



*Information given about our products, plants, equipment and processes is based on extensive research and experience in technical applications. This information is accurate to the best of our knowledge but is provided, whether given orally or in writing, without any liability on our part over and above that relating to each individual contract and we reserve the right to make technical modifications in the course of product development. Furthermore, our technical applications support service is available for further consultation and co-operation in solving any problems regarding production or technical*

*applications. This does not, however, release the clients from their obligation to check our specifications and recommendations before using them for their own purposes. This applies in particular to international deliveries, also with respect to third party proprietary rights as well as to any applications and procedures which have not been clearly specified by us in writing. In the event of claims our liability is limited to that laid down in our current Terms and Conditions of Delivery, Processing and Payment.*

printed on 100 % recycled paper



# Precious Metals and Chemistry

Silver crystals and silver gauzes

2014-07 NETZWERKENSCHLEIFE



# Your Partner for Precious Metals

For over a century, Agosi has specialised in the recovery of precious metals and in manufacturing precious metal products. Especially for its customers in the chemical industries, Agosi can offer high-quality silver crystals and silver gauzes.

## Silver catalysts for formaldehyde production

Consequent material and process improvement in the field of silver catalyst (purity  $\geq 99.99\%$ ) have resulted in a high quality standard with an outstanding economic efficiency. Best test results regarding purity, surface structure, bulk density and durability attest to the customised process improvements for formaldehyde production that Agosi has achieved.

With its own refining facilities, Agosi can offer the entire precious metal cycle and thus make used silver catalyst directly available for the customer again. Agosi is certified according to DIN EN ISO 9001, 14001, and as a specialist reprocessing company.

## Your benefits:

- » spherical shape  $\rightarrow$  high mechanical strength, hence longer lifetime of the catalyst
- » light bulk density  $\rightarrow$  longer bed life (up to 12 months), low pressure drop
- » large surface area ( $\geq 80 \text{ mm}^2/\text{g}$ )  $\rightarrow$  high methanol conversion into formaldehyde, few side products, better yield
- » high purity (silver catalyst  $\geq 99.99\%$ )

## Hightech products

Silver crystals and silver gauzes are used as catalysts in the chemical reactions of methanol to formaldehyde. By continuously optimizing the physical properties of silver catalysts we supply our customers with innovative products whose technological development guarantees a high level of efficiency. Silver crystals with low bulk density and different grain sizes as well as silver gauzes with various mesh widths and wire diameters complete our range of products and ensure that we meet the specific needs of each individual application.

Both partners, Agosi and its Austrian subsidiary Ögussa, are specialised in the production of catalysts: while Ögussa produces silver gauzes corresponding to customer requirements, Agosi supplies silver crystals in various grain sizes and structures.



## Precious Metal Refining

At the end of the silver catalyst's life, the precious metal bearing material enters Agosi's refining facilities. Refining and regeneration into high-quality products are a full service package. Thus Agosi completes the closed loop of precious metals and ensures their efficient use and economical re-use for their application in the chemical industries. Our clients are offered reliability, quality and competent technical application services in all the questions on precious metal products and recycling, as well as on logistics and technological and innovative support.



# Technical Data

## AgosiSilverCatalyst

chem. specification	standard grain sizes		bulk density g/l	service
	DIN ISO 3310 mm	mesh ASTM E11		
Ag $\geq 99.99\%$				recycling of used silver catalyst
$\leq 100 \text{ ppm}$	0.35 - 0.15	-45 + 100	$\leq 2900$	
Au $\leq 10 \text{ ppm}$	0.50 - 0.35	-35 + 45	$\leq 2500$	
Pd $\leq 10 \text{ ppm}$	1.00 - 0.50	-18 + 35	$\leq 1800$	
Pt $\leq 10 \text{ ppm}$	2.00 - 1.00	-10 + 18	$\leq 1600$	
Cu $\leq 25 \text{ ppm}$	2.00 - 0.50	-10 + 35	$\leq 2000$	
Ni $\leq 5 \text{ ppm}$				
Pb $\leq 5 \text{ ppm}$				
Cr $\leq 5 \text{ ppm}$				
Fe $\leq 5 \text{ ppm}$				
Mn $\leq 5 \text{ ppm}$				
Al $\leq 5 \text{ ppm}$				
S $\leq 10 \text{ ppm}$				
Cd $\leq 5 \text{ ppm}$				
Further grain sizes on request.				

## AgosiSilverGauzes

specification	product	service
mesh/cm <sup>2</sup>	64	further mesh widths and wire diameters as well as alloy compositions on request
wire- $\phi$	0.35mm	
weight	ca. 1650g/m <sup>2</sup>	rectangular: breadth and length according to customer specification round: diameter according to customer specification
fine silver	99.99%	
		precious metal refining

