



# The World of Metal Finishing

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our know-how is your success





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# IWG - The Company

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OUR MISSION

## The Perfect Surface

“Our know-how is your success” – for more than 60 years. We see ourselves as a partner that is permanently accessible to our customers. Thanks to our comprehensive knowledge and experience, we can assist our customers in selecting the optimal process, developing new colour nuances, and implementing new systems, among other activities.



# Why IWG

We do not do off-the-shelf. Innovation has always been an essential part of our DNA. We complement your continued development with our innovations, thus creating tailor-made solutions. Our many years of experience can help you choose the process that is optimal for you.

## Our USP



### Fast Service

We react to your requests straightforwardly and swiftly.



### Flexibility

has priority for us as a family business. After all, your needs are as diverse as our solutions.



### Excellent Product Quality

We aspire to produce the perfect surface.

IWG WORLDWIDE

## IWG around the Globe



We are always close by. We are near to our customers thanks to our international network. We offer worldwide service and fast delivery, wherever you are.



ENVIRONMENT

## Sustainability plays a major Role



We are tackling today's challenges using a variety of measures, ranging from sustainable, environmentally friendly product solutions that promise better performance at lower costs, and the economical use of resources, to maintaining social and environmental standards within our supply chain.

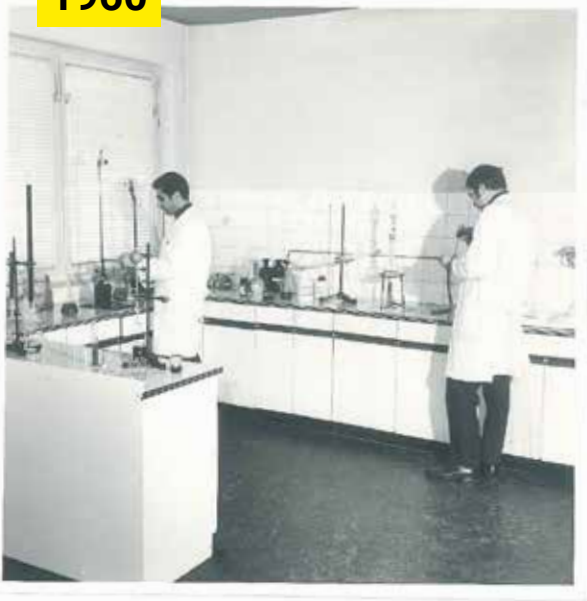


OUR HISTORY

## More than 60 Years of IWG

The pioneering spirit of our founder, Walter Garhöfer, coupled with great commitment, curiosity, and decision-making power, created the basis of our successful company. Off-the-shelf products still have no place at IWG. Garhöfer's son, Werner Garhöfer, continued to develop IWG with his innovative ideas. Christian Garhöfer, the third generation of the family, has been running the company since 2012.

1960



OUR HISTORY

## IWG then...

Founded by Walter Garhöfer in Vienna in 1962, IWG initially focused exclusively on the development of non-precious metal electrolytes. The product range was expanded continuously and soon precious metal electrolytes began to play an important role in our business. The opening of the Hong Kong unit in the early 1990s created access to the Asian market and was a milestone for the company.

OUR HISTORY

## ... and now

At present, more than 30 highly competent and vastly experienced employees work every day for our customers. However, not only do the demands of our customers change over time. Our more than 3,000 products are also being further developed on an ongoing basis.

**And we keep growing! Our fully automated plating service will start operating by end 2022.**

2022





ABOUT US

## Our Team

The IWG team features employees with a wide variety of qualifications, experience, and mindsets. This diversity has great potential, a factor we consider a permanent part of our open and appreciative company culture. We respect, encourage, and support our staff at IWG to provide our customers the best results possible – every single day.



IWG QUALITY RESPONSIBILITY

## Made in Austria

The quality of our products is paramount to our ISO certified company. No compromises!

Every single batch is checked before it leaves our Production Department. All our products are manufactured exclusively in our company headquarters in Lower Austria – made in Austria!





OUR COMPETENCES

## IWG Lab Solutions

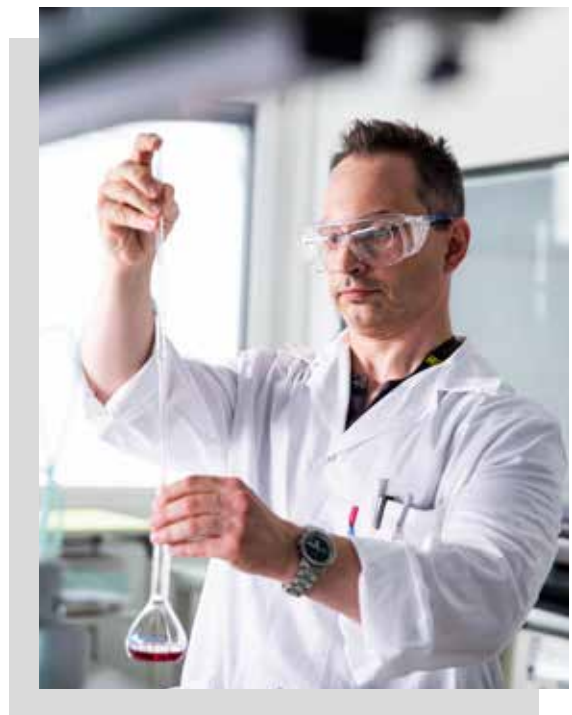
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IWG LAB SOLUTIONS

### **In-House Laboratory**



A regular, monthly bath analysis is included as a special service for IWG customers. No bath is too small or too big. The smallest bath has a volume of 10 litres and is analysed by our highly-specialised lab technicians with the same level of precision as the biggest bath with a volume of around 3,500 litres. Planned or unplanned, we can quickly determine the various bath parameters to ensure consistent quality for customers' workpieces.







FROM THE LABOR

## Analysis

We can carry out our analyses quickly and precisely to help support our customers' production, thanks to our staff's high levels of training and our cutting-edge measuring instruments.

### Our Services at a Glance



#### Analysis of your workpieces

using FIB-SEM electron microscope



#### Analysis of your electrolytes

using titration or ICP spectrometry



#### On-site service

We can visit you and help you with troubleshooting.

ANALYSIS OF WORKPIECES AND ELECTROLYTES

## Troubleshooting

We can analyse your baths and examine your workpieces at our site, using damage-limiting methods with the following instruments:

- FIB-SEM electron microscope with EDX detector and TOF-SIMS mass spectrometry
- X-ray fluorescence measuring instrument
- CASS and SO<sub>2</sub> test instruments
- separating instruments for grinding and sample preparation
- various optical microscopes and colorimeters
- ICP spectrometry
- AAS - atomic absorption spectrometry
- autotitration
- ion chromatography with mass spectrometry
- gas chromatography with mass spectrometry
- UV spectrometer

A SPECIAL HIGHLIGHT FOR YOU

## FIB-SEM

We are now able to provide even more precise analyses than ever before. The Tescan Amber X is a unique combination of field-free, ultra-high resolution BrightBeam™ SEM optics and Xenon PlasmaFIB. It allows for the precise preparation and analysis of various applications. This level of analysis is unique in Austria.





UNSERE KOMPETENZEN

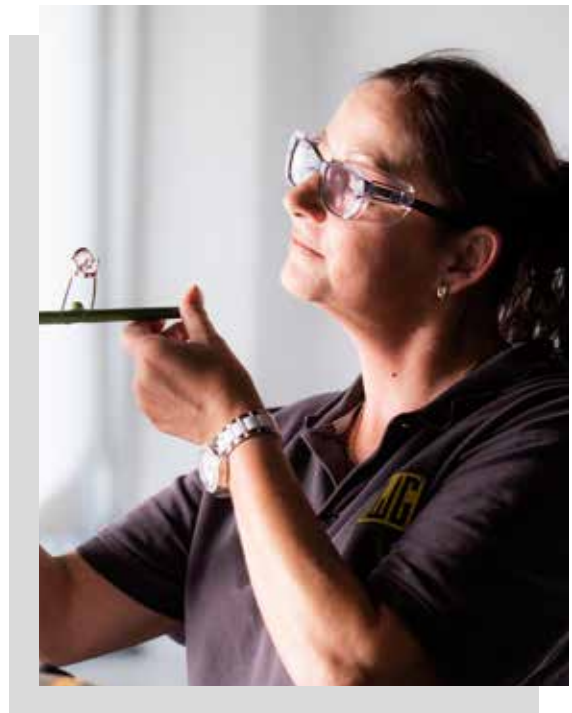
# IWG Chemicals

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IWG CHEMICALS

## Our Aspiration: The Perfect Surface

We aspire to produce the perfect surface and this is why we design individual solutions for our customers. We develop electrolytes for high-quality results in our ultra-modern laboratories, no matter how complex the task – whether for decorative or more sophisticated technical purposes. Additionally, we can offer the entire range of metal plating: tanks, rectifiers, anodes – all paired with many years of experience in facility planning.





IWG CHEMICALS

## IWG Precious Metals

Our standards are as high as those of our customers if not more. This is why we continually keep developing our precious metal electrolytes. Our customers, manufacturers from various industries – jewellery, automotive, and electronics – trust in our know-how and over 60 years of experience in electroplating.

<sup>79</sup>  
**Au**

### **Aurega®**

our gold electrolytes

Aurega®, our gold electrolytes, can be used for both decorative and technical applications.

<sup>45</sup>  
**Rh**

### **Rhodega®**

our rhodium electrolytes

Rhodega® succeeds with high abrasion resistance, excellent whiteness, and tarnish protection.

<sup>78</sup>  
**Pt**

### **Platega®**

our platinum electrolytes

Platega®, an excellent, cost-effective alternative to pure rhodium, such as Platega® pure or blend for example.

<sup>47</sup>  
**Ag**

<sup>44</sup>  
**Ru**

<sup>46</sup>  
**Pd**

### **Other electrolytes**

**Aurega®, Ruthega® & Pallega®**

Discover our Silver, Ruthenium and Palladium electrolytes as well.



IWG CHEMICALS

## Continuous Innovation & Development

The demands and standards set by our customers change constantly. This is why it is so important to recognise them as soon as possible and find solutions through innovation and continual development. And we accept this challenge gladly. In doing so, we are confronted by issues such as economic viability, efficiency improvement, cost reduction and quality standards.



IWG CHEMICALS

## IWG Non-Precious Metals

Many of our trusted products are non-precious metal electrolytes, such as numerous nickel, copper and tin electrolytes, as well as those made from their alloys.

<sup>29</sup>  
**Cu**

### Cudega

Copper, white and yellow bronze

Our copper baths serve as an intermediate layer for many basic materials. Whether cyanide-based or acid-based, these high-performance electrolytes produce smooth, high-gloss surfaces, free from internal tension, which are easy to shape and polish.

White bronze produces excellent corrosion protection, a feature we have been able to improve considerably thanks to constant further development, in addition to its visual appeal.

<sup>28</sup>  
**Ni**

### Nidega

Chemical nickel or nickel for electroplating

Our nickel electrolytes for electroless plating create a uniquely even layer thickness, even for complex elements. With a phosphor content of 11-13 %, Nidega chem high P HS reaches a consistent deposition rate of 14µ/h over the bath's entire service life, making it about 40 % faster than conventional baths!

Nidega pure:  
Our nickel electrolytes for electroplating are very ductile, generate high-gloss surfaces with excellent levelling, good throwing power and corrosion protection. Suitable for rack and drum applications.

<sup>50</sup>  
**Sn**

### Stadega

Tin and tin-nickel

Our sulphuric acid-based tin processes are excellent for racks or drums and generate even, high-gloss layers. Great for soldering with good conductivity.

Stadega blend Ni black is our cost-effective response to ruthenium. Our baths achieve anthracite grey layers with an L\* value of up to 57 using a blackening agent. Tin-nickel black is very corrosion-resistant, even when the layers are very thin. Chemical resistant, heat-resistant and low-glare.

<sup>24</sup>  
**Cr**

### Crodega

Chrome 3+, the environmentally friendly alternative

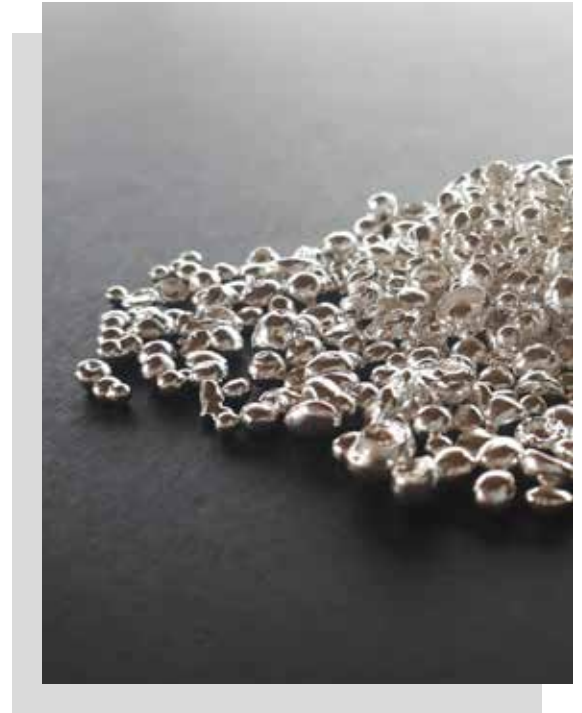
Chrome plating has become a staple in the automotive industry thanks to its layering qualities, such as high durability, low wear, and excellent corrosion protection. Chrome layering is also visually appealing, in addition to protecting various vehicle parts from corrosion and oxidation. We offer trivalent chrome electrolytes as an alternative to chrome 6, which are far more environmentally friendly, thanks to their lower chrome content.



IWG CHEMICALS

## The Cycle of Electroplating Recycling. Turning Old into New!

The recycling of precious metals is one of our core competences. We use effective methods to recycle precious metals, such as gold, palladium, rhodium, and platinum, so we can re-use them. This is environmentally friendly and also good for customer budgets.



### Recycling at IWG

**Cost-effective**

Electroplating recycling is cost-effective and good for customer budgets. We recover precious metals for future use, thanks to our effective recycling methods.

**Transparent – with the IWG Precious Metal Account**

It's easy! The value of the precious materials is reimbursed or credited to the precious metal account of our customers and then used for new baths at any time. Reliable, safe, and transparent. Every single step of the process – from the reception of the material to the invoicing – is fully documented and can be traced easily.

**Customer-specific Solutions**

State-of-the-art analysis methods using ICP-OES ensure precise, reliable results for your scrap. We possess decades of experience and update the necessary processing steps on an ongoing basis. This is analysis at the highest level of precision.

**Efficiency**

Maximum recovery using a combination of various recycling methods, so even the minutest traces of precious metals can be recovered. The costs for the separation process remain low.

**Environment**

We recover precious metals using our own separation process exclusively so that we can offer them again to our customers. 100 % recycling = 100 % sustainable.



OUR COMPETENCES

# IWG Plating Service

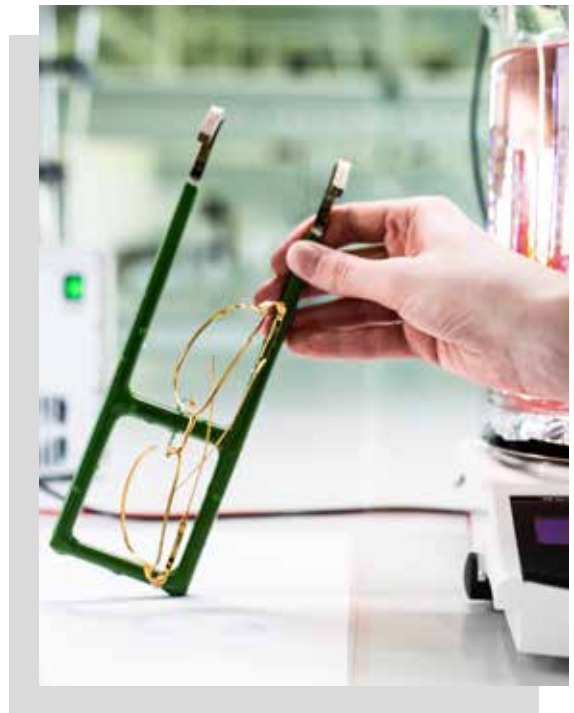
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IWG PLATING SERVICE

**No Order is too big or too small.**



It is our creativity that really sparks our innovative strength, as well as our competence and long years of experience. You are our most important input provider when it comes to optimizing or newly developing your baths! Our more than 3,000 products cover the entire range of electroplating.





TESTING AT IWG

## Experimental Plating

Newly developed plating baths can begin operating with a volume of up to 120 litres and simulated using real test conditions. We can also offer small-scale series sampling and production for parts used in jewellery and for technical equipment.

### Our Services



#### Consultation & Solutions for Complex Shapes

We redefine service.



#### Prototype Development

Ideal test conditions for your products.



#### Small-scale production

We make perfect, exclusive small-scale series of products for you.

IWG PLATING SERVICE

## Our new Plating Service

We are investing in a fully automated plating facility for the chemical nickel plating of aluminium parts and in the establishment of R&D facilities for rhodium alloys.  
**At IWG by the end of 2022!**



IWG PLATING SERVICE

## Competence Center

We plan to automatise our core processes in the future, producing larger quantities in-house, becoming 30 % faster in the plating of aluminium parts and catering to higher customer demand. We are already looking forward to innovative products by renowned manufacturers and new technological standards made possible with the opening of our new production facilities.



# Our Responsibility - Into the Future with a good Feeling

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RESPONSIBILITY

## Our Values

Only those conscious of their responsibility can act accordingly. We truly believe in this statement. For us, corporate responsibility is constant further development in a wide spectrum of different fields – from sustainable product solutions, social commitment, workplace safety for our staff, careful use of resources, and compliance with social and environmental standards, to our contribution to climate protection. Sustainability has long since turned into a core company objective from a peripheral activity. We can proudly say we are working consistently on reducing our ecological footprint.





**Code of Conduct**

Compliance with our business principles is a natural part of our daily work: unconditional respect for accepted ethical principles, such as respect for human rights, respect for the different cultural backgrounds of our staff and business partners and strict adherence to existing laws.

**Compliance with Due Diligence Obligations along the Supply Chain**

We ensure our products do not contain raw materials from illegal or unethical sources. Compliance audits based on the RJC "Code of Practices" (COP) are conducted by independent third parties.

**Member of the Responsible Jewellery Council**

Our goal is to strengthen people and the environment in the long-term through sustainable actions. This is the principle we follow every day. We are a certified member of the RJC and commit ourselves to maintaining ethical, social, environmentally friendly, and human rights standards across the entire supply and production chain. We conduct our daily business in compliance with the RJC "Code of Practices" (COP).



QUALITY, ENVIRONMENT & SAFETY

**We focus on the Details**

**Quality**

By certifying our quality management systems according to ISO 9001, we create the necessary conditions for the implementation of an optimal quality standard. With the ISO 9001 quality management system, we ensure that we are able to meet the requirements of our customers as well as legal requirements for our products and services. This includes consistent processes, the continuous further development of our processes as well as the ongoing consideration of risks and opportunities.



**Environment**

We work systematically on reducing our ecological footprint. Our operating site is a genuine green building, whether thanks to our photovoltaic system with up to 220 kW of electrical output or our environmentally friendly water-to-water heat pumps.

**Safety**

Our company's efficiency is closely linked with the protection of our staff, as well as the protection of our environment and the safety of our products. The constant implementation of all relevant environmental and safety regulations is our No. 1 priority.

# Our Product Range

Name of Product	Decorative Application			Functional Application	Method		LAB Values		
	Writing utensils	Jewellery	Glasses	Plug connectors	Bath	Pen	L*	a*	b*
<b>Silver</b>									
Aurega® pure 380	x	x	x	x	x		~98,5	~0,2	~2,5
Aurega® pure 100				x	x		~98	~0,1	~3
Aurega® pure 390	x	x	x	x	x		~97	~0,2	~3
<b>Gold</b>									
Aurega® pure 1N14B	x	x			x		~87	~3	~23
Aurega® pure 112	x	x			x		~84,5	~2,5	~16,5
Aurega® pure Auroprint	x	x	x		x		~86	~7,5	~30
Aurega® pure 218M	x	x	x		x		~80	~5,5	~25
Aurega® pure DE	x	x			x		~84	~8	~29,5
Aurega® brown	x	x			x		~72	~9	~20
Aurega® for pen 0N		x				x	~88	~0,5	~21
Aurega® for pen 2N		x				x	~87	~4	~28
Aurega® for pen R		x				x	~89	~6	~37
Aurega® yellow for pen		x				x	~90	~4,5	~34
Aurega® green		x			x		~78	~6,5	~17
Aurega® rose 1 for pen		x				x	~87	~9	~17
Aurega® rose 3 for pen		x				x	~87	~9,5	~13
Aurega® pure 1114M	x	x			x		~87,5	~3	~23
Aurega® pure 1115	x	x	x		x		~84,5	~3,5	~18,5
Aurega® blend Cu 118CX	x	x			x		~88	~6	~16
Aurega® pure 1N14	x	x			x		~86	~5,5	~30
Aurega® blend Pd 2001 TR			x		x		~79	~4	~15
Aurega® pure 210H	x	x	x	x	x		~88,5	~6	~34
Aurega® pure 211Ti			x		x		~85	~10,5	~39
Aurega® pure 210GM	x	x	x		x		~83	~9	~36
Aurega® pure 218	x	x			x		~86,5	~5	~28
Aurega® pure 240KP		x			x		~89,5	~7,5	~38,5
Aurega® pure 240KP 1N		x			x		~89	~5	~23
Aurega® pure 240KP 2N		x			x		~87	~5	~20
Aurega® pure 240KP 3N		x			x		~86,5	~5	~17
Aurega® pure 240KP 4N		x			x		~86,5	~6,5	~17
Aurega® pure 240KP 5N/1		x			x		~86,5	~9	~14
Aurega® pure 240KP 6N		x			x		~86	~7	~15,5
Aurega® pure 240KP 9N		x			x		~88,5	~6,5	~33
Aurega® pure 2N18	x	x			x		~87	~5	~26
Aurega® blend Ag 3030	x	x	x		x		~96	~1	~7
Aurega® blend Cu 630	x	x	x		x		~86	~8,5	~14,5
Aurega® blend Cu 635	x	x	x		x		~85	~9	~16
Aurega® blend Pd 9000	x	x	x		x		~83	~6	~18

Name of Product	Decorative Application			Functional Application	Method		LAB-Values		
	Writing utensils	Jewellery	Glasses	Plug connectors	Bath	Pen	L*	a*	b*

#### Palladium

Pallega® blend Co	x	x	x	x	x		~84	~1	~5
Pallega® pure EC	x	x	x	x	x		~86	~1	~5
Pallega® blend Fe	x	x	x	x	x		~85	~1	~5
Pallega® pure FS	x	x	x	x	x		~84	~1	~6
Pallega® pure HT	x	x	x	x	x		~87	~1	~5
Pallega® pure TS	x	x	x	x	x		~87	~1	~5
Pallega® blend Ni	x	x	x	x	x		~84,5	~1	~5

#### Platinum

Platega® blend Rh	x	x	x		x		~89	~1	~4
Platega® pure K1	x	x	x		x		~86,5	~1	~5,5

#### Rhodium

Rhodega® blend Ru	x	x	x		x		~90	~0,5	~3
Rhodega® blend Pt	x	x	x		x		~90	~1	~3
Rhodega® pure blue		x				x	~35	~-7	~-20
Rhodega® pure blue for pen 100					x		~35	~-10	~-20
Rhodega® pure black 100					x		~63	~1	~3
Rhodega® pure C2	x	x	x	x	x		~91	~0,5	~3
Rhodega® pure K3	x	x	x	x	x		~91	~0,5	~3
Rhodega® pure for pen 100						x	~90	~1	~3

#### Ruthenium

Ruthega® pure HS2	x				x		~76	~0,5	~3,5
Ruthega® pure HS2/O	x				x		~55,5	~0,5	~2
Ruthega® pure N	x				x		~64	~1	~3,5
Ruthega® pure für pen	x					x	~71	~1	~4,5
Ruthega® pure black for pen	x					x	~57	~0,5	~2

#### Bronze

Cudega blend Sn white 15	x	x	x	x	x		~88	~0,2	~4,5
Cudega blend Sn yellow 16	x	x	x		x		~87	~2	~15

#### Copper

Cudega pure 650	x	x		x	x				
Cudega pure 100	x	x		x	x				

#### Nickel

Nidega pure Sulfamat HG				x	x				
Nidega pure GAP				x	x				
Nidega chem high P				x	x				
Nidega chem mid P				x	x				
Nidega chem high P HS				x	x				
Nidega chem low P black				x	x				

Name of Product	Decorative Application			Functional Application	Method		LAB-Values		
	Writing utensils	Jewellery	Glasses	Plug connectors	Bath	Pen	L*	a*	b*

#### Degreasing

Rostex	x	x	x	x	x				
Degreasing 1016 SP	x	x	x	x	x				
Degreasing 1018	x	x	x	x	x				
Degreasing EE 1070	x	x	x	x	x				

#### Ultrasound Cleaner

Uniclean 50	x	x	x	x	x				
Uniclean 70	x	x	x	x	x				
Uniclean 90	x	x	x	x	x				

#### Stripper

Rackstripper E									
Uniex									
Nifex									
Goldex 3									
Nickelex									
Elektrolytischer Silberstripper Konzentrat									

#### Protect Passivierungen

Arega® protect 100					x				
Arega® protect 200					x				
Cudega protect 100					x				

#### Aluminium Pretreatment

Zincatepickle									
Alubond									
Alubond 2									
Aluox									

#### Accessories

Anionentauscherharze									
Harz zur Cyanidentfernung									
Palladium recovery resin									
Gold recovery resin									
Gleichrichter Labor									
Gleichrichter Plating Electronic									
Cu Anoden									
Stifte zum Tampongalvanisieren									
Tamponspitzen									
Zinn Anoden									
Ni Anoden									
MOX Anoden									
Platinierte Titan Anoden									

Name of Product	Decorative Application			Functional Application	Method		LAB-Values		
	Writing utensils	Jewellery	Glasses	Plug connectors	Bath	Pen	L*	a*	b*

Tin										
Stadega blend Ni black	x	x	x	x	x					
Stadega pure 283	x	x	x	x	x					

Electropolishing										
Glanzbeize MS 4										
Aluox										

Precious Metal Alloys										
Pallega® Palladiumsolution 100	x	x	x	x						
Aurega® Goldcomplex 68,2%	x	x	x	x						
Aurega® Goldcomplex 210H	x	x	x	x						
Aurega® Goldcomplex 210H/2	x	x	x	x						
Aurega® Silvercomplex 54%	x	x	x	x						
Aurega® Palladiumsolution 9000	x	x	x	x						
Aurega® Palladiumsolution 2001	x	x	x	x						



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