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Electrolytes for decorative applications

Electrolytes for decorative applications

Our decorative processes fulfil the needs and wishes for a (precious) metal surface that is not only visually high-quality. Decide on the colour, gloss and reflection of your product, but also on its haptics and abrasion resistance - and thus on its value and elegance in the view of the end user.

Of course, we always keep an eye on current trends and price developments for individual raw materials. In this way, we can offer you modern processes that are as cost-efficient as possible in the following segments, for example.

Jewelry and Livestyle Articles

Electrolytes that allow an extremely fine optical tuning of final surfaces according to precise ideas - for all jewelry as well as lifestyle articles such as writing utensils or bathroom fittings.

Clothing and fashion

Specially developed coating processes that have been established for decades for particularly skin-friendly and yet high-quality surfaces on a large scale.

Corrosion protection

Coatings for long-lasting and reliable corrosion protection especially for surfaces that are subject to wear and tear, such as fittings, fixtures and accessories.

Color overview

RHODUNA®
J1

RHODUNA®
Diamond Bright

RHODUNA®
271

RHODUNA®
275 Black

RHODUNA®
471 Black

RHODUNA®
PT ONE

PLATUNA®
Alloy

PLATUNA®
Alloy RH

PLATUNA®
Alloy RU

PLATUNA®
PT

PLATUNA®
N1

PALLUNA®
457

PALLUNA®
458

PALLUNA®
459

RUTHUNA®
279 Black

RUTHUNA®
474 Black

RUTHUNA®
475 Black

RUTHUNA®
479 Black

RUTHUNA®
490 Black

RUTHUNA®
491

RUTHUNA®
492

RUTHUNA®
493

AURUNA®
215

AURUNA®
215 Pale

AURUNA®
311

AURUNA®
313

AURUNA®
555

AURUNA®
570

AURUNA®
5300

AURUNA®
5750

AURUNA®
500 LC

AURUNA®
502

AURUNA®
503

AURUNA®
261

AURUNA®
262

AURUNA®
263

AURUNA®
264

AURUNA®
250

AURUNA®
567 EF-14

AURUNA®
568 EF-18

AURUNA®
556 EF-24

AURUNA®
5500 EF

AURUNA®
621 EF

ARGUNA®
621

Rhodium Electrolytes

Rhodium coatings are a popular choice for jewelry, watches and other items that require a smooth, ultra-bright layer. The layers can range from brilliant white to anthracite black.

Rhodium coatings not only provide an aesthetic improvement, but also protection against oxidation that would cause the metal to tarnish. Rhodium coatings also have a high hardness and are therefore more resistant to scratches, abrasion and wear. This extends the life of the plated objects, helping them retain their brightness and beauty for longer.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
RHODUNA® J1	brilliant white L: 89.8 a: 0.6 b: 2.7	99.9 Rh	up to 0.3	2 Rh	Rack Barrel	Initial Concentrate (100 ml) with 2 or 4 g Rh Replenisher Solution (100 ml) with 5 g Rh	Popular with white gold and diamond jewelry due to warm Rh color Pure rhodium Excellent throwing power
RHODUNA® Diamond Bright	brilliant white L: 90.1 a: 0.6 b: 2.7	99.9 Rh	approx. 3.0 - 5.0	2 (1.6 - 3) Rh	Rack Barrel	Rhodium Concentrate (100 ml/1 l) with 20 or 40 g Rh /l* Additive Solution (100 ml/1 l)* Replenisher Solution (100 ml/1 l) with 50 g Rh /l * Rhodium Concentrate and Additive Solution are only sold as a set	Pure rhodium Low porosity Good coverage speed Excellent throwing power High abrasion resistance
RHODUNA® 271	white L: 89.8 a: 1.1 b: 3.2	99.9 Rh	up to 1.0	20 Rh	Pen Plating	ready for use (100 ml) with 2 g Rh	Rhodium pen plating comparable to RHODUNA® Diamond Bright High coverage Pure rhodium
RHODUNA® 275 Black	anthracite-black L: 60.1 a: 1.1 b: 3.8	approx. 95 Rh	0.2	20 Rh	Pen Plating Rack Barrel	ready for use (100 ml) with 2 g Rh	Rack application in beaker glass scale Fixed black color
RHODUNA® 471 Black	gray-anthracite L: 49.5* a: 0.8 b: 2.6 * with blackening agent and posttreatment	> 95 Rh	0.7	2 (1.8 - 2.2) Rh	Rack	Initial Concentrate (100 ml/1 l) with 20 g Rh /l Blackening Agent (100 ml/1 l) Replenisher Solution (100 ml) with 50 g Rh /l	Applications on a larger scale Adjustable degree of blackness Good color consistency Simple electrolyte maintenance Darkest coatings 2-stage + posttreatment

White precious metal alloys

Alloys are mixtures of two or more metals. They are used in a variety of applications, particularly to combine different properties.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
RHODUNA® PT ONE	white L: 89.1 a: 0.9 b: 3.4	20 Rh 80 Pt	0.3	0.3 Rh 0.7 Pt	Rack Barrel	Initial Concentrate (250 ml)	Extremely abrasion-resistant Increase rectifier voltage until color matches min. 2 V for MMO anodes min. 2.5 V for Pt/Ti anodes
PLATUNA® Alloy	white L: 86.1 a: 0.4 b: 4.3	75 Pt 25 Ru	1.0	1 (0.8 - 1.2) Pt 1 (0.8 - 1.2) Ru	Rack Barrel	Initial Concentrate (250 ml/10 l) Replenisher Solution (200 ml/5 l) Platinum Concentrate (100 ml/1 l) Ruthenium Concentrate (100 ml/1 l)	Up to 25 % cost savings compared to pure platinum coatings Exceptionally abrasion-resistant
PLATUNA® Alloy RH	white L: 87.6 a: 0.8 b: 4.0	80 Pt 20 Rh	0.5	1.2 (0.8 - 1.6) Pt 0.3 (0.2 - 0.4) Rh	Rack Barrel	Platinum Concentrate (1 l) Rhodium Concentrate (1 l)	Latest platinum generation Large current density range Voltage-controlled operation possible Low platinum and rhodium content
PLATUNA® Alloy RU	white L: 86.6 a: 0.8 b: 3.9	80 Pt 20 Ru	0.5	1 (0.8 - 1.2) Pt 1 (0.8 - 1.2) Ru	Rack Barrel	Platinum Concentrate (1 l) Ruthenium Concentrate (1 l)	Latest platinum generation Large current density range Voltage-controlled operation possible Low platinum and ruthenium content

Platinum Electrolytes

Platinum electrolytes are characterized by their exceptional price stability, which has made them a reliable investment for years. This stability, coupled with the prestigious name of platinum, gives products finished with this precious metal an irresistible appeal. Platinum-based decorative applications are therefore sought after across all consumer groups and lend every product a touch of exclusivity and luxury.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
PLATUNA® PT	white L: 89.1 a: 0.9 b: 3.4	99.9 Pt	up to 0.5 up to 50.0	1 - 2 Pt 6 Pt	Rack Barrel	Platinum Concentrate (1 l)	Latest generation of platinum No cooled storage required Brilliant and bright High coating thicknesses up to 50 µm Exceptionally wide current density range Voltage-controlled operation possible Low platinum content
PLATUNA® N1	white L: 87.4 a: 0.5 b: 6.2	99.9 Pt	1.0	2 (0.5 - 4) Pt	Rack Barrel	Platinum Concentrate (200 ml/1 l/5 l)	Exceptionally wide current density range Voltage-controlled working possible Low platinum content Low operating temperature

Palladium Electrolytes

Our palladium electrolytics are convincing when it comes to intermediate layers, diffusion barriers and corrosion protection.

Our palladium electrolytes are also used as final layers in the jewelry and spectacle frames industries.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
PALLUNA® 457	white L: 85.1 a: 0.6 b: 5.9	99.9 Pd	5.0	10.0 (8.0 - 12.0) Pd	Rack Barrel	Initial Concentrate (10 l) Palladium Solution 460 (1 l) Replenisher Solution (1 l)	Weakly alkaline palladium electrolyte Stable, non-volatile bright additive system Operates at an increased temperature, no increase in electrolyte volume Easy electrolyte maintenance Pure palladium coatings with excellent brightness High coating thickness without cracks Very good wear and corrosion resistance Low contact resistance
PALLUNA® 458	white L: 83.0 a: 0.9 b: 7.1	99.9 Pd	3.0	10.0 (9.0 - 11.0) Pd	Rack Barrel	Initial Concentrate (10 l) Palladium Solution 460 (1 l) Density Correction Salt 5 (5 kg) Replenisher Solution (1 l)	Neutral electrolyte for pure palladium coatings of a bright white color Bright, low-pore coatings Corrosion resistant Ductile coatings
PALLUNA® 459	white L: 83.5 a: 0.8 b: 7.2	99.9 Pd	0.5	1.5 - 2.0 Pd	Rack Barrel	Initial Concentrate (10 l) without PM Palladium Solution (1 l) Replenisher Solution (250 ml) ready for use (1 l) with 2 g Pd /l	As a diffusion barrier directly on non-ferrous metals or silver

Ruthenium Electrolytes

Trendy fashion accessories, stunning bathroom fittings and other sophisticated applications in luxury interiors can impress with black surfaces. Our RUTHUNA® is the right solution for deep black, sparkling and economical surfaces.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
RUTHUNA® 279 Black	anthracite-black L: 65.1 a: -1.0 b: 0.1	>95 Ru	up to 0.08	20 Ru	Pen Plating	ready for useg (100 ml) with 2 g Ru	Abrasion-resistant, dark, bright coatings Working temperature 20 - 40 °C High coverage
RUTHUNA® 474 Black	anthracite-black L: 59.9 a: 1.0 b: 5.3	>95 Ru	0.5	5 Ru	Rack	Initial Concentrate (156 ml)	Good color consistency Simple electrolyte maintenance Easy to use batch type
RUTHUNA® 475 Black	black L: 48.2 a: 0.8 b: 4.3	>95 Ru	0.3	2 Ru	Rack	Initial Concentrate (100 ml)	Lower ruthenium content Good color consistency Simple electrolyte maintenance Easy to use batch type
RUTHUNA® 479 Black	gray to black L: 45.0* - 75.0 a: 0.7 b: 4.2 * with Blackening Agent	>95 Ru	0.5	5 (2 - 10) Ru	Rack Barrel	Initial Concentrate (100 ml/1 l) Blackening Agent (100 ml/1 l) Accelerator (1 l) Replenisher Solution (100 ml/1 l)	For larger-scale applications Variable blacking agent content Easy to operate High color consistency Pre-gilding recommended as an undercoat
RUTHUNA® 490 Black	anthracite L: 63.5 a: 0.4 b: 3.2	>95 Ru	0.3	2 (1.8 - 2.2) Ru	Rack Barrel	Makeup Salt (1 kg) Concentrate (1 l) Blackening Agent (1 l)	Neutral electrolyte Direct coating of copper, nickel, brass or bronze alloys possible No pre-coating or lacquer sealing necessary High color consistency Simple electrolyte maintenance High abrasion resistance Enormous precious metal cost savings

Ruthenium Electrolytes

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply	Special features
RUTHUNA® 491	grey L: 72.9 a: 1.0 b: 4.5	Pure ruthenium	0.5	1.5 - 11 Ru depending on application	Rack	Makeup Salt (1 kg) Concentrate (1 l) Wetting Agent 30 (1 l)	Simple electrolyte maintenance Suitable as a corrosion-resistant intermediate layer, e.g. to replace palladium Direct plating of copper, nickel, brass or bronze alloys possible No pre-gold plating or pre-coating with palladium or palladium alloys necessary
RUTHUNA® 492	grey L: 73.2 a: 1.0 b: 4.5	94 Ru 6 Ni	0.7	5 (4 - 6) Ru 1.5 (1 - 2) Ni	Rack	Makeup Salt (1 kg) Density Correction Salt (1 kg) Concentrate (1 l) Additive Solution (1 l)	Simple electrolyte maintenance Suitable as a corrosion-resistant intermediate layer, e.g. to replace palladium or palladium-nickel Direct coating of copper, nickel, brass or bronze alloys possible No pre-gold plating or pre-coating with palladium or palladium alloys necessary Higher maximum coating thickness Improved pore tightness Alloy therefore cheaper than pure Ru
RUTHUNA® 493	grey L: 67.2 a: 1.0 b: 3.4	80 Ru 20 Co	0.7	5 (4.5 - 5.5) Ru 1 (0.8 - 1.2) Co	Rack	Makeup Salt (1 kg) Density Correction Salt (1 kg) Concentrate (1 l) Additive Solution (1 l) Wetting Agent (1 l)	Simple electrolyte maintenance Suitable as a corrosion-resistant intermediate layer, e.g. to replace palladium or palladium-nickel Direct coating of copper, nickel, brass or bronze alloys possible No pre-gold plating or pre-coating with palladium or palladium alloys necessary Higher maximum coating thickness Improved pore tightness Alloy therefore cheaper than pure Ru

Gold Electrolytes

In the decorative area, various colored gold electrolytes add brightness and value or set new trends.

Gold is considered an ideal metal for plating jewelry as it offers a unique combination of beauty and durability. Its characteristic brightness and warm color give jewelry an appealing aesthetic that has been appreciated for thousands of years. In addition, gold is resistant to corrosion and retains its brightness over time without fading or tarnishing. These properties make it a preferred choice for high-quality jewelry that is suitable for both everyday wear and special occasions. Gold is also hypoallergenic, which makes it particularly well tolerated by people with sensitive skin.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
AURUNA® 215	light yellow approx. 1 - 2 N L: 85.5 a: 5.7 b: 30.0	98.5 Au 1.5 Fe/In	3.0	2.5 (2.0 - 3.0) Au 0.5 (0.4 - 0.6) Fe 1.0 (0.8 - 1.2) In	Rack Barrel	Initial Concentrate Replenisher Solution	Constant color in a wide operating range Uniform color Non-allergenic as nickel- and cobalt-free AuNiIn replacement
AURUNA® 215 Pale	pale yellow L: 85.7 a: 2.7 b: 20.7	96 Au 3.5 Fe 0.5 In	3.0	1.5 (1.3 - 1.7) Au 0.5 (0.4 - 0.6) Fe 1.0 (0.8 - 1.2) In	Rack Barrel	Initial Concentrate Replenisher Solution	Paler coatings than AURUNA® 215 Color constant in a wide operating range Non-allergenic as nickel and cobalt free AuNiIn Replacement Hamilton color
AURUNA® 311	deep yellow L: 88.2 a: 6.1 b: 32.6	99.7 Au 0.3 Co	10.0	2 (1.0 - 2.5) Au	Rack Barrel Reel-to-reel equipment	Initial Concentrate Gold Solution CAP 50 and CAP 100 Replenisher Solution ready for use as an alternative in a beaker glass scale	Direct gold plating of stainless steel, nickel and alloys Low-porosity, ductile and crack-free Very good activation effect
AURUNA® 313	deep yellow L: 86.1 a: 7.4 b: 35.1	99.5 Au 0.5 Fe	0.5	2 (1 - 3) Au 0.5 (0.3 - 1.0) Fe	Rack Barrel	Initial Concentrate Replenisher Solution Gold Solution CAP 50 and CAP 100	Direct gold plating of stainless steels Good activation effect without halides Low-porosity and corrosion protection
AURUNA® 555	deep yellow L: 89.9 a: 5.9 b: 38.3	99.9 Au	0.25	1.0 (0.8 - 2) Au	Rack Barrel	Makeup Salt Replenisher Solution	Economical due to low gold content Color-constant layers from approx. 0.05 µm Long service life Very good throwing power Simple electrolyte maintenance Insensitive to contaminants Without complexing agents
AURUNA® 570	green-yellow L: 93.1 a: -4.5 b: 31.6	75 Au 25 Ag	> 10	8.0 (7.5 - 8.5) Au LC version (low content): 4.0 (3.6 - 4.4) Au	Rack Barrel	Initial Concentrate with Ag (1 l) Replenisher Solution with Ag (1 l)	Gold-saving, 18-carat layers Bright even in thick layers Simple electrolyte maintenance Cadmium-free 25% cost savings compared to pure gold plating

* For gold electrolytes, the addition of potassium gold cyanide is usually necessary

Gold Electrolytes

In addition to the various shades of yellow and white gold, red gold is particularly popular in the jewelry sector. This color is created by combining gold and copper, which gives the piece of jewelry a warm, reddish brightness. Rose gold is particularly popular because of its timeless elegance and versatility, which goes well with both classic and modern designs. In addition, rose gold harmonizes well with different skin tones and can be easily combined with other pieces of jewelry.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
AURUNA® 5300	deep yellow L: 84.6 a: 9.2 b: 33.3	99.7 Au 0.3 Fe	20.0	8 (2 - 12) Au	Rack Barrel	Initial Concentrate Basic Additive C Replenisher Solution	For larger-scale applications Good corrosion and abrasion resistance Non-allergenic, as it is free from nickel and cobalt
AURUNA® 5750	yellowish-white L: 95.5 a: -2.0 b: 10.0	50 Au 50 Ag	approx. 3	5.0 (4.5 - 5.5) Au 3.0 (2.5 - 3.5) Ag	Rack Barrel	Initial Concentrate Brightener 1 Brightener 2	Gold-saving, 12-carat layers Brilliant even in thick layers Excellent ductility of the coatings Simple electrolyte maintenance A variant with a low gold content is available for thin layers
AURUNA® 500 LC	red L: 84.2 a: 8.6 b: 17.0	75 Au 25 Cu	1.5	2 (1.5 - 3.0) Au 1.5 (1.3 - 2.0) Cu	Rack Barrel	Initial Concentrate with Au (250 ml) Brightener (1 l) Wetting Agent 41 (1 l) Replenisher Solution (1 l)	Gold-saving coatings (18 carat) Tarnish- and corrosion-resistant Very hard, abrasion-resistant coatings Low gold content No free cyanide Easy to use
AURUNA® 502	red L: 85.3 a: 8.9 b: 14.2	75 Au 25 Cu	10	4.0 (3.5 - 4.5) Au	Rack Barrel	Initial Concentrate (10 l) Brightener (1 l) Wetting Agent 42 (1 l) Replenisher Solution (1 l)	Cadmium-free, without free cyanide Gold-saving coatings (approx. 18 caratage) Tarnish and corrosion-resistant High, abrasion-resistant coatings
AURUNA® 503	red L: 85.3 a: 8.8 b: 14.8	75 Au 25 Cu	5	6.0 (5.0 - 7.0) Au	Rack Barrel	Initial Concentrate (25 l) Brightener 1 (1 l) Wetting Agent 42 (1 l) Density Correction Salt 6 (5 kg) Replenisher Solution (1 l)	Cadmium-free, without free cyanide Gold-saving coatings (approx. 18 caratage) Tarnish and corrosion-resistant High, abrasion-resistant coatings Higher deposition speed than AURUNA® 502

* For gold electrolytes, the addition of potassium gold cyanide is usually necessary

Gold Electrolytes

In addition to electrolytes that are suitable for rack and barrel operation, we also offer a variety of pen plating electrolytes. This enables targeted, partial plating, which is primarily required for multicolor plating, repair work and plating of small areas.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
AURUNA® 555	deep yellow L: 89.9 a: 5.9 b: 38.3	99.9 Au	0.25	1.0 (0.8 - 2) Au	Rack Barrel	Makeup Salt Replenisher Solution	Economical due to low gold content Color-constant layers from approx. 0.05 µm Long service life Very good throwing power Simple electrolyte maintenance Insensitive to contaminants Without complexing agents
AURUNA® 5750	yellowish-white L: 95.5 a: -2.0 b: 10.0	50 Au 50 Ag	approx. 3	5.0 (4.5 - 5.5) Au 3.0 (2.5 - 3.5) Ag	Rack Barrel	Initial Concentrate Brightener 1 Brightener 2	Gold-saving, 12-carat layers Bright even in thick layers Excellent ductility of the coatings Easy electrolyte maintenance A variant with a low gold content is available for thin layers
AURUNA® 261	pale light yellow approx. 1 N L: 87.6 a: 4.5 b: 36.4	99 Au	0.1	20 Au	Pen Plating	ready for use (100 ml) with 2 g Au	Gold plating at room temperature
AURUNA® 262	neutral yellow approx. 2 - 3 N L: 87.6 a: 6.9 b: 35.9	99 Au	0.1	20 Au	Pen Plating	ready for use (100 ml) with 2 g Au	Gold plating at room temperature
AURUNA® 263	deep, rich yellow, fine gold color L: 87.6 a: 6.9 b: 37.1	99.5 Au	0.1	20 Au	Pen Plating	ready for use (100 ml) with 2 g Au	Gold plating at room temperature
AURUNA® 264	rosè approx. 4 - 5 N L: 83.9 a: 10.2 b: 14.6	90 Au	0.1	20 Au	Pen Plating	ready for use (100 ml) with 2 g Au	Gold plating at room temperature
AURUNA® 250	yellow approx. 3 N L: 88.2 a: 6.1 b: 32.6	99.5 Au	0.1	20 Au	Pen Plating	ready for use (100 ml/1 l) with 20 g Au /l	Gold plating at room temperature Direct gold plating of stainless steel, nickel and alloys Very good activation effect

* For gold electrolytes, the addition of potassium gold cyanide is usually necessary

Gold Elektrolyte

A wide range of colors for decorative color gold plating (up to 0.2 µm) including standard colors convince with a color-constant deposition with color-stable and tarnish-resistant coatings.

The marking of the gold colors is based on the European standard EN 28 654 and has been extended accordingly for the electrolyte subdivision.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
AURUNA® Color 100	green yellow 0 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type Constant voltage operation
AURUNA® Color 160	green yellow 0 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 101	pale yellow 1 N	> 80 % (> 19,5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 102	light yellow 2 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 104	rosè 4 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 105	red 5 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 115	red 5 N	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 126	rosè / grey	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 109	fine gold	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 119	fine gold	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type
AURUNA® Color 149	fine gold	> 80 % (> 19.5 ct)	0.2	1 Au	Rack	Makeup Salt with/without Au for 10 l electrolyte	Fixed color Easy-to-use batch type

* For gold electrolytes, the addition of potassium gold cyanide is usually necessary

Electroforming

Electroforming is a high-precision process for manufacturing molded parts such as jewelry, in which metal is applied to a model in high coating thicknesses. This enables the production of complex and detailed designs that are difficult to achieve using traditional methods. Especially in the field of hollow jewelry, electroforming offers the possibility to create light and delicate pieces that are nevertheless stable. Thanks to electrolytic deposition, non-conductive materials such as plastic or wax can also be coated with a metal layer, further increasing design freedom. Elektroforming is therefore a key technology for innovative jewelry design and manufacturing.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
AURUNA® 567 EF-14	pale yellow L: 94.8 a: -3.5 b: 16.8	60.4 Au 39.6 Ag	several 100s	15 Au approx. 5 Ag	Rack Barrel	Makeup Salt (for defined bath volume) Brightener Stabilizer Solution Replenisher Salt Replenisher Solutions	Hallmarking in 14 carats Compliance with the fineness and the weight distribution within narrow limits Color plating necessary
AURUNA® 568 EF-18	pale yellow L: 93.5 a: -4.0 b: 25.9	77 Au 23 Ag	several 100s	15 Au approx. 3 Ag	Rack Barrel	Makeup Salt (for defined bath volume) Brightener Stabilizer Solution Replenisher Salt Replenisher Solutions	Hallmarking in 18 carats Adherence to fineness and weight distribution within narrow limits Color plating necessary
AURUNA® 556 EF-24	yellow, 24 ct L: 88.6 a: 7.7 b: 34.9	99.9 Au	several 100s	12 (12 - 20) Au	Rack Barrel	Makeup Salt Replenisher Solution	24 carat fine gold electrolyte Semi-bright coatings High degrees of hardness of up to 200 HV at 99.9% fineness Protective gilding of 24 carat solid jewelry
AURUNA® 5500 EF	yellow, 24 ct L: 88.6 a: 7.7 b: 34.9	> 99.9 Au	several 100s	16 (12 - 20) Au	Rack Barrel	Makeup Salt Initial Concentrate Density Correction Salt 12 Replenisher Solution	Hard, semi-bright coatings High hardness of approx. 180 HV Gold plating of 24 carat solid jewelry
ARGUNA® 621 EF	bright white L: 97.8 a: -0.2 b: 3.1	> 99.9 Ag	several 100s	40 (35 - 45) Ag	Rack Barrel	Brightener 1-1 (1 l) Brightener 2-1 (1 l)	Can be used at relatively high temperatures (< 40 °C) Very bright white color without a blue tinge Soluble anodes Very good throwing power

* For gold electrolytes, the addition of potassium gold cyanide is usually necessary

Silver Electrolytes

Silver is a versatile and valued precious metal used in jewelry making, known for its excellent ductility and attractive brightness. It is softer than many other metals, making it ideal for creating detailed and filigree designs. Furthermore, silver is more affordable compared to gold or platinum, making it an accessible option for a wider range of buyers. Due to its antibacterial and antiallergenic properties, it is also suitable for people with sensitive skin.

Product	Color (Lab values)	Metal content in the deposit wt.%	max. coating thickness µm	Metal content g/l	Application	Information on the form of supply*	Special features
ARGUNA® 621	bright white L: 97.8 a: -0.2 b: 3.1	99.9 Ag	> 100	40 (35 - 45) Ag	Rack Barrel	Brightener 1-1 (1 l) Brightener 2-1 (1 l)	Organic brightener system Very bright, brilliant white color without a bluish tint Wide applicable current density range Very good throwing power Can be used at higher temperatures Can be deposited directly on nickel (no pre-silvering necessary) High carbonate tolerance Simple electrolyte maintenance

* With silver electrolytes, it is usually necessary to add potassium silver cyanide and silver anodes.

Antitarnish

Precious metals are by definition highly corrosion-resistant in their natural environment. In daily use, however, they are exposed to environmental influences that even they cannot withstand. Optical blemishes or technical malfunctions are the undesirable consequences.

A transparent layer of special nanopolymers, just a few nanometers thick, can protect your precious metal surface from corrosion, tarnishing, discoloration, dirt, abrasion and scratches.

In addition, the product quality is increased by the functional properties. Decorative products, in particular, benefit from the water-repellent effect and the flattering feel of the protective layers.

Antitarnish	Precious metal base					Protective effect					Usage			Information on the form of supply	Information
	Ag Plated	Ag Sterling	Ag Antique	Au	Other Pd Pt Rh Ru	TAA[1]	K2S[2]	(NH4)2S[3]	Na2S[4]	Reality[5]	Rack	Chain galvanization	Barrel		Hints and special characteristics
617	●	●	●	⊙	⊙	■■□□	■■■□	■■□□	■■□□	■■□□	●	⊙	⊙	Concentrate	Especially for sterling silver or antique colored silver
618	●	●	⊙	●	⊙	■■□□	■■■□	■■□□	■■□□	■■□□	●	⊙	⊙	Concentrate	Especially for silver-plated or gold-plated surfaces
618 PLUS	●	⊙	⊙	●	●	■■□□	■■■■	■■■□	■■■□	■■■■	●	●	⊙	Concentrate, Makeup Salt PLUS	Especially for silver-plated or gold-plated surfaces / electrochemical process

Legend precious metal base and usage

- ● Optimized
- ⊙ Usable
- ○ Not usable

Legend protective effect and layer characteristics

- ■■■■ Excellent
- ■■■□ Very good
- ■■□□ Medium
- ■□□□ Weak
- □□□□ None

1) Thioacetamid test
2) Potassium sulphide test
3) Ammonium sulphide test
4) Sodium sulphide test
5) Protective effect in reality

Precious Metal Components

Our precious metal components provide the precious metals for your plating (see AURUNA® electrolytes).

Product	Information on the form of supply	Special features
Umicore Potassium Gold Cyanide 68,2%	100 g Au, 500 g Au	Quickly soluble in water Does not lead to dust formation and is free-flowing
PALLUNA® Palladium Solution 460	1 l	

Anodes

Under the brand name PLATINODE®, we offer two types of high-quality electrodes. The first is a titanium electrode plated with the purest platinum using the high-temperature electrolysis (HTE) process. The platinum functional layer has a high ductility, the highest purity and excellent adhesion.

On the other hand, we offer mixed metal oxide (MMO) electrodes, which offer a perfect cost-performance ratio.

Umicore anodes for beaker glass are available in volumes of 0.5, 1.0, 2.0, 3.0 and 5.0 liters. Special requests regarding the dimensions of the anodes and the shape of the containers can be accommodated.

Product	Information on the form of supply	Special features
PLATINODE® Pt/Ti-Anoden	for beaker sizes 0.5 l, 1.0 l, 2.0 l, 3.0 l, 5.0 l customized	Simplified handling Optimal anode surface Long service life Stability in the beaker Simple structure No complicated cabling Replaceable anode segments
PLATINODE® MMO Anoden 	for beaker sizes 0.5 l, 1.0 l, 2.0 l, 3.0 l, 5.0 l customized	Simplified handling Optimal anode surface Long service life Stability in the beaker Simple structure No complicated cabling Replaceable anode segments

Passion for
perfect surfaces.

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