

The Copper Voluntary Risk Assessment

Working with public authorities to enhance safe
production and safeguard use of copper

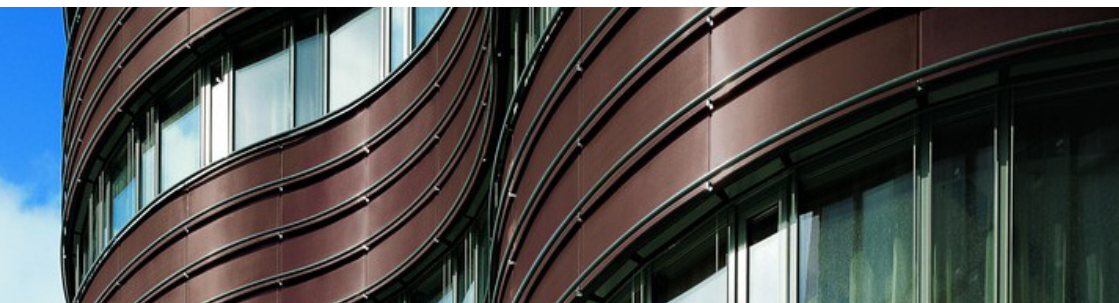


Copper
is an
essential
element
in our
modern
environment



As a semi-finished or finished product, it contributes significantly to industrial and technological development, but it is also an essential nutrient for humans, ensuring the health and wellbeing of people across the globe.

This was confirmed by an industry-sponsored “Voluntary Risk Assessment” (VRA) of copper, performed between 2000 and 2005, in cooperation with the Italian Government’s Istituto Superiore di Sanità.



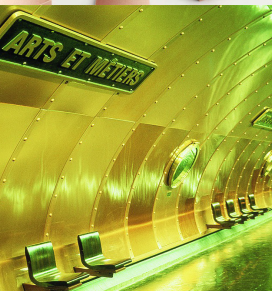
In 2008, the VRA was fully endorsed by the EU authorities. It was the first exercise of this type in Europe to be completed.

Recognised and accepted by the scientific community and by EU regulatory authorities, the VRA provides a sound scientific basis to assess safe production and uses of copper metal, copper powder and four copper compounds.

The VRA:

- Quantifies environmental emissions during copper production, use and end of life
- Assesses copper exposure to workers and consumers
- Based on sound scientific analysis, recommends safe limit values for the environment and human health
- Compares the above and recommends where additional risk management measures may be needed

Copper: Safe, clean, essential...



The VRA key conclusions and recommendations:

Copper is an essential nutrient for **humans** as well as for all living organisms

- Daily copper intakes of between 1 and 11 mg Cu/day are safe for humans.
- Typical copper intake levels, which range from 0.6 to 2.0 mg/day, indicate more of a risk from copper deficiency.

Copper production and use are, in general, safe for Europe's **environment** and the **health** of its citizens

- The copper industry has committed itself to preparing a risk reduction plan in the limited cases where environmental risks were detected.

The European Copper Institute, acting on behalf of the European copper industry, has worked closely with EU authorities to ensure objectivity, quality and transparency of the risk assessment, of its results and of its follow-up.

Key features:

A transparent process:

→ The VRA was reviewed in-depth by renowned scientists within independent peer-review panels.

A broad and committed industry participation:

→ From the producers of copper metal, powder and chemicals to the downstream users, the VRA involved the whole copper value chain.

A significant investment:

→ The European Copper Institute formed a consortium to manage the €8 million VRA project.

→ The final VRA is a 1,800 pages dossier.

Immediate results:

→ Commitment by the copper industry to implement the small number of recommended risk reduction measures.

→ The EU's Scientific Committee on Health and Environmental Risks (SCHER) has endorsed the VRA methodology and its results.

Long-term perspectives:

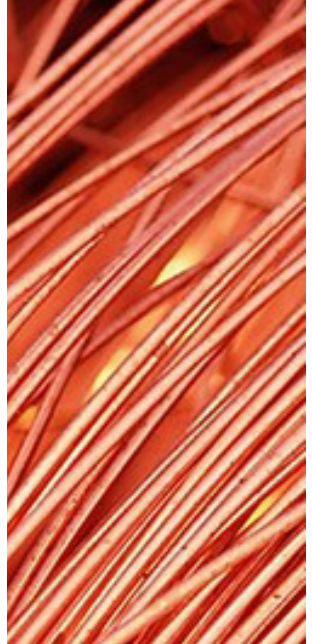
→ The VRA provides the solid scientific platform needed to address the requirements of REACH, the European Union's regulation on chemicals and their safe use.

→ The VRA is contributing to the long-term stability of the European copper industry.

Did you know that?



- Copper can continue to be recycled over and over again with no loss in its performance and qualities.
- Copper is naturally antimicrobial and so limits the spread of bacteria in water and air distribution systems made from it.
- Copper is an essential trace mineral present in all body tissue? Along with iron, copper helps in the formation of red blood cells and to keep blood vessels, nerves, immune system, and bones healthy.
- Archaeologists have recovered a portion of a water plumbing system from the Pyramid of Cheops in Egypt. The copper piping was found to be in serviceable condition after more than five thousand years.
- Tools made from copper or copper alloys will not cause a spark, and thus are used wherever there may be a danger of explosion.





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