EXCELLENCE IN WATER QUALITY

SWARCOCLEAR

SWARCO | The Better Way. Every Day.

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Advanced Industry Systems

OUR PHILOSOPHY

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OUR MISSION

SWARCOCLEAR filter beads improve water quality.

OUR VISION

SWARCOCLEAR filter beads – the world's standard for clean water

OUR VALUES

Efficiency, Quality, Sustainability

OUR MOTTO

Excellence in water quality

SUSTAINABILITY

Refining flat glass into micro glass beads is SWARCO's core competence.

With over five decades of experience and continuous research and development activities at the Competence Center for Glass Technology in Amstetten, Austria, SWARCO has always been the front runner, setting new standards in the glass bead industry.

Circular Economy

Instead of producing flat glass by melting primary raw materials, SWARCO Advanced Industry Systems sources high-grade recycled glass from the flat glass industry, which uses 50% less energy. The recycled material used consists solely of cuttings and scraps from high-quality industrial glass (post-industrial waste). At SWARCO Advanced Industry Systems, we have the necessary know-how to produce high-grade glass beads from these recycled products. Also, the origin and trajectory of the glass can be traced. To avoid transporting the raw materials over large distances, we purchase them in the region near the different production facilities.

Energy Efficiency

SWARCO Advanced Industry Systems production facilities in Europe are ISO 50001 certified. We track and document each production unit's energy consumption. We strive to further develop state-of-the-art technology to reduce our energy consumption and our emissions and to achieve better recycling rates in the raw materials we use. At SWARCO Advanced Industry Systems, we pride ourselves on having some of the greenest glass bead factories in the world.

AN EFFICIENT FILTER MEDIUM

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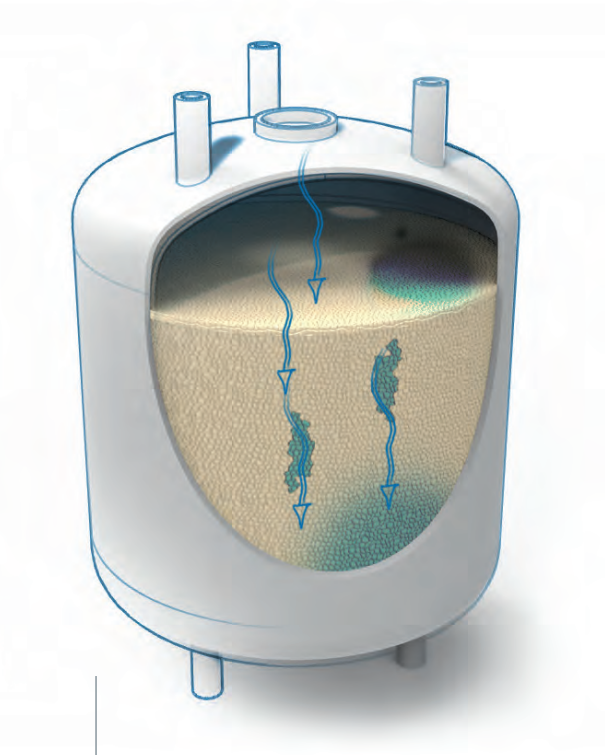
SWARCO develops and produces filter glass for water filter applications in customized OEM versions for pool system and filter manufacturers and resellers.

SWARCOCLEAR filter beads have a smooth, closed surface as well as high material hardness and surface quality. As a result, germs and contaminants do not cling on to the filter glass beads permanently. Up to 95 percent of all particles up to 1 µm in diameter are filtered out of the water. Thanks to the advantageous properties of filter glass beads, the amount of filter medium used can be reduced by up to 25 percent. By the same token, the much shorter backwash duration cuts water and energy needs significantly.

Filter glass beads offer clear advantages compared with conventional filter materials.



Glass Filter System

- Low risk of biofilm formation
- Longer service life
- Minimal energy, chemicals and water consumption
- High filtration quality
- Low pressure loss

Sand Filter System

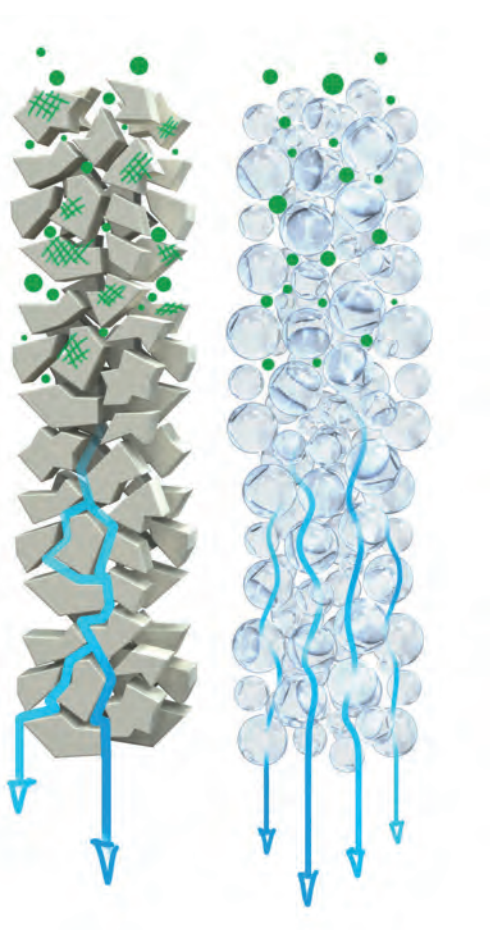
- Formation of biofilms that are harmful to health
- High energy, chemicals and water consumption
- Channel formation, and clogging

SWARCOCLEAR FILTER GLASS BEADS

Filter glass is a sustainable and environmentally friendly filter medium offering reduced water, chemicals and energy consumption.

The raw materials used for SWARCOCLEAR filter glass beads are subject to EU guidelines on chemicals and hazardous substances and comply with the REACH regulation and the RoHS directive. For an external verification of the quality and environmental focus of its work, SWARCO Advanced Industry Systems uses an ISO 9001 certified quality management system.

	Sand	SWARCOCLEAR filter glass beads
Geometry	Uneven shape	Even shape
	Porous to very porous surface	Closed, smooth surface
	Low hardness and surface quality	High hardness and surface quality
	High abrasion and wear	Minimal abrasion and wear
	High dust content	Zero dust content
Permeability	Random arrangement	Regular bead packing
	Inhomogeneous hydraulic conditions	Homogeneous hydraulic conditions
	Long retention time of pore water	Short retention time of pore water
	High risk of contamination and infection	Uniform permeability and low risk of contamination and infection
	Limited utilization of filter bed	Complete utilization of filter bed
Dirt adhesion prior to backwashing	Continuous increase of deposits and adhesions (e.g. due to porous surface)	Trapping of contaminants in voids between filter glass beads
	High risk of clogging	No deposits, adhesion or clogging



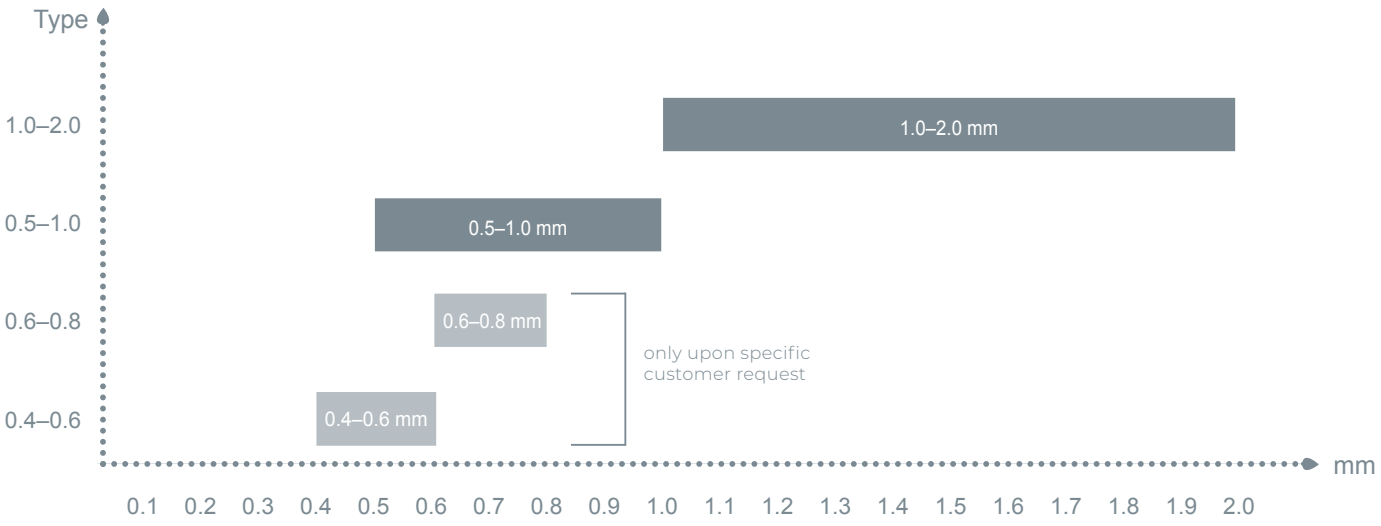
Technical Data

Material	Specific weight	Bulk weight	Roundness	Hardness
The glass filter beads are made from melted soda-lime glass cullet. Impurities are permissible only up to a max. of 0.1 percentage by weight.	~ 2.5 g/cm³	~ 1.5 kg/l	50–85%	acc. to Mohs ~ 6 acc. to Rockwell ~ 46 acc. to Vickers ~ 645

Chemical Composition

SiO_2	61.0–75.0%	CaO	7.0–20.0%
Al_2O_3	0–2.5%	Na_2O	12.0–18.0%
MgO	0–5.0%	Other	max. 2.0%

Available Grain Sizes



Further customized particle-size distributions are possible upon request.

18 kg = canister

20 kg 50 bags = 1 pallet

1000 kg = big bag

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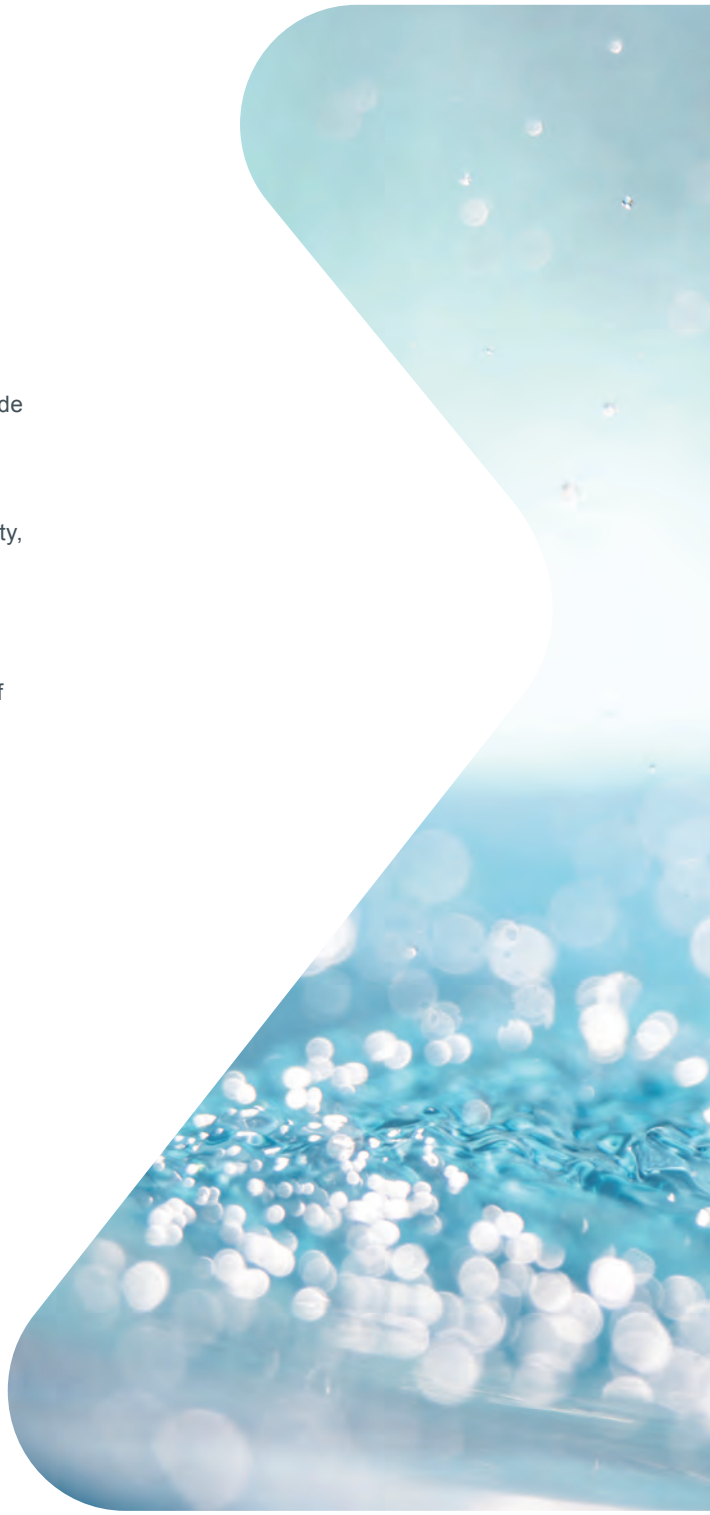
WELL ROUNDED

In 1969 we started out with the manufacture of tiny reflective glass beads for road markings. Today, we have grown into one of the world's leading manufacturers of micro glass beads, with production facilities in Europe, the United States and Saudi Arabia. Micro glass beads serve as high-grade filling agents for industrial applications and as blasting media for surface treatment applications. In traffic technology, micro glass beads which are embedded in the marking materials reflect the beam from the headlight back to the driver, making road markings visible; this enhances road safety, especially at night.

SWARCOCLEAR is a product family of the business segment SWARCO Advanced Industry Systems. As part of the international SWARCO group, SWARCO Advanced Industry Systems leverages the universal benefits of glass beads for special industry applications.

www.swarco.com/ais



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We are deeply committed to gender equality. For the sake of brevity, only one gender may be used on occasion. However, this does not imply any discrimination against the other gender.

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