Composition of metal products RMO® Europe

General description:
the color codes identify the products, each color corresponds to the RMO Europe catalog (example: red= product family brackets).

Group products	Composition	Color Code
Orthodontics wires, ligatures wires, preformed wire (not concerned : Bendaloy, Nickel free, Elgiloy and NiTi products) and accessories (contentions, locks/hooks/eyelets/springs)	I	
Elgiloy products	II	
NiTi products	III	
Gummetal products	VII	
Australian wires	VIII	
Copper Nickel-Titanium Wires	IX	
Bendaloy and nickel free products	IV	
Arch (Wilson components, Quad Helix et accessories)	I	
Metal Brackets	I	
Tubes and lingual buttons	I	
Bands	V	
Mini-screws/Tads and accessories (hooks, etc.)	VI	
Expansion screws, palatal suture expansion screws and accessories (contention hooks, claps, bars, Transpalatal arches, ..)	I	
Fulcrum Herbst appliance, Liberty Bielle®, Lip Bumper and facial arches.	I	
Instruments (pliers, etc.)	Xa & Xb	

Composition of metal products RMO® Europe

Composition

Composition of RMO metal products can be found on tables below: table I, II, III, IV, V, VI.
Instruments are manufactured in medical grade stainless steel.

Table I

Stainless steel, austenitic and martensitic 302, 303, 304, 316L, 17-4, 425, 440			
Material	**Chemical symbol**	**CAS#**	**%**
Iron	Fe	7439-89-6	Balance
Chromium	Cr	7440-47-3	16-18 - 0.05 mg/m3/M2 (Cr+6)
Nickel	Ni	7440-02-0	10-13
Manganese	Mn	7439-96-5	0-2
Molybdenum	Mo	7439-98-7	2-2,5
Silicium	Si	7440-21-3	0-0,75
Carbon	C	7440-44-0	0-0,03

Table II

Elgiloy Products			
Material	**Chemical symbol**	**CAS#**	**%**
Cobalt	Co	7440-48-4	40
Chromium	Cr	7440-47-3	20
Nickel	Ni	7440-02-0	15
Iron	Fe	7439-89-6	Balance
Molybdenum	Mo	7439-98-7	7
Manganese	Mn	7439-96-5	2

Table III

NiTi Products			
Material	**Chemical symbol**	**CAS#**	**%**
Nickel	Ni	7440-02-0	55
Titanium	Ti	7440-32-6	45

Table IV

Bendaloy and nickel free Products			
Material	**Chemical symbol**	**CAS#**	**%**
Titanium	Ti	7440-32-6	70-80
Zirconium	Zr	744-67-7	5-10
Tin	Sn	7440-31-5	4-8
Molybdenum	Mo	7439-98-7	10-20

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Table V

Bands			
Material	**Chemical symbol**	**CAS#**	**%**
Iron	Fe	7439-89-6	Balance
Chromium	Cr	7440-47-3	15-20
Nickel	Ni	7440-02-0	8-12
Manganese	Mn	7439-96-5	0-2
Molybdenum	Mo	7439-98-7	0-4
Aluminium	Al	7429-90-5	0-2
Copper	Cu	7440-50-8	0-4
Silicon	Si	7440-21-3	0-5
Cobalt	Co	7440-48-4	0-5
Niobium	Nb	7440-03-1	0-2
Titanium	Ti	7440-32-6	0-0.2
Nitrogen	N	7727-37-9	0-4
Carbon	C	7440-44-0	0-1.5

Table VI

Mini-Screws/Tads			
Material	**Chemical symbol**	**CAS#**	**%**
Aluminium	Al	7429-90-5	5.5-6.50
Titanium	Ti	7440-32-6	Balance
Carbon	C	7440-44-0	0.08 (maximum)
Iron	Fe	7439-89-6	0.25 (maximum)
Vanadium	V	7440-21-3	3.5-4.5
Manganese	Mn	7439-96-5	0.05 (maximum)
Oxygen	O	7439-98-7	0.13 (maximum)
Nitrogen	N	7727-37-9	0.05 (maximum)
Hydrogene	H	1333-74-0	0.012 (maximum)

Table VII

Gummetal products Nickel Free β-titanium			
Material	**Chemical symbol**	**CAS#**	**%**
Titanium	Ti	7440-32-6	Propriety
Niobium	Nb	7440-03-1	
Tantale	Ta	7440-25-7	
Zirconium	Zr	744-67-7	

Table VIII

Australian wires			
Material	**Chemical symbol**	**CAS#**	**%**
Iron	Fe	7439-89-6	Balance
Chromium	Cr	7440-47-3	18
Nickel	Ni	7440-02-0	9
Manganese	Mn	7439-96-5	2.0
Cobalt	Co	7440-48-4	0.75

Table IX

Copper Nickel-Titanium Wires			
Material	**Chemical symbol**	**CAS#**	**%**
Nickel	Ni	7440-02-0	35-60
Titanium	Ti	7440-32-6	20-50
Copper	Cu	7440-50-8	0-15

Tableau Xa

Instruments : Wire cutters, ligature cutters, contouring pliers, needle holders, universal pliers			
Material	**Chemical symbol**	**CAS#**	**%**
Carbon	C	7440-44-0	0.17-0.25
Silicon	Si	7440-21-3	1 (maximum)
Manganese	Mn	7439-96-5	1 (maximum)
Phosphor	P	7723-14-0	0.045 (maximum)
Sulfur	S	7704-34-9	0.03 (maximum)
Chrome	Cr	7440-47-3	12-14

Tableau Xb

Instruments : Ligature pliers, wire bending pliers, contouring pliers			
Material	**Chemical symbol**	**CAS#**	**%**
Carbon	C	7440-44-0	0.26-0.35
Silicon	Si	7440-21-3	1 (maximum)
Manganese	Mn	7439-96-5	1.5 (maximum)
Phosphor	P	7723-14-0	0.04 (maximum)
Sulfur	S	7704-34-9	0.03 (maximum)
Chrome	Cr	7440-47-3	12-14