



SCHÜTZ ECOBULK





**What makes the
SCHÜTZ ECOBULK
packaging so special:**



Full System Solution.	04 05
Worldwide Availability.	06 07
Handling and Performance.	08 09
Quality and Reliability.	10 11
Innovative Technologies.	12 13
Comprehensive Advice and Support.	14 15
Product Diversity.	16 17
Special Applications.	18 19
Efficiency Benefits.	20 21
Collection and Reconditioning.	22 23
Safety and Originality.	24 25
Ecological Sustainability.	26 27

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.

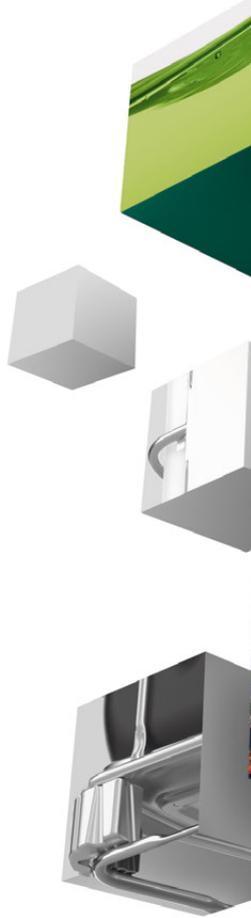
In addition to offering safety, efficiency and sustainability, SCHÜTZ packaging comes as a zero-administration system, which means that customers and users all over the world can keep their packaging and logistics costs to a minimum while at the same time benefiting from maximum flexibility.

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.**

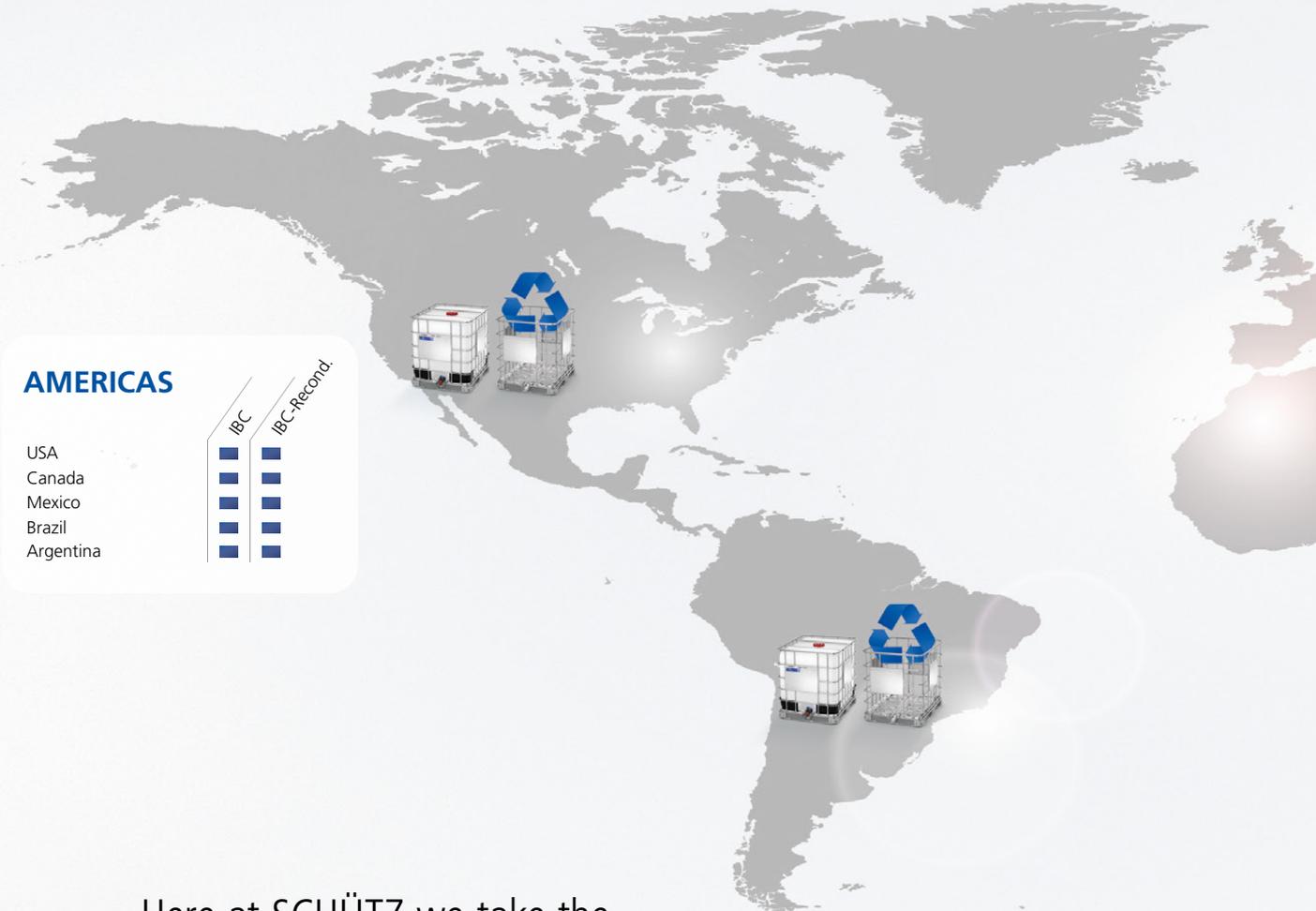


Individual configurability guarantees that the requirements of your filling goods and subsequent supply chain processes can be met by means of appropriate adjustments to the IBC.

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.



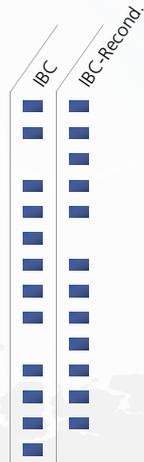
AMERICAS

	IBC	IBC-Recycled
USA	■	■
Canada	■	■
Mexico	■	■
Brazil	■	■
Argentina	■	■

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.

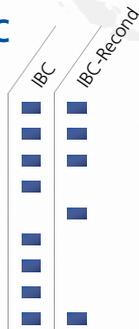
EMEA

Germany
Netherlands
Belgium
France
UK
Ireland
Italy
Spain
Norway
Sweden
Poland
South Africa
Turkey
Israel



ASIA/PACIFIC

China
Japan
Malaysia
Thailand
Singapore
Indonesia
Korea
India
Australia



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 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 robust steel pallet stands the test even in the toughest conditions. Thanks to their 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

Optimization 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 current ECOBULK line.

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

The corner blocks feature an optimised geometry and special centring aids. This, in combination with the 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.

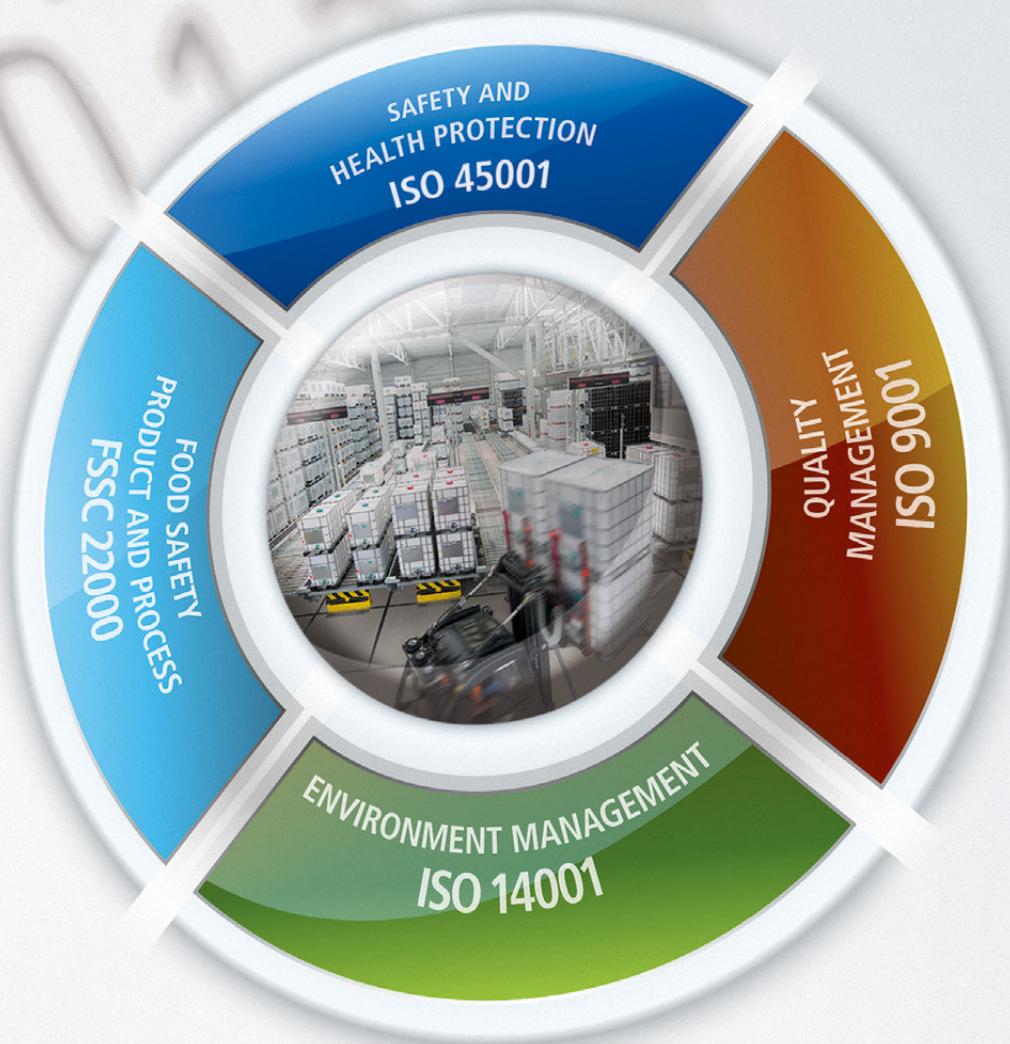


Our products are required to meet the most exacting demands in day-to-day use all over the world. The globally standardised SCHÜTZ Safety, Health, Environment and Quality Management System (SHEQ) is certified according to international standards. It is designed to ensure that all statutory and technical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





Our production system guarantees full global transparency and **100% TRACEABILITY** of the components, materials and processes used.

Ongoing practical and laboratory tests at our own test labs additionally guarantee **CONTINUOUS QUALITY CONTROL**.

We additionally employ an independent certification institute to perform **REGULAR AUDITS AND EXTERNAL MONITORING**.

Our products for special areas of application (e.g., for hazardous substances, foods, use in ex-zones), offer **FULL COMPLIANCE** with international requirements and have the relevant certification.

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.

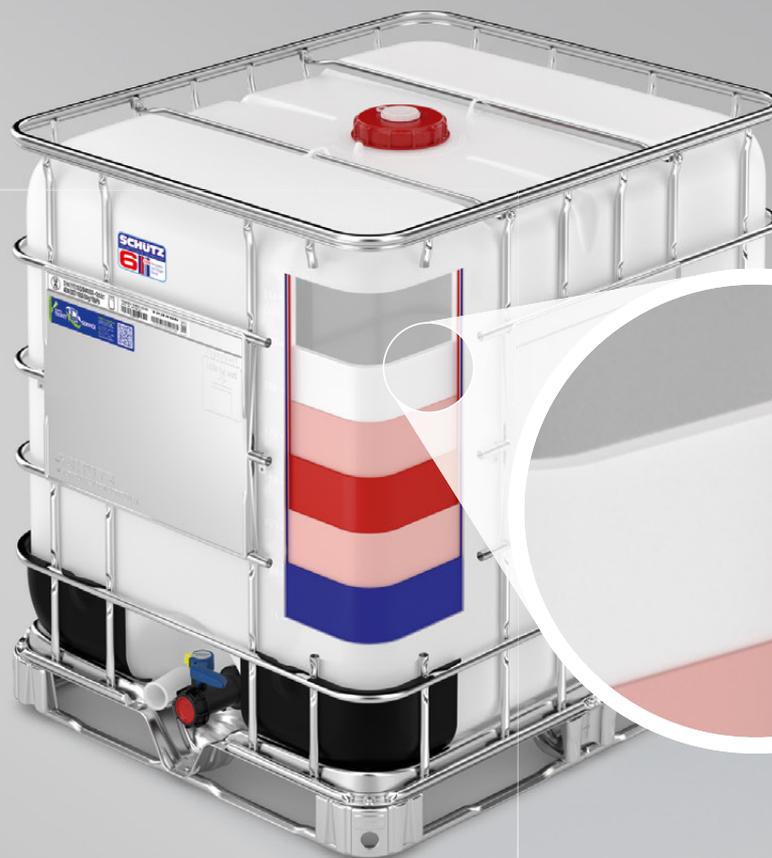




We use only **cutting-edge production technology** – all of the equipment, machinery and processes we use are constantly assessed and optimised for both economic and ecological efficiency.

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**.



Thanks to **Security-Layer Technology**, a continuous blow-moulding process developed by SCHÜTZ, SCHÜTZ ECOBULKS have unique properties and applications.



Comprehensive Advice and Support.

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 200,000 substances.

Product Diversity.

Type	Certification (optional)	Volume Dimensions	Label plates
 <p>Maximum density 1.6</p>	<p>Hazardous goods certification</p> <ul style="list-style-type: none"> UN 31HA1/Y 	<p>LX 1000 1,000 litres (275 gal) 1,200x1,000x1,160 mm (LxWxH)</p>	<p>4-field</p>  <p>6-field</p>  <p>8-field</p>  <p>12-field</p> 
 <p>Maximum density 1.9</p>	<p>Hazardous goods certification</p> <ul style="list-style-type: none"> UN 31HA1/Y <p>Food safety certification/ Technical cleanliness</p> <ul style="list-style-type: none"> SCHÜTZ FOODCERT SCHÜTZ CLEANCERT  <p>Ex-zone certification</p> <ul style="list-style-type: none"> for zones 1 and 2 	<p>MX 560 560 litres (150 gal) 1,200x1,000x750 mm (LxWxH)</p>  <p>MX 640 640 litres (170 gal) 1,200x800x1,000 mm (LxWxH)</p>  <p>MX 820 820 litres (220 gal) 1,200x1,000x1,000 mm (LxWxH)</p>  <p>MX 1000 1,000 litres (275 gal) 1,200x1,000x1,160 mm (LxWxH)</p>  <p>MX 1250 1,250 litres (330 gal) 1,200x1,000x1,350 mm (LxWxH)</p> 	<p>4-field</p>  <p>6-field</p>  <p>8-field</p>  <p>12-field</p> 
 <p>Maximum density 1.9</p> <p>Maximum density 1.6</p>	<p>Hazardous goods certification</p> <ul style="list-style-type: none"> UN 31HA1/Y <p>Food safety certification/ Technical cleanliness</p> <ul style="list-style-type: none"> SCHÜTZ FOODCERT SCHÜTZ CLEANCERT  <p>Ex-zone certification</p> <ul style="list-style-type: none"> for zones 1 and 2 <p>Fire protection (SX-D)</p> <ul style="list-style-type: none"> UL approved (NFPA 30) FM approved 	<p>SX-EX 1000 1,000 litres (275 gal) 1,200x1,000x1,160 mm (LxWxH)</p> <p>SX-D 1000 1,000 litres (275 gal) 1,200x1,000x1,160 mm (LxWxH)</p>	<p>4-field</p>  <p>6-field</p>  <p>8-field</p>  <p>12-field</p> 

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
<p>Robust tubular steel grid frame</p> 	<p>2-layer <ul style="list-style-type: none"> UV protection (optional) </p>	<p>DN 150 S 165 x 7 AG </p> <p>DN 225 S 245 x 6 AG </p>	<p>Integrated butterfly valve  DN 50</p>	<p>No bottom plate, 4-way entry</p> <p>wood </p> <p>plastic composite </p>
<p>Robust tubular steel grid frame</p> 	<p>2-layer <ul style="list-style-type: none"> UV protection (optional) <p>3-layer conductive or antistatic outer layer <ul style="list-style-type: none"> UV protection (optional)  6-layer EVOH permeation barrier <ul style="list-style-type: none"> conductive or antistatic outer layer (optional) UV protection (optional) </p> </p>	<p>DN 150 S 165 x 7 AG </p> <p>DN 225 S 245 x 6 AG </p> <p>DN 400 with clamp-ring lid </p>	<p>Integrated butterfly valve  DN 50</p> <p>Integrated butterfly valve  DN 80</p> <p>Screwable butterfly valve  DN 150</p> <p>Integrated ball valve  DN 50</p>	<p>With integrated bottom plate, 4-way entry</p> <p>steel frame </p> <p>steel skid </p> <p>plastic skid </p> <p>full-plastic-skid </p> <p>plastic frame </p> <p>full-plastic-frame </p>
<p>Robust tubular steel grid frame with additional steel case/ closed steel hull (SX-D)</p> 	<p>2-layer <ul style="list-style-type: none"> UV protection (optional)  6-layer EVOH permeation barrier <ul style="list-style-type: none"> UV protection (optional) </p>	<p>DN 150 S 165 x 7 AG </p> <p>DN 225 S 245 x 6 AG </p>	<p>Earthed integrated butterfly valve  DN 50</p> <p>Earthed integrated butterfly valve  DN 80</p>	<p>With integrated bottom plate, 4-way entry</p> <p>steel frame </p> <p>steel skid </p>

Special Applications.



SCHÜTZ FOODCERT

The new food safety standard.

REQUIREMENTS:

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

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

CHOICE OF FURTHER OPTIONS:

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



SCHÜTZ CLEANCERT

Maximum cleanliness and safety for your filling goods.

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 CC

- comply with the highest cleanliness and safety requirements for materials, products and production processes
- comprehensive risk prevention measures in production based on extensive HACCP analyses according to FMEA methodology

CHOICE OF FURTHER OPTIONS:

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



EXPLOSION PROTECTION

Packaging types for use in ex-zones 1 and 2.

REQUIREMENTS:

- suitability for filling products with a low flash point of $\leq 60^{\circ}\text{C}$
- suitability for use in areas with explosive gaseous or vaporous atmospheres
- no electrostatic charge during filling, emptying and transportation

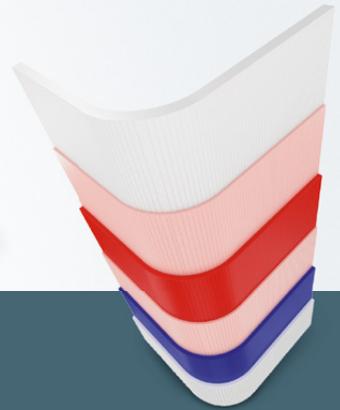
EXAMPLE PRODUCT SOLUTION:

ECOBULK MX-EX

- 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 antistatic or conductive
- dissipation of electrostatic charge of filling goods via outlet valve

CHOICE OF FURTHER OPTIONS:

- robust plastic skid pallet (earthed)
- EVOH permeation barrier



EVOH BARRIER

For particularly sensitive filling goods.

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., combustible gases / nonpolar 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 combustible gases and nonpolar solvents

CHOICE OF FURTHER OPTIONS:

- 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
- no cost-intensive administration, tracking or return of empty packaging





REUSE

Reconditioned SCHÜTZ IBCs offer full product safety. On request, we provide customised logistics solutions.

COLLECTION OF USED IBCs

Order the SCHÜTZ TICKET SERVICE conveniently online, through the app, by e-mail or telephone, stating your customer reference number. Just a few days later, your empty IBCs will be collected from your premises



RECYCLING

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, through the app, by e-mail or telephone
- 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

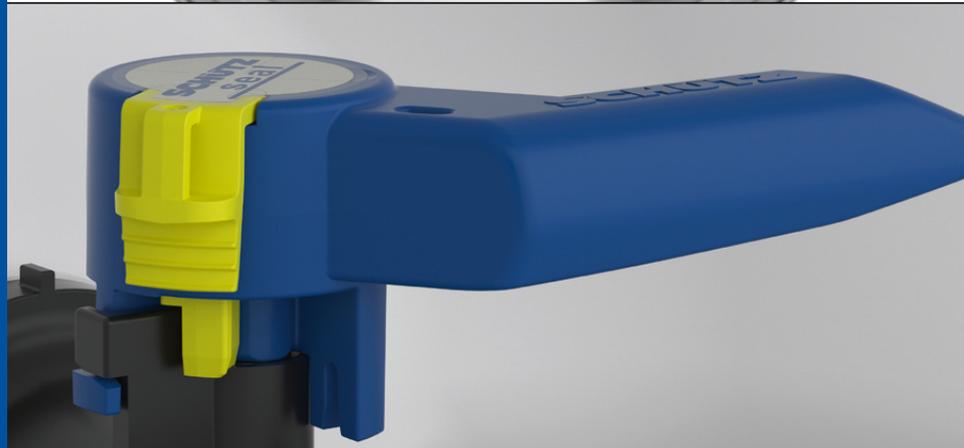
Worldwide

- 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.



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:

- Using a globally standardized, eco-friendly process, collected SCHÜTZ IBCs are refitted with original SCHÜTZ inner bottles and components.
- The result: RECOBULKS correspond in safety and quality to ECOBULKS – the world's most successful IBC system.

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.



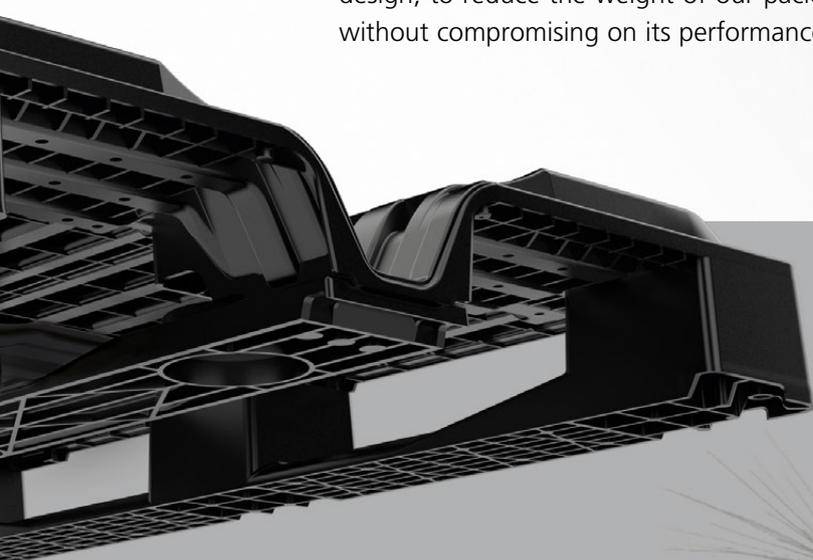
Thanks to SCHÜTZ worldwide collection and reconditioning of used IBCs, natural resources are preserved and carbon emissions reduced by hundreds of thousands of tons each year.

By using innovative technologies, we are able to further increase the proportion of materials we reuse and recycle and to avoid unrecyclable waste.

Our global presence enables us to keep distances short and accordingly to reduce the costs of transporting empty packaging.

The IBC has a lower tare weight and takes up less transport space than other packaging types – and that means lower carbon emissions per transported litre of filling goods.

We constantly strive, by means of intelligent design, to reduce the weight of our packaging without compromising on its performance.



Each reconditioned
SCHÜTZ IBC produces roughly
100 KG
less in carbon emissions
than a new IBC.



With our worldwide production and service network,
we are also close to you.

All SCHÜTZ locations can be found at:
www.schuetz.net/global

