Container Systems, Inc. 1224 Bankhead Hwy US-Winder, Georgia 30680 Phone (+1) 770-447-5287

SCHÜTZ Container Systems, Inc. 2105 South Wilkinson Way US-Perrysburg, Ohio 43551 Phone (+1) 419-872-2477

SCHÜTZ Container Systems, Inc. 5000 Underwood US-Pasadena, Texas 77507 Phone (+1) 281-474-5200

Cardinal Container Services, Inc. 138 Walser Road US-Lexington, North Carolina 27293 Phone (+1) 336-249-6816

SCHÜTZ Container Systems, Inc. 2375 Reeves Road US-Plainfield, Indiana 46168 Phone (+1) 317-839-7121

SCHÜTZ Container Systems, Inc. 13170 C Marlay Avenue US-Fontana, California 92337 Phone (+1) 951-360-0260

SCHÜTZ Container Systems, Inc. 5500 Providence Hill Drive US-St. Joseph, Missouri 64503 Phone (+1) 816-749-0940

SCHÜTZ VASITEX Indústria de Embalagens S.A. Viela Urga, 692 BR-Guarulhos – SP-07175-332 Phone (+55) 11-2436-3760

SCHÜTZ ELSA, S.A. DE C.V. Avenida Uno No. 12 Colonia Cartagena Parque Industrial Tultitlán, Estado de México MX-C.P. 54918 Phone (+52) 55 5888-0875

Industrias Termoplasticas Argentinas S.A. Ruta 5 Km. 75 AR-6706 – Jáuregui (Buenos Aires) Phone (+54) 2323-497-596

EMEA

SCHÜTZ Ibérica, S.L. Autovía A7, km 1148.4 Camí Mas de Ramon ES-43480 Vila-seca (Tarragona) Phone (+34) 902-160693

SCHÜTZ Ibérica, S.L. Calle Alonso Barba, 16 Parque empresarial La Garena ES-28801 Alcalá de Henares (Madrid) Phone (+34) 902-16 06 93

SCHÜTZ France SASU Chemin du Buisson Gayet FR-91460 Marcoussis Phone (+33) 1-69805000

SCHÜTZ France SASU 9 rue Bénévent ZI du Technopole FR-42000 Saint-Étienne Phone (+33) 4-77 10 16 00

SCHÜTZ (UK) Ltd. Claylands Av. Dukeries Ind. Est. GB-Worksop, Notts. S81 7BE Phone (+44) 1909-478863

SCHÜTZ (Ireland) Ltd. Townamore IE-Killala, Co. Mayo Phone (+353) 96 330 44

SCHÜTZ (Italia) S.r.l. Via San Zenone, 185 IT-25020 Dello (BS) Phone (+39) 030-9771611

SCHÜTZ (Benelux) B.V. Westelijke Randweg 23 Haven 0413 NL-4791 RT Klundert Phone (+31) 168-334600

SCHÜTZ Nordic AS Norvald Strandsvei 131 NO-2212 Kongsvinger Phone (+47) 62 822750

SCHÜTZ Allemballage AB Lagervägen 4 SE-136 50 Jordbro Phone (+46) 8-500 128 08

SCHÜTZ Polska Sp. z o.o. ul. Postępu 21A PL- 02-676 Warszawa Phone (+48) 22-8463405 Deren Ambalaj Şifa Mah. Şekerpınar Cad. No: 27 TR-34950 Tuzla-Istanbul Phone (+90) 216 423 55 55

Mobilak N.A.M. Park P.O.B 36 IL-8771001 Netivot Phone (+972) 8-8521580

PARADIGM Packaging (Pty) Ltd. 6 Edison Road Mariann Ridge Estate ZA-Pinetown, 3610 Kwa-Zulu Natal Phone (+27) 31 791 0365

ASIA-PACIFIC

SCHÜTZ Container Systems (Shanghai) Co., Ltd. No. 100 Pu Gong Road Shanghai Chemical Industry Park CN-Shanghai 201507 Phone (+86) 21-6712 0777

SCHÜTZ Container Systems (Tianjin) Co., Ltd. No. 11 Saida Century Avenue Xiqing Economic Development Area CN-Tianjin 300385 Phone (+86) 22-58 33 51 08

SCHÜTZ Container Systems Co., Ltd. 86-2 Soya Hadano City JP-Kanagawa Pref. 257-0031 Phone (+81) 463-82-6600

SCHÜTZ (Malaysia) Sdn Bhd PT 27773 Jalan Nilam 3 Nilai Utama MY-71800 Nilai, Negeri Sembilan Phone (+60) 6 798 0899

SCHÜTZ (Thailand) Ltd.
Hemaraj Eastern Seaboard
Industrial Estate
500/76, Moo 2, Tambol Tasit,
Amphur Pluakdaeng, Rayong,
TH-21140 Thailand
Phone (+66) 33 069 911

PT. SCHÜTZ Container Systems Indonesia Jl. Maligi VIII Lot.R-4 Kawasan Industri KIIC Margakaya, Telukjambe Barat ID-Karawang 41361 Phone (+62) 21 2961 8080

Clover Chemical Co., Ltd. 110, Gongdan 8-ro Jillyang-eup KR-Gyeongsan-si, Gyeongsangbuk-do 712-832 Phone (+82) 2 735 7575

SCHÜTZ Australia Pty Ltd. Head Office 17 Burr Court AU-Laverton North VIC 3026 Phone (+61) 3 9360 9291

SCHÜTZ Australia Pty Ltd. 146 Cockburn Road AU-North Coogee WA 6163 Phone (+61) 8 9336 2688

SCHÜTZ Australia Pty Ltd. Building 4, 356 Bilsen Road AU-Geebung QLD 4034 Phone (+61) 7 3265 4911