



Standard Specifications for Tube

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Umicore's business unit Jewellery and Industrial Metals provides an unrivalled wide range of precious metals products and related services to the jewellery industry and to a variety of industrial applications. Its North American production site is both ISO9001 and ISO14001 certified.

The 'Standard Specifications' series define the standard specifications for custom orders. They correspond to the needs of the majority of the precious metals industry in North America and illustrate most of Umicore's production capabilities. Should you, however, have a request that seems to fall outside what is published here, then please don't hesitate to contact us for further assistance. Umicore updates its 'Standard Specifications' regularly based on customer feedback, market trends and technological developments.

For each product the 'Standard Specifications' show:

- Product name and description
- Characteristics needed to fully define the product and a drawing illustrating the definition of those, where appropriate
- Available materials for these products
- Standard production capabilities and tolerances
- Temper
- Standard packaging

In order to speed up the processing of product inquiries and orders we encourage you to use the terminology used in the 'Standard Specifications' and to clearly indicate any requests that deviate from these 'Standard Specifications', such as tighter specifications.

Throughout the 'Standard Specification' series all dimensions are provided in mm and temperatures in °C. Conversions to inches, feet and °F are for reference only.

Seamless Ring Tube

Product characteristics:

- Material
- Outside diameter ('OD')
- Inside diameter ('ID') or finger size
- Sidewall³
- Length⁴
- Special shape requirements
- Flatness
- Tolerances (if different from the 'Standard Specifications')
- Vickers hardness or temper (see charts in appendix)
- Surface finish and quality
- Packaging

Available materials:

From stock: 10Y, 10W, 14Y, 14W, 14R, 18Y, 18W, 18D, SCU, 95D, 95H, 95R, ANT

Made to order: 19Y, 19D, 22Y, SSW or any other customer specified alloy.

For Orca™ bond gold with silver bimetal ring tube, please refer to the technical data sheet.

Standard inside diameters or finger sizes:

FINGER SIZE	ID (MM)	ID (INCHES)
3.5	14.25	0.561
4	14.65	0.577
4.5	15.06	0.593
5	15.44	0.608
5.5	15.87	0.625
6	16.13	0.641
6.5	16.69	0.657
6.75	16.89	0.665
7	17.12	0.674
7.5	17.50	0.689
8	17.90	0.705
8.5	18.31	0.721
9	18.72	0.737
9.5	19.13	0.753
10	19.53	0.769
10.25	19.68	0.775
10.5	19.94	0.785
11	20.24	0.801
11.5	20.75	0.817
12	21.15	0.833

Other dimensions and tolerances may be available on request.

³ The OD equals the ID plus two times the sidewall. The sidewall can also be referred to as wall thickness. ⁴ Instead of the length the mass can be used to define the volume ordered.

Available standard sidewall dimensions:

STANDARD AVAILABLE SIDEWALL DIMENSIONS		MATERIAL							
		YELLOW GOLD ALLOYS		WHITE GOLD ALLOYS		PLATINUM AND PALLADIUM ALLOYS		SILVER ALLOYS	
(INCHES)	(MM)	FINGER SIZE BELOW 12	FINGER SIZE 12	FINGER SIZE BELOW	FINGER SIZE 12	FINGER SIZE BELOW 12	FINGER SIZE 12	FINGER SIZE BELOW	FINGER SIZE 12
0.05	1.27	•		•		•		•	
0.06	1.52	•		•		•		•	
0.07	1.78	•	•	•		•		•	•
0.08	2.03	•	•	•		•		•	•
0.09	2.29	•	•	•	•	•	•	•	•
0.10	2.54	•	•	•	•	•	•	•	•
0.11	2.79	•	•	•	•	•	•	•	•
0.12	3.05	•	•	•	•	•	•	•	•
0.13	3.30	•	•	•	•	•	•	•	•
0.14	3.56	•	•	•	•	•	•	•	•
0.15	3.81	•	•	•	•	•	•	•	•
0.16	4.06		•		•		•		•
0.17	4.32		•		•		•		•
0.18	4.57		•		•		•		•
0.19	4.83		•		•		•		•
0.20	5.08		•		•		•		•
0.21	5.33		•		•		•		•
0.22	5.59		•		•		•		•

Other dimensions and tolerances may be available on request.

Tolerances on dimensions:

- OD: +/- 0.13 mm (0.005")
- ID: +/- 0.13 mm (0.005")
- Sidewall: +/- 0.13 mm (0.005")

Length:

Maximum length:

- Platinum and palladium products: 1000 mm (40")
- Gold and silver products: 1500 mm (60")

Cut tube (blanks) is available on request.

Flatness:

0.38 mm (0.015") for lengths up to 600 mm (24").

Temper:

Standard temper is soft. Other tempers are available on request.

Surface:

Uniform in appearance, of typical colour for the temper and alloy ordered, and free of orange peel, foreign inclusions, oxide or tarnish, scratches greater than 0.02 mm/0.0008" and blisters. Items ordered at soft temper may not appear shiny when first received. Once polished or drawn the surface will shine up.

Packaging:

Shipped in a plastic tube.

METAL DESCRIPTION LEGEND

Gold

CODE	DESCRIPTION
10Y	10 karat yellow gold
10W	10 karat white gold
10G	10 karat green gold
10R	10 karat red gold
14Y	14 karat yellow gold
14W	14 karat white gold
14D	14 karat palladium white gold
14G	14 karat green gold
14R	14 karat red gold
18Y	18 karat yellow gold
18W	18 karat white gold
18D	18 karat palladium white gold
18G	18 karat green gold
18R	18 karat red gold
19Y	19 karat yellow gold
19D	19 karat palladium white gold
22Y	22 karat yellow gold

KARAT	MINIMUM GOLD CONTENT	COMMENTS
9	37.50%	High karat alloys available on request
10	41.67%	High karat alloys available on request
14	58.33%	High karat alloys available on request
18	75.00%	High karat alloys available on request
19	79.17%	High karat alloys available on request
22	91.67%	High karat alloys available on request
24	99.90%	99.95% and 99.99% available on request

Silver

CODE	DESCRIPTION	MINIMUM SILVER CONTENT	COMMENTS
SSW	Sterling silver	92.50%	93.5% silver available on request
FIS	Fine silver	99.90%	99.95% and 99.99% available on request
COS	Coin silver	89.93%	
SOF	Solder flush	92.52%	
SCU	Silver Copper	93.50%	
ANT	Arctic Fox™ anti-tarnish silver	92.70%	

Platinum

CODE	MINIMUM PLATINUM CONTENT	DESCRIPTION
90W	90.00%	90% Platinum 10% Iridium
95W	95.00%	95% Platinum 5% Iridium
95H	95.20%	95% Platinum Heat Treatable®
95R	95.20%	95% Platinum 5% Ruthenium
FPT	99.90%	99.9% Platinum (99.99% available on request)

Palladium

CODE	MINIMUM PALLADIUM CONTENT	DESCRIPTION
FPD	99.90%	99.9% Palladium
95D	95.00%	95% Palladium 5% Silver and Gallium

Impurity levels for all jewellery products

Nickel	90 ppm (for alloys without nickel as alloying element)
Lead	40 ppm
Cadmium	40 ppm

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