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# METALOR®

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Process Name	PDS no.	PM Content g/l	Temperature °C	Current Density A/dm <sup>2</sup>	Hardness (Vickers)	pH	Decorative	Industrial	Other	Application	Features
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## GOLD PROCESSES

MetClad 2000 Series	0007	2 - 4	25 - 40	0.8 - 1	160 - 220	3.5 - 4.2	●			Luxury costume jewellery and leather fittings	Cyanide based, 23 - 24 karat gold deposits, wide colour range, mix 'n' match, nickel-free version
MetClad CDF I 18K	0703	4	70	0.5 - 1.5	250 - 350	10.5	●			Quality costume jewellery, watch cases	Cyanide based, copper brightened corrosion resistant
MetClad Rose	0048	4.5	55	1.5	300 - 350	5	●			General decorative plating	Cyanide based, colour close to 5N
MetForm 18P	0033	6	70	1	200 - 400	10.5	●			Electroforming, conventional electroplating	Cyanide based, alkaline system for gold, copper, cadmium alloy
MetGild 2000 Series	0001	0.5	55	2	140 - 220	10.5	●			Gilding and flash	Cyanide based, cobalt, nickel, indium, zinc, iron, copper, silver brightened (Swiss standard), mix 'n' match
MetGold 2010 B Series	0087/0094	2 - 3	35	0.5	140 - 180	4.5		●		Connectors	Cyanide based, acidic cobalt/nickel brightened barrel process, improved thickness distribution
MetGold 2010 HS Series	0086/0093	6 - 10	55	1 - 60	140 - 180	4.7		●		Connectors	Cyanide based, acidic cobalt/nickel brightened high speed process, improved thickness distribution
MetGold 2010 VBS Series	0088/0095	1.5 - 4	38	0.1	140 - 180	4.3		●		Connectors	Cyanide based, acidic cobalt/nickel brightened vibrobot process, improved thickness distribution
MetGold 2010 VR Series	0085/0092	3.5 - 6	35	1	140 - 180	4.7		●		Connectors, PCBs	Cyanide based, acidic cobalt/nickel brightened vat/rack process, improved thickness distribution
MetGold 2010C (HS) RPC	0943	6 - 18	55	1 - 60	140 - 180	4.7		●		Connectors, lead frames	Cyanide based, acidic cobalt brightened high speed process, pore reduction
MetGold 3000 Series	0894/0893	2 - 8	25 - 50	0.2 - 1	140 - 180	4.6		●		Connectors	Cyanide based, acidic cobalt/nickel brightened system, barrel, rack and high speed
MetGold 3010C (HS)	1023	4 - 15	55	1 - 50	140 - 190	4.2		●		Connectors	Cyanide based, cobalt hardened high speed acid gold with minimized immersion
MetGold ECF60 Series	0154	8 - 12	55	2	60 - 200	9.5			●	Thinfilm circuits, solid items requiring good throw, microwave devices	Sulphite based, cyanide free
MetGold ECF64D	0149	12 - 18	50	0.3	120 - 180	9.1			●	Dental	Sulphite based, cyanide free
MetGold IG Ni Series	0137/0138	1 - 6.8	90 - 95	---	---	5 - 5.2			●	Solderability protection, SMD, microelectronic circuits	Cyanide based, immersion process for thin gold coatings with nickel underplate
MetGold Pure Series	0083	4 - 12	60	0.1 - 1	90 - 140	6		●		Glass-to-metal seal connectors, microwave devices, thinfilm circuits, electronic	Cyanide based, pure gold process, neutral pH, semi-metal additives
MetSign W	0665	4	60	0.5	240	9.5	●			General decorative	Sulphite based, cyanide free, 20 karat gold alloy



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## SILVER PROCESSES

MetSil 90	0195	36	20	1.4	120	---	●	●		General decorative and electrical, connectors, microwave boxes, cutlery	Cyanide based, mirror bright, haze-free pure silver deposits
MetSil 91	0209	50	20	15	90	---		●		Wire plating contacts, semiconductors	Cyanide based, semi-bright, high speed, alkaline process
MetSil 150	0197	36	20	1.5	120	---	●	●		General applications	Cyanide based, organically brightened, haze-free pure silver deposits
MetSil 500 CNF	1051	30	25	0.5	100 - 130	8.5	●	●	●	General applications, photovoltaic cells	Cyanide free
MetSil 2010 Series	0211	65	45 - 60	≤80	100 - 130	8.5		●		Spot plating on lead frames	Cyanide based, selenium brightened, wire bondable silver (matt to bright possible)
MetSil Dec	0198	36	20	1.4	120	---	●	●		Decorative and general applications	Cyanide based, non-metallic brightened, rack and barrel plating
MetSil HCD	0212	65	65	45 - 185	100 - 120	8.5		●		Semiconductors, spot plating on lead frames	Cyanide based, slightly alkaline, very high speed
MetSil Protect 200	0225	---	60	---	---	7			●	Passivation of silver plated products	Excellent immersion protection to tarnishing

## PALLADIUM PROCESSES

MetPal 2000B	0163	2	25	0.5	400 - 550	8	●	●		General decorative, costume jewellery, electronic	Nickel-free, neutral to mildly acidic process for pure palladium plating of flash deposits
MetPal EPD	0193	4	50	---	400 - 550	2			●	PCB, direct metallization of copper and solder pads	Sulphate based, electroless pure palladium process
MetPal GB1	0164	2 - 12	55	1	400 - 550	7.5	●			General decorative	Nickel-free, neutral to mildly alkaline process for pure palladium plating of white, bright deposits
MetPal I B	0967	8	20	0.25	400 - 550	8	●	●		General decorative and technical	Chloride based palladium-nickel process for rack or barrel plating
MetPal I D	0171	10	25	1	400 - 550	8.4	●			General decorative	Chloride based palladium-nickel process for vat, rack or barrel plating
MetPal I HS	0184	20	35	3 - 50	400 - 550	8		●		Connectors, semiconductors	Chloride based palladium-nickel process for high speed, dip selective or jet plating
MetPal II HS	0182	20	35 - 55	3 - 50	400 - 550	7.5		●		Connectors, semiconductors	Low ammonia palladium-nickel process for high speed plating
MetPal III Pd-Ni HS	0183	20	65	42	400 - 550	4		●		Connectors, semiconductors	Patented ammonia and chloride-free palladium-nickel plating system, covers low to high speed
MetPal III Pd-Ni V&B	0653	4	70	2	400 - 550	4	●	●		General decorative and electronic	Patented ammonia- and chloride-free palladium-nickel plating system, vat or barrel
MetPal III Pure Pd Deco	0769	4	55 - 75	2	400 - 550	4	●			Jewellery, general decorative	Patented ammonia- and chloride-free plating system
MetPal III Pure Pd Strike	0737	2	70	5	400 - 550	4		●		Connectors, semiconductors	Patented ammonia- and chloride-free plating system for high speed plating

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## PLATINUM PROCESSES

Met-Pt 200S	0771	2 - 10	25 - 70	0.5 - 10	400	1	●	●		Variety of substrates under a variety of conditions	Bright and hard deposits
Met-Pt 209 / Met-Pt P	0258	5	85	2 - 8	400 - 500	8.5		●		Aerospace turbine blades, titanium anodes	Matt, adherent, low-stressed deposits

## RHODIUM PROCESSES

Met-Rh 225	0248	5	55	0.3 - 1.1	700 - 950	<1		●		General electronic, PCB sectors, reed switches	Sulphate based, hard, ductile and crack-free deposits, matt to semi-matt deposits
Met-Rh Diamond	0237	2	25 - 30	3	800 - 900	<1	●			Jewellery, costume jewellery, leather fittings, gift items, spectacle frames	Sulphate based, bright extra white flash and high thickness deposits
Met-Rh Infinity White	0643	2	40 - 50	3	800 - 900	<1	●			Jewellery, costume jewellery, leather fittings, gift items, spectacle frames	Sulphate based, bright extra white flash and high thickness deposits
Met-Rh S100	0246	2	45	1.5	900	<1	●	●		General decorative, industrial, electronic, PCB sectors, reed switches	Sulphate based, flash and high thickness deposits
Met-Rh S501G	0239	2	25	1	800 - 1000	<1	●			Jewellery, costume jewellery, leather fittings, gift items, spectacle frames	Sulphate based, dark grey deposits
Met-Rh S503W	0772	1.6 - 4.5	20 - 43	1	800 - 900	<1	●	●		General decorative, industrial	Sulphate based, ultra white, bright and hard deposits for flash and high thickness deposits
Met-Rh S504B	0662	2	30	1	800 - 900	<1	●			Jewellery, costume jewellery, leather fittings, gift items, spectacle frames	Sulphate based, dark grey deposits with blue aspect

## RUTHENIUM PROCESSES

Met-Ru 2000	0262	3 - 20	50 - 70	0.5 - 2	600 - 900	1 - 1.5	●			General decorative	Hard, bright mirror type deposits, mix 'n' match, from grey to dark grey
Met-Ru 2001	1052	4 - 10	70	1 - 10	800 - 900	1.7		●		High load and low voltage applications, such as reed switches	Excellent corrosion and wear resistance, low stress deposits
Met-Ru 3000 Black	1019	5	60 - 70	3 - 5	500 - 800	0.1 - 0.5	●			General decorative	Bright and extra black deposits

## BASE METAL PROCESSES

MetWhite 100	0302	---	60	1 - 4	400 - 500	<12	●	●		Decorative and electronic components	Cyanide based, white bronze, substitute for nickel as barrier layer or final contact finish
MetTreat 100	0322	---	18	---	---	<12			●	Immersion stripping of gold from copper, copper alloys, nickel and nickel alloys	Alkaline system in salt form with minimum attack on the base metal
MetTreat 200	0861	---	50	---	---	<12			●	Immersion stripping of gold from many alloys	Alkaline system in solution form with minimum attack on the base metal
MetTreat 300	1044	---	70 - 80	---	---	<1			●	Electrolytic stripping of rhodium from white gold alloys	Acidic system with minimum attack on the base metal