



# Copper substitution persistently low

Study name: Substitution survey 2020  
Study author: DMM Advisory Group  
First Presented: March 2020

New trends supporting the usage of copper have resulted in substitution remaining low during 2019. Net substitution stood at 0.83 percent of total copper use, with critical applications relying on copper and copper alloys for performance. Over the next five years copper use is expected to increase, driven by increased electrification, use of electric devices and electric mobility.

## Overview

According to new survey research commissioned by the International Copper Association (ICA), substitution of copper remained low during 2019.

Net substitution stood at 0.83 percent, and including miniaturization at 1.23 percent, of total global copper use. The new survey, carried out by the DMM Advisory Group,

discovered that for many applications copper continues to offer the best cost-performance combination.

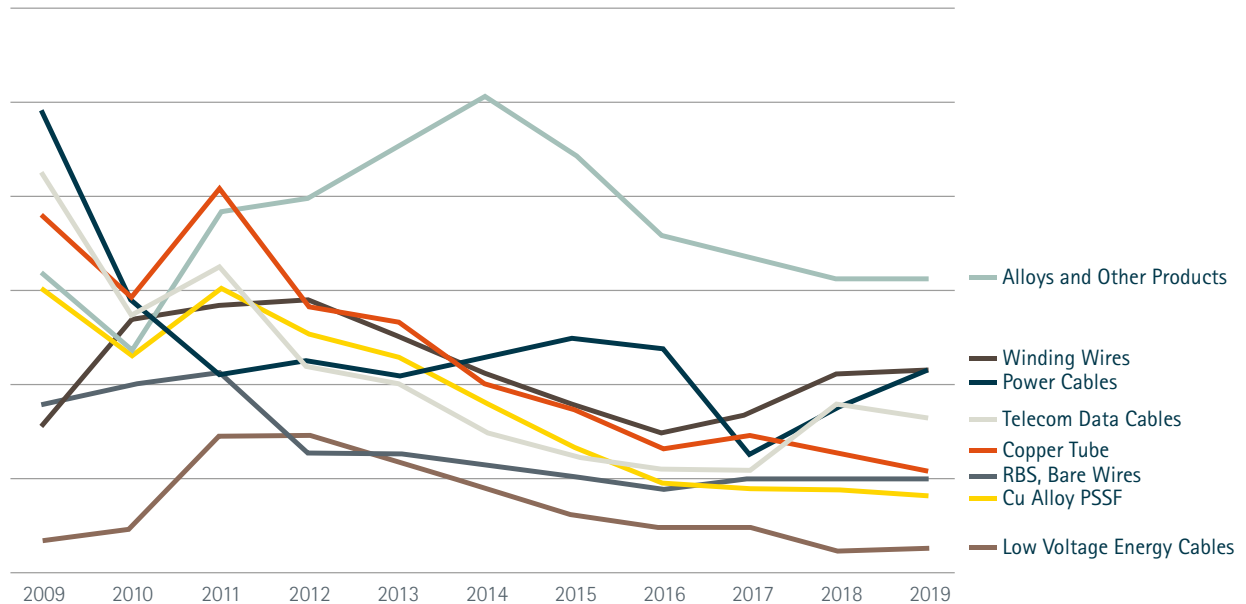
## Geographical differences

China, the largest market for copper, has the lowest relative net substitution across the world at 0.5 percent of total copper use.

The country's reliance on copper is due to cautious procurement policies and regional product specifications. Conversely, in Latin

America, where net substitution is the highest, manufacturers have experienced increased pressure to reduce costs.

## Net substitution by copper products 2009–2019 – in KT



## Key findings

- Many copper applications have limited exposure to substitution as copper and alloys still provide the best cost-performance combinations, especially where conductivity, heat and corrosion resistance is required.
- Key factors impacting substitution are relative material costs, regulations and standards, new technologies and pressure from competitors to reduce costs.
- China, the largest copper use region, continues to favor copper as the reliable material and due to regional material specifications.