## EXCELLENCE IN SURFACE FINISHING SWARCOBLAST





SWARCO | The Better Way. Every Day.

Advanced Industry Systems



## OUR Philosophy



OUR MISSION SWARCOBLAST blasting beads for surface finishing

OUR VISION SWARCOBLAST sets the highest standards for surface finishing applications around the world.

<sup>our values</sup> Quality, Reliability, Continuity

<sup>оик мотто</sup> Excellence in surface finishing

## APPLICATIONS





With their outstanding precision and long service lives, SWARCOBLAST glass blasting beads make a compelling case in a broad range of applications.

#### Cleaning

Desanding • Removal of residues • Gentle removal of paints and coatings, solder and welding residues, temper colours • Surface treatment for coatings

#### Finishing

Smoothing, lapping and polishing (reduction of surface roughness, removal of toolmarks, anti-reflective finishing, matting, satin finishing) • Exposure of surface defects

#### **Shot Peening**

Surface hardening • Increasing endurance, fatigue strength and dimensional accuracy • Improving lubricating film adhesion • Reducing notch sensitivity • Preventing stress corrosion cracking • Straightening and shaping • Compacting

#### Deburring

In deburring, burrs are removed from metal workpieces which were manufactured through punching, milling or turning.







## SWARCOBLAST CORE COMPETENCE



With their outstanding precision and first-class quality, SWARCO micro glass beads make a compelling case in a broad range of applications.

Refining flat glass into micro glass beads is SWARCO Advanced Industry Systems' 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.

Both internally and in its solutions, SWARCO has a long-standing commitment to quality and environmental protection. The raw materials used for SWARCO micro 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.

SWARCO Advanced Industry Systems production facilities in Europe are ISO 50001 certified.

The certifications give clients the certainty that they can count on quality in the long run.

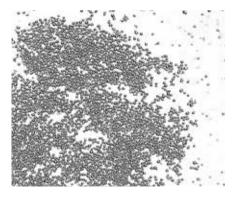


#### Circular Economy

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.

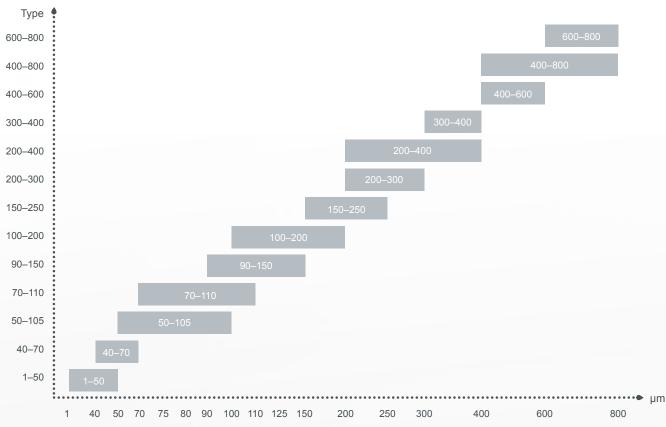


### SWARCOBLAST Glass Blasting Beads



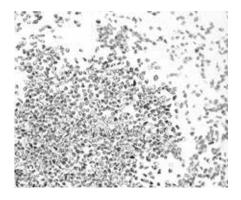
	Material	Soda-lime glass
	Description	Mineral fine blasting medium made of glass
	Process	Injector and pressure blasting processes
	Shape	Sphere
SHOT PEENING	Compacting/ Shot peen forming	X
	Deburring	Х
S NO	Stripping	Х
CLEANING	Smoothing, polishing	Х
SHOT O	Matting	Х
S	Cleaning	Х
	Texturing	Х
	Specific weight	~ 2.5 g/cm <sup>3</sup>
	Bulk weight	~ 1.5 kg/l
	Hardness	acc. to Mohs $\sim 6$ acc. to Rockwell $\sim 46$ acc. to Vickers $\sim 645$
	Packaging	25 kg 1000 kg

Available Grain Sizes



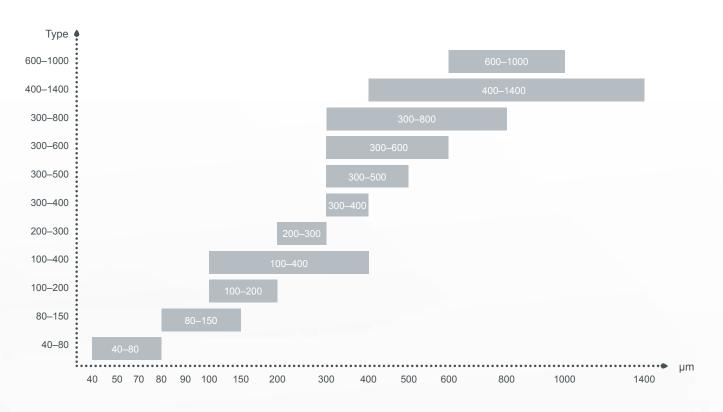
Chemical composition of glass	SiO <sub>2</sub>	68.0-75.0%	CaO	7.0–12.0%
blasting beads and glass	Al <sub>2</sub> O <sub>3</sub>	0-2.5%	Na <sub>2</sub> O	12.0-18.0%
blasting granulate	MgO	0-5.0%	Other	max. 2.0%

### SWARCOBLAST Glass Blasting Granulate



SHOT CLEANING	- - - - - - - - - - - - - - - - - - -	Material	Soda-lime glass		
		Description	Mineral fine blasting medium made of glass		
		Process	Injector and pressure blasting processes		
		Shape	Grain		
		Deburring	Х		
		Derusting	Х		
		Stripping	Х		
		Descaling	Х		
Ϋ́		Cleaning	Х		
		Specific weight	~ 2.5 g/cm <sup>3</sup>		
		Bulk weight	~ 1.5 kg/l		
		Hardness	acc. to Mohs ~ 6 acc. to Rockwell ~ 46 acc. to Vickers ~ 645		
		Packaging	25 kg 1000 kg		

### Available Grain Sizes



Further customized particlesize distributions are possible upon request.



# BLASTING MEDIA

The SWARCOBLAST product range comprises a variety of products made of mineral, synthetic or natural raw materials.

For technical data sheets on our different products and available grain size distributions visit: www.swarco.com/ais

Please consider our General Terms and Conditions and the general notes of the technical information sheets on all products described in this brochure. This information is no warranty for the properties of these materials. The user has to make sure that the material is appropriate for their intended application.





SHOT CLEANING

		Normal corundum	High-grade corundum, white	High-grade corundum, pink	
	Products at a glance				
	Material	Aluminium oxide	Aluminium oxide	Aluminium oxide	
	Description	Hard and tough, multiple-use blasting medium with sharp edges	Very hard, multiple- use blasting medium with sharp edges	Very hard, multiple- use blasting medium with sharp edges; high abrasion effect	
	Process	Pressure and injector blasting processes	Pressure and injector blasting processes	Pressure and injector blasting processes	
	Shape	Grain	Grain	Grain	
-1	Roughening	Х	Х	Х	
	Deburring	Х	Х	Х	
	Derusting	Х	Х	Х	
	Stripping	Х	Х	Х	
	Descaling	Х	Х	Х	
	Smoothing, polishing				
	Mass finishing				
	Matting	Х	Х	Х	
	Cleaning	Х	Х	Х	
	Texturing	Х	Х	Х	
-	Drying				
	Specific weight g/cm <sup>3</sup>	3.9-4.1	3.9–4.1	3.9–4.1	
	Bulk weight kg/l	1.4–2.1	1.4–1.8	1.4–1.8	
	Hardness	acc. to Mohs 9	acc. to Mohs 9	acc. to Mohs 9	
	Grain sizes	1–2000 µm	1–2000 µm	17–2000 μm	
	Packaging	25 kg 1000 kg	25 kg 1000 kg	25 kg 1000 kg	



Blasting corundum	Crushed grinding	Polyamide	Vest-Air-Fin	Corn cob shot	Walnut shell
1.1.1.1.1	wheels	plastic granulate	plastic granulate	10.000	granulate
and the second second	A	None and a second		States	Aller
	· · · · · · · · · · · · · · · · · · ·			Wan Store	
		No. of Contraction		10,000	
	Crushed grinding		11 March		1
Aluminium oxide/ Ferrosilicon	wheels and corundum dust	Polyamide 6	Thermoset/Resins	Ground corn cobs	Ground walnut shells
Blasting medium for cleaning heavily contaminated surfaces	Sharp edges	Non-abrasive, dust-free	Chemically inert, non-toxic, long service life; also available with anti-static agent	Extremely soft, organic material; absorbs water and oil	Natural, organic blasting medium without preservatives
Pressure and injector blasting processes	Pressure and injector blasting processes	Pressure, injector and airless blast cleaning processes	Pressure and injector blasting processes	Mass finishing and pressure blasting processes	Pressure and injector blasting processes
Grain	Grain	Cubic/Cylindrical	Grain	Grain	Grain
Х	Х				
Х	Х	Х	Х		Х
Х	Х				
Х	Х		Х		Х
Х	Х				
				х	х
				Х	Х
Х	х				
Х	Х		Х	Х	Х
Х	Х				
				Х	
5.0-5.5	3.8–4.0	1.14	1.45–1.52	0.4–0.6	1.0–1.2
2.0-2.5	1.5–1.8	0.7–0.8	0.7–0.8	approx. 0.7	approx. 0.7
acc. to Mohs 9	acc. to Mohs 9	acc. to Mohs 2–3	acc. to Mohs 3–4	acc. to Mohs approx. 4.5	acc. to Mohs approx. 2.5–3.5 acc. to Vickers approx. 25–30
0–3000 µm	44–2830 μm	0.5 x 0.5 – 2 x 2 mm	180–1700 μm	200–5000 μm	100–10000 µm
25 kg 1000 kg	25 kg 1000 kg	25 kg	25 kg 1000 kg	25 20g	25 kg

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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.

SWARCOBLAST 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

Imprint

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