

July 1, 2013

At 3M we follow OSHA guidances ( please reference OSHA 29 CFR 1910.1200 Hazard Communication Standard) for issuing MSDS. For that reason, we only have MSDS for chemicals, not articles. Under today's interpretation for OSHA, most of our brackets, tubes, wires, etc. are considered articles. However, because we are a medical device manufacturer, we follow other guidelines, for example ISO 10993 for medical devices and ISO 7405 for medical devices used in dentistry. Because our products comply with such guidelines, we provide in our instructions for use (IFU) specific warnings, such as "[Warning: the product contains nickel and chromium. A small percentage of the population is known to be allergic to nickel and/or chromium. If an allergic reaction occurs, direct patient to consult physician](#)" and further information on how to use our product as intended. Please refer to the complete IFU's and individual product labeling. In lieu of an MSDS, you will find the material composition below. 3M Unitek Permachrome Resilient Archwires are manufactured from a stainless steel alloy known as 304V. The composition of this alloy is shown below

Alloy	C	Mn	Si	Cr	Ni	Fe	P	S	N
304V	<0.07	<2	<1	18-20	9	67-69	<0.045	<0.03	~ 0.10

3M Unitek Nitinol (Classic, Heat-Activated, and Super Elastic) are made from a nickel titanium alloy with the following composition.

Alloy	Ni	Ti
Nickel-Titanium	56	44

Unitek™ Beta III Titanium Archwires have the following composition

Alloy	C	Ti	Fe	Mo	Zr	Sn
Beta III	<0.017	~77	,3.5	11.5	6	4.5

C- Carbon  
Cr – Chromium  
P – Phosphorus  
Ti – Titanium  
Sn - Tin

Mn – Manganese  
Ni – Nickel  
S – Sulfur  
Mo – Molybdenum

Si – Silica  
Fe – Iron  
N – Nitrogen  
Zr – Zirconium

If you have further questions please feel free to contact me at 626-574-4267.

Regards,  
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