



# Precious Metals and Chemistry

Crystals - Gauzes - Laboratory Equipment

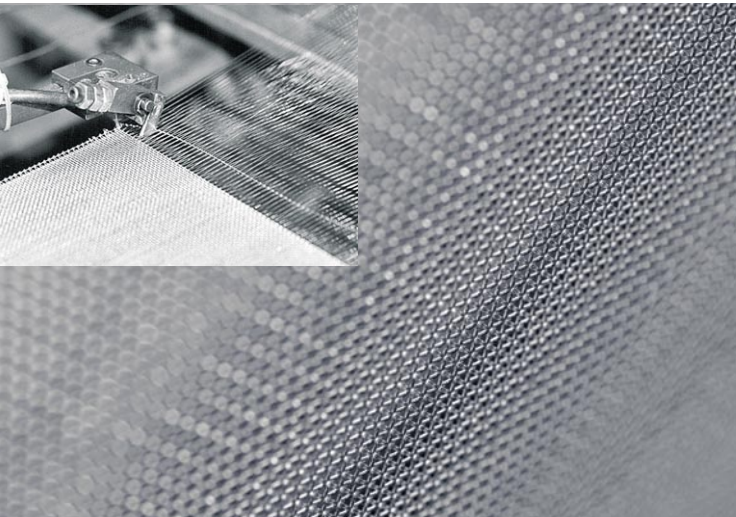


# Your Partners for Precious Metals:

Allgemeine Gold- und Silberscheideanstalt AG, Pforzheim and its subsidiary ÖGUSSA Österreichische Gold- und Silberscheideanstalt GesmbH, Wien have combined their decades of experience in the production of semi-finished products and the refining of precious metals. For their customers in the chemical industry they have specialized in high quality silver crystals, silver gauzes, thermocouple wires and precious metal laboratory equipments for various fields of application including the medical industry.

## Silver Catalysts for Formaldehyde Production

Silver gauzes and silver crystals are used as catalysts in the selective oxidation of methanol to formaldehyde.



By continuously optimizing the physical properties of both silver crystals and silver gauzes we supply our customers with innovative products whose technological development guarantees a high level of efficiency.

Silver crystals with low packing density and silver gauzes with various mesh widths and wire thicknesses widen our range of products and ensure that we meet the specific needs of each individual customer. Both partners, Allgemeine and Ögussa, are specialized in the production of catalysts: while Ögussa

produces silver gauzes corresponding to customer requirements, Allgemeine produces silver crystals in various grain sizes and structures.

## Precious Metal Refining – the Cycle of Precious Metals

Allgemeine and Ögussa provide a competent and reliable refining service for all used silver catalysts. Refining and transformation into unused silver crystals and silver gauzes are a full service package. Thus, we complete the cycle of precious metals and ensure their efficient use and economical re-use for their application in the chemical industry. Our clients are offered reliability, quality, competent technical services and consultation in all the questions on precious metal products and recycling as well as on logistics and technological and innovative support.

## Technical Data

Silver Crystals	Specification	Fractions mm	Packing Density g/l	Service
	Ag > 99,99%	0,15 - 0,35	≤ 3.800	precious metal refining
	Au ≤ 10 µg/g	0,35 - 0,50	≤ 3.300	
	Bi ≤ 10 µg/g	0,50 - 1,00	≤ 2.300	
	Cu ≤ 25 µg/g	0,50 - 2,00	≤ 2.400	
	Fe ≤ 10 µg/g	1,00 - 2,00	≤ 2.000	
	Pb ≤ 10 µg/g			
	Pd ≤ 5 µg/g			
	Pt ≤ 5 µg/g			

Gauzes	Specification	Lieferform	Service
	mesh/cm2 64 wire-ø 0,35mm weight ca. 1650g/m <sup>2</sup> fine silver 99,99%	further mesh widths and wire diameters as well as alloy compositions on request  web: breadth and length according to customer specification round shape: diameter according to customer specification	precious metal refining



## Laboratory Equipment

Precious metal laboratory equipment (crucibles, dishes, tongs and electrodes) form the core business of Ögussa, Vienna. The materials used for these products are PGM-alloys (platinum, rhodium, iridium and palladium) as well as gold. The specific combination of the single alloy elements is determined by the chemical analytical process: wetting behaviour, resistance to corrosion, melting point and creep strength are adapted according to the particular application and the various parameters in that field. These qualities can be improved considerably by using materials that underwent precipitation hardening or grain refining processes (FKS), respectively. Apart from standard solutions, Ögussa offers tailor-made materials and items.

## Thermocouple Wires - Thermowells

A further core competence of Ögussa is the production of thermocouple wires (platinum, platinum/rhodium) of the types S, R and B. Standard diameters are 0,35 mm and 0,50 mm, special diameters according to customer requirements are also offered. Delivery from stock or length according to customer specification and combined with a melted bead. The range of services for pyrometry is rounded off by matching thermowells (PtRh 10).

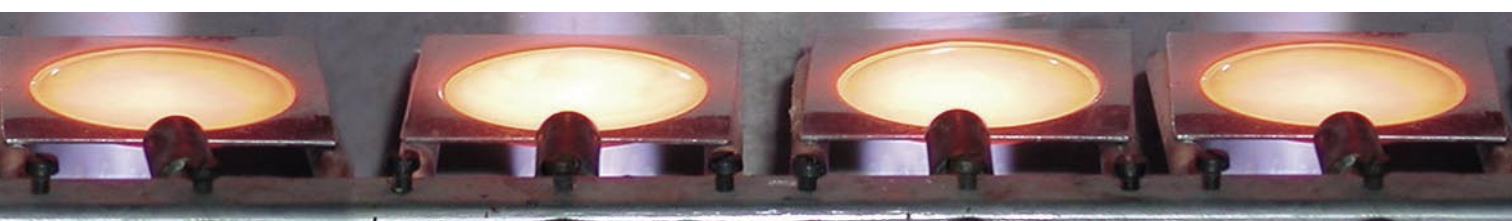
Spent or damaged laboratory equipment or thermocouple wires enter our refining processes for precious metals and are transformed into new products, thus closing the precious metal cycle for our customers both economically and efficiently.



## Technical Data

Thermocouple Wire	Specification	Diameter and Production Form Types S, R, B	Service
Typ S Type 1 + 2	Pt - PtRh 10	standard diameters 0,35 mm and 0,50 mm available from stock, special diameters on request	exchange of spent thermocouple wires, precious metal refining
Typ R Type 1 + 2	Pt - PtRh 13	on spools or length according to customer specification and combined with a melted bead	
Typ B Type 2 + 3	PtRh 6 - PtRh 30		

Laboratory Equipment Platinum	Specification	Product Form	Service
	Platinum Gold 95/5	- crucibles for x-ray analysis	transformation of used crucibles and dishes, precious metal refining, special products according to customer specification
	Platinum Rhodium 90/10	- crucibles for x-ray analysis; Pt, Pt/Au and Pt/Rh available as special alloy FKS 16 (grain refined)	
	Platinum Iridium 99,7/0,3 and 97/3	- crucibles and dishes for wet-chemical processes, combustion boats with handle, mini crucibles	
	Platinum Iridium 90/10	- Fischer-, Winkler-, Wölbling-, Schöniger-electrodes	
	Gold Platinum 90/10	- ashing crucibles	



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