



**RECYCLING**



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## REILING – WITH US YOU CLOSE THE LOOP

The Reiling Group is one of the leading recycling specialists in Germany for glass, plastic, wood, photovoltaic modules, and much more. The production and marketing of foam glass gravel is also part of Reiling Group's portfolio.

As recycling experts, we have been committed to the subjects of sustainability

and environmental protection for generations.

We ensure that collected recyclable materials are optimally returned to the economic cycles.

A significant proportion of raw materials, energy and CO<sub>2</sub> can be saved continually by separating glass wastes by type, professional treatment processes, and

reuse of recyclates as secondary raw materials in the manufacturing glass industry. At more than one million tons of recycled glass per year, we are one of Europe's leading recycling companies.

We offer our business partners a comprehensive network with short transport routes with a total of 15 glass locations in Germany and abroad.





## SEGMENT

# CONTAINER GLASS

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### EFFICIENCY WITH THE HIGHEST QUALITY

We are one of the market leaders in glass recycling in Europe.

As a partner of the dual systems, municipalities, industry, and commerce, we are wherever you need us. In addition to installation of containers, we ensure periodic collection or even collections just-in-time!

We offer the manufacturing glass industry best cullet quality. After all, this is

the only way to ensure the highest possible reusability in the glass melt.

Together with US researchers, we developed the X-ray fluorescence analysis (a method for separating impurities) years ago. This method has become indispensable in the international processing of cullet. We keep on working to incorporate new findings and research results into our technical processes.

This way, we can achieve the best result in terms of purity, fines content, and colour grading. We return more than one million tons of glass cullet to the material cycle every year by recycling container and flat glass sorted by type.

# SEGMENT CONTAINER GLASS

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## COLLECTION

From the collected waste glass, we produce clean material freed from impurities. We generally collect all types of glass common on the market. We collect container glass by container as a partner of dual systems and municipalities. We also support industry, trade, gastronomy, and commerce in glass recycling.

## TREATMENT

We work with state-of-the-art technology to the benefit of you as the customer. We can adjust the fines share, colour sorting, or chemical consistency to your needs. Custom grain sizes to match your needs can be provided in addition to the guaranteed purity.

## END PRODUCTS

In consideration of the individual specifications of glassworks and the glass processing industry, our products will be clean of CSP, FE and NF metals as well as glass ceramics, lead-containing glasses, and organic substances after treatment – perfectly processed for reuse in professional melting application

## WE OFFER

- Container setup
- Periodic collection
- Just-in-time collection
- Individual on-site consultation
- Seamless documentation of the processed glass quantities
- Optimal conditions

## QUALITY STANDARDS

- Purity: largely free from foreign materials such as ceramics, stone, porcelain (CSP), ferrous metal/non-ferrous metals, organic materials such as plastic and paper
- Colour distribution and colour components
- Colour mixtures are possible as well
- Grain size distribution as desired

## THE REILING PLUS

We offer all-round service along the entire value chain and place the greatest importance on trusting cooperation as partners. Continuous further development and optimisation of the recycling processes and technologies used keep making us your strong partner.





SEGMENT

# FLAT GLASS

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RECYCLABLE  
WITHOUT LOSS IN QUALITY

Thanks to a century of experience, we and our team of over 650 employees at 15 glass locations in Germany and abroad ensure that high-quality processed cullet can be reused as secondary raw material.

In order to achieve the best possible processing results, the various types of glass waste must be collected in as pure a form as possible. We offer individual container solutions from the small exchange con-

tainer to larger skips and large roll containers. Your needs, as well as the quantity and type of glass waste produced, are decisive here.

Collection of float glass, laminated glass, and insulating glass, as well as mixed fractions of different glasses is of course possible.

We will be happy to advise you personally on the disposal solution that best suits you and your needs.

SEGMENT

# FLAT GLASS

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## COLLECTION

We distinguish between float glass, windshields, various laminated safety glasses, single-pane safety glass, insulating glass, and coloured glass.

We have customised solutions for many special glasses as well. Whether as an industrial partner or small business: we facilitate flat glass recycling.

## TREATMENT

We work with the state-of-the-art technology, in part specifically developed by us in-house. Profit from this as a customer: we will adapt to your needs, be it in finegrain content, colour sorting, or chemical consistency.

## ENDPRODUCTS

Our company was one of the first providers of glass recycling in Germany. It continues to do pioneering work even now. After all, the quality of our product and the satisfaction of our customers come first. The end result is carefully sorted and approved cullet of the highest quality as a sought-after secondary raw material.

## WE OFFER

- Container setup
- Periodic collection
  - Just-in-time collection
  - On-site consultation on individual options
  - Seamless documentation of the processed glass quantities
  - Optimal conditions

## QUALITY STANDARDS

- Purity: largely free from foreign materials such as ceramics, stone, porcelain (CSP), ferrous metal/non-ferrous metals, organic materials such as plastic and paper
- Colour distribution and colour components
- Colour mixtures are possible as well
- Grain size distribution as desired
- Regular submission of all quality parameters to the glassworks

## INNOVATION

We work with the state-of-the-art reprocessing technology of X-ray fluorescence analysis. Due to our precise processing, we can remove any CSP, FE and NF metals, glass ceramics, lead-containing glass, and organic materials from the collected glass waste. As a result, our recyclates can be used in virtually any melting application to add value.





SEGMENT

# PHOTO VOLTAIC

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## FUTURE-DRIVEN END-OF-LIFE CONCEPTS

From individual PV modules to complete solar parks: this type of power generation has shown large growth rates throughout Europe since the turn of the millennium.

The plants can make an important contribution to climate protection by generating clean energy for approximately two decades. We consider it our duty to ensure sustainability of silicon-based photovoltaic modules beyond their period of use. We ensure disposal of PV modules at ElektroG-certified locations in compliance with

the law as a responsible recycling company. We also issue the corresponding recycling certificates, submit volume reports to EAR foundation and offer our customers future-driven end-of-life concepts.

## ENVIRONMENTAL COLLECTION

Two main challenges arise with regard to the end of the product life cycle when photovoltaic modules have reached the end of their service lives: legally compliant collection as well as sorted return of the valuable module components.

We dedicate ourselves to this task with great commitment and the highest level of professional know-how based on more than 15 years of experience in photovoltaic recycling.



# SEGMENT PHOTO VOLTAIC

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## COLLECTION

One challenge for the future is the environmentally sound collection of disused photovoltaic modules and the recycling of the valuable components therein. We dedicate ourselves to this task with great commitment and experience. We accept all types of silicon-based photovoltaic modules.

## TREATMENT

Highly specialised solutions are required to ensure that all components of a photovoltaic module are separated by type. We rise to the challenge of efficiently separating the materials that are firmly bonded together in the module. As a certified primary treatment facility, we cooperate with reliable partners to guarantee best results in the recycling of photovoltaic modules. Processing takes place in several steps

in this process to ensure compliance with the highest quality standards. Shredding follows on primary treatment; the materials are prepared and separated for return to the recyclable material cycle in the main process step.



## HIGHEST QUALITY

The main component of PV modules is glass. It is the main secondary raw material recovered. Other materials, such as aluminium, will also be optimally recycled and returned to high-quality applications.

Thanks to the continuous further development of recycling processes and the use of state-of-the-art sorting technologies, we can meet the high demands to the secondary raw materials obtained. With us close the loop!

## THE REILING PLUS

In order to facilitate the recycling of photovoltaic modules in future as well, Reiling actively contributes to research projects aimed at improving processing methods.





## SEGMENT

# REVITRO GLASS

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### FASCINATING COLOURS, MANY APPLICATIONS

Classically used in glass recycling, Reiling demonstrates creativity and courage in the search for new uses: The conventional “From old to new” is supplemented by “From old to different”.

The “Revitro” product range is the best example of successful upcycling. Revitro is a fully recycled product. This also means that our final product is made up of the material we receive from our customers for glass recycling.

Colour plays a major role here. The prerequisite for the intensely luminous to technically cool colours of our end product is the high colour purity of the input material. Thus, our pre-sorted collection is one of the most important prerequisites.



### REVITRO IS VERSATILE IN ARCHITECTURE, HORTICULTURE, AND LANDSCAPING:

- Planting bed and path design
- Object accents
- Parking lot partitions
- Architectural accents
- Permanently beautiful, long-lasting design of roof surfaces
- Eye-catching trade fair buildings
- Barefoot walks, etc.





SEGMENT

# FOAM GLASS

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## INNOVATIVE AND SELF-MADE

Foam glass is a new business segment of the Reiling Group. We produce foam glass in-house and distribute it throughout Europe.

Foam glass gravel is 100% recyclable and made of ground glass cullet. It stands out with its good eco-balance: only 15% of the primary energy is used for production compared to XPS products. The weight is 130- 170 kg/m<sup>3</sup>, making it approx. 600 kg lighter than conventional crushed stone or chippings.

Foam glass is considered an environmentally compatible filling and will pass the required eluate test.

The product properties make foam glass gravel suitable for a wide range of applications in building construction, civil engineering, and traffic engineering. It is used mainly as load-bearing perimeter insulation under floor slabs for foundations and for green roofs.

Foam glass gravel is the only insulation material that can be used as lightweight



fill. Considerable time savings can be generated as compared to panel insulation. All in all, the product offers a more ecological alternative to conventional materials.

Foam glass gravel is produced in our Husum plant.

With 16 depots across Germany, we offer very large area coverage and ensure customer proximity and short transport routes.





## GLASS RECYCLING LOCATIONS IN GERMANY

**Reiling Glas Recycling GmbH & Co. KG**  
 Bussemasstraße 49 • D-33428 Marienfeld  
 Phone +49 (0) 5247 - 9803-0

**Reiling Glas Recycling GmbH & Co. KG**  
 Am Wiesenbusch 34 • D-45966 Gladbeck  
 Phone +49 (0) 2043 - 97100-0

**Reiling Glas Recycling GmbH & Co. KG**  
 Appendorfer Weg 4 • D-39171 Sülzetal  
 Phone +49 (0) 39205 - 4509-10

**Reiling Glas Recycling GmbH & Co. KG**  
 Solarstraße 15 • D-04860 Torgau  
 Phone +49 (0) 3421 - 7291-0

**Ruhrglas Recycling GmbH & Co. KG**  
 Frydagstraße 39 • D-44536 Lünen  
 Phone +49 (0) 2306 - 2006-0

**R-Glas Recycling GmbH & Co. KG**  
 Söllerstraße 33 • D-21481 Lauenburg  
 Phone +49 (0) 4153 - 5833-0

## INTERNATIONAL GLASS RECYCLING LOCATIONS



**Reiling Glasrecycling Danmark ApS**  
 Maglemølle 60 • DK-4700 Næstved  
 Phone +45 (0) 555657-22

**Reiling Glasrecycling Danmark ApS**  
 Kruntappen 11 • DK-6580 Vamdrup  
 Phone +45 (0) 755838-50



**Swede Glass United AB**  
 PO Box 49 • SE-696 21 Askersund  
 Phone +46 (0) 583 821-95

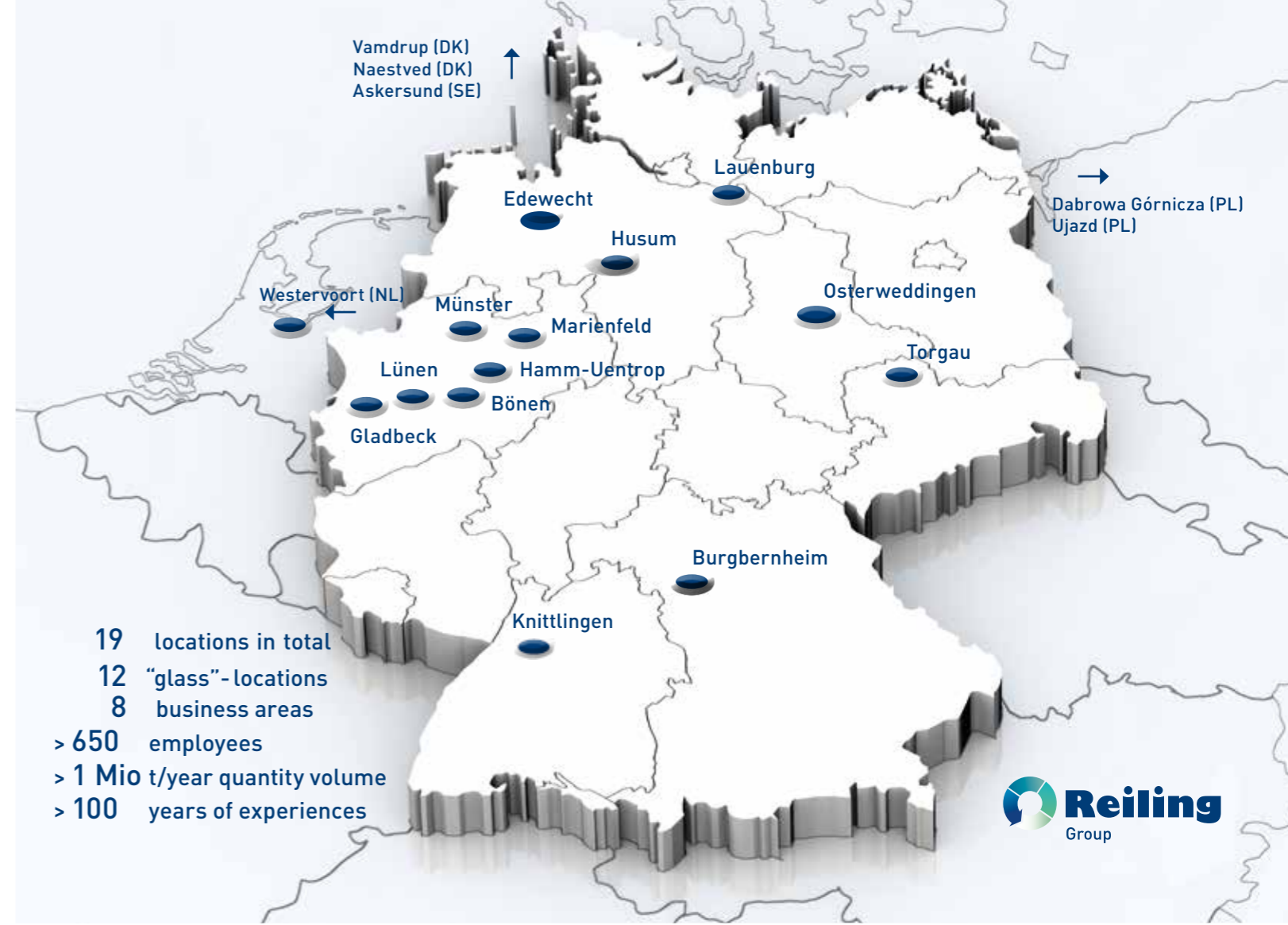


**DSS Recykling Sp.z o.o.**  
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 Phone +48 (32) 26089-75

**DSS Recykling Sp.z o.o.**  
 Osiedle Niewiadów 64 • PL -97-225 Ujazd  
 Phone +48-(32) 26089-75



**Reiling Glas Recycling Nederland B.V.**  
 Hamersestraat 8 • NL-6931EX Westervoort  
 Phone +31 26 7854925



- 19 locations in total
- 12 "glass"-locations
- 8 business areas
- > 650 employees
- > 1 Mio t/year quantity volume
- > 100 years of experiences

# VALUES

OF REILING GROUP

FAMILIAL  
SOCIAL

INNOVATIVE  
FUTURE-ORIENTED

COMPETENT  
GROUNDED

RESPONSIBLE  
FAIR

CONSCIOUS  
ECO-FRIENDLY



## ENVIRONMENTAL PROTECTION

### Sustainability equals the future to us.

*This is what we at Reiling Group are committed to. We see environmental and climate protection as an important task and take this into account in all corporate decisions.*

Protecting the environment and using natural resources sparingly depend on the commitment of every single employee and are firmly anchored in our business policy and corporate philosophy. We also rely on renewable energies in the company as far as possible. Our innovative combined heat and power plants for generating energy and heat and our photovoltaic systems for generating our own electricity are practical examples of this. Similarly, a smart energy management system demonstrates our sense of responsibility towards the environment and the efficient use of resources (DIN ISO 50001 certification).

# TRUST

## CERTIFIED DISPOSAL SECURITY

We represent quality and reliability. However, we never leave good enough alone. We are our own strictest auditors in order to continuously improve and always meet the qualitative and legal requirements. We also submit to audits by external certifiers at regular intervals.

**We are DEKRA certified:**  
Quality management to ISO 9001  
Disposal specialist operation  
Energy management to ISO 50001



Recyclables management. Recycling. With us you close the loop.





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