

Technology

Gold volumes in the technology sector dwindle further with year-on-year declines across all uses from electronics to dentistry.

Tonnes	Q2'15	Q2'16	Year-on-year change	Year-to-date change
Technology	83.3	80.9	↓ -3%	↓ -3%
Electronics	65.7	63.9	↓ -3%	↓ -3%
Other Industrial	12.8	12.4	↓ -3%	↓ -3%
Dentistry	4.7	4.6	↓ -4%	↓ -4%

Demand for gold in technological applications totalled 80.9t in Q2, fractionally higher than the previous quarter, but down 3% year-on-year. Continued cost-saving – through substitution or thrifting – continued to weigh on the sector.

Electronics demand impacted by weaker device sales

Gold used in electronics dropped 3% year-on-year to 63.9t in Q2 2016, although it was unchanged from the first quarter. This keeps electronics demand at its lowest level since the fourth quarter of 2013. The rise in the gold price in the first six months of the year will have fueled further cost-saving drives by manufacturers. Despite the tough environment, growth in the wireless sector helped partially offset slackness in demand for gold bonding wire.

The wireless sector grew in Q2, as stronger sales for Android devices made up for weaker iPhone sales. However, gold's use in this sector faces some hurdles. As the smart-device market matures, previous double-digit gains will be difficult to replicate. One bright spot might be the continued interest in Internet-of-Things (IoT) applications, which may drive increased demand for certain devices.

Gold bonding wire demand continued to decline, as manufacturers substituted gold with cheaper alternatives. Palladium coated copper (PCC) wire was increasingly used by middle-to-low-end smartphone manufactures in China. Flip chip packaging (which continues to grow in importance and relevance given its advantages of lower cost, high electrical performance and reproducibility) also reduced gold wire consumption.

Dentistry and other industrial declined further

Other industrial demand in Q2 fell 3% year-on-year, from 12.8t to 12.4t. Declines were seen across a number of key Asian markets: China was 6% lower, while Taiwan and Korea dropped 7.5% and 2.7% respectively. Despite this weakness, industrial demand for gold is, in some areas, beginning to show signs of recovery.

Gold in dental applications continues to hover around the 4–5t mark, weakening by 4% to 4.6t in Q2, largely due to cosmetic considerations.

More new uses of gold uncovered

Scientists in the United States have developed a new super-hard alloy of gold and titanium.²² This new alloy is the hardest metallic substance that is compatible with living tissues – four times tougher than titanium alone. This new material could have wide ranging applications in medicine and dentistry, overcoming the shorter lifespan of titanium implants (typically around 10 years) that are currently used in human joint-replacements.

In addition, Johnson Matthey continues to advance the manufacture of a new non-polluting commercial catalyst that uses gold. The aim is to replace traditional mercury-containing catalysts in the polyvinyl chloride (PVC) production process, as well as making it more cost effective. The project has won them a number of awards, including an International Impact Award.²³

22 <http://advances.sciencemag.org/content/2/7/e1600319>

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