

Contact Materials

Tomorrow's life –
our mission today
Winning with Technical Materials





Contact Materials



Platinum
Engineered
Materials



Electronic
Packaging
Materials

Materials for a better life – Umicore Technical Materials

Making Contact Everywhere!

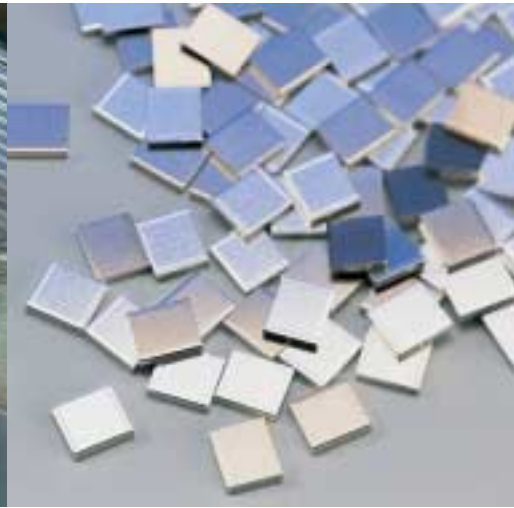
Many of the things which we consider routine today were once the visions of a future-oriented company.

With this motivating idea in mind we develop and produce solutions for a wide variety of technical applications. The products of Umicore are used in all important branches of industry

(e.g., the glass industry, petrochemistry, aviation and aerospace, the automotive industry and in electrical applications and electronics).

As different as the applications of our products are, our solutions have one thing in common – highest quality. We offer solutions which set new standards, products which are trend-setting in their functionality and future technologies that can be used reliably and safely.

As you can see, the future is something very everyday to us at Umicore.



- 1| Contact tips, AgC
- 2| Contact profiles
- 3| Contact tips
- 4| Contact wires

Profiles

Contact materials

Fuse materials

Contact tips

Tapes

Wires

Assemblies



Customer First

Customer-specific solutions. The customer comes first.

A simple piece of wisdom that all our employees follow since we see ourselves primarily as service providers. Together with our customers we develop solutions which offer maximum implementation of individual requirements and supply products that ensure maximum process safety and reliability.

Electrical engineering and technology is characterized by long product life time and maximum demand on product quality, both of which must be met regardless of whether our customers use semi-finished products or finished parts. It is Umicore's place to always remain a step ahead of development by recognizing trends and quickly developing automatic production processes. That sounds easy, but staying on your toes and confronting new challenges is no simple task. It is, however, a challenge we master every day.

Our innovative capability is primarily based on our qualified staff. Their experience, know-how and their enthusiasm serve as the base for good ideas and successful results.





1| Extrusion press

Material Production

New materials and requirements need a solid base – research and development.

The requirement on our products is: “Assure reliable and safe continuous or single switching operations.”

As is so often the case, the hard part is the details. The general conditions and the demands of the electrical industry are often very complex. This is why we support our customers from the very beginning – with technical application technology and a worldwide sales network. We see ourselves as

development partners who work together with you to create the best and most economical solution.

Selecting a suitable contact material sometimes means exploring new paths. Ever so often this is reason enough to think about new alloys and materials, but it isn't the only reason – our developers are always a little curious too.

Precipitating

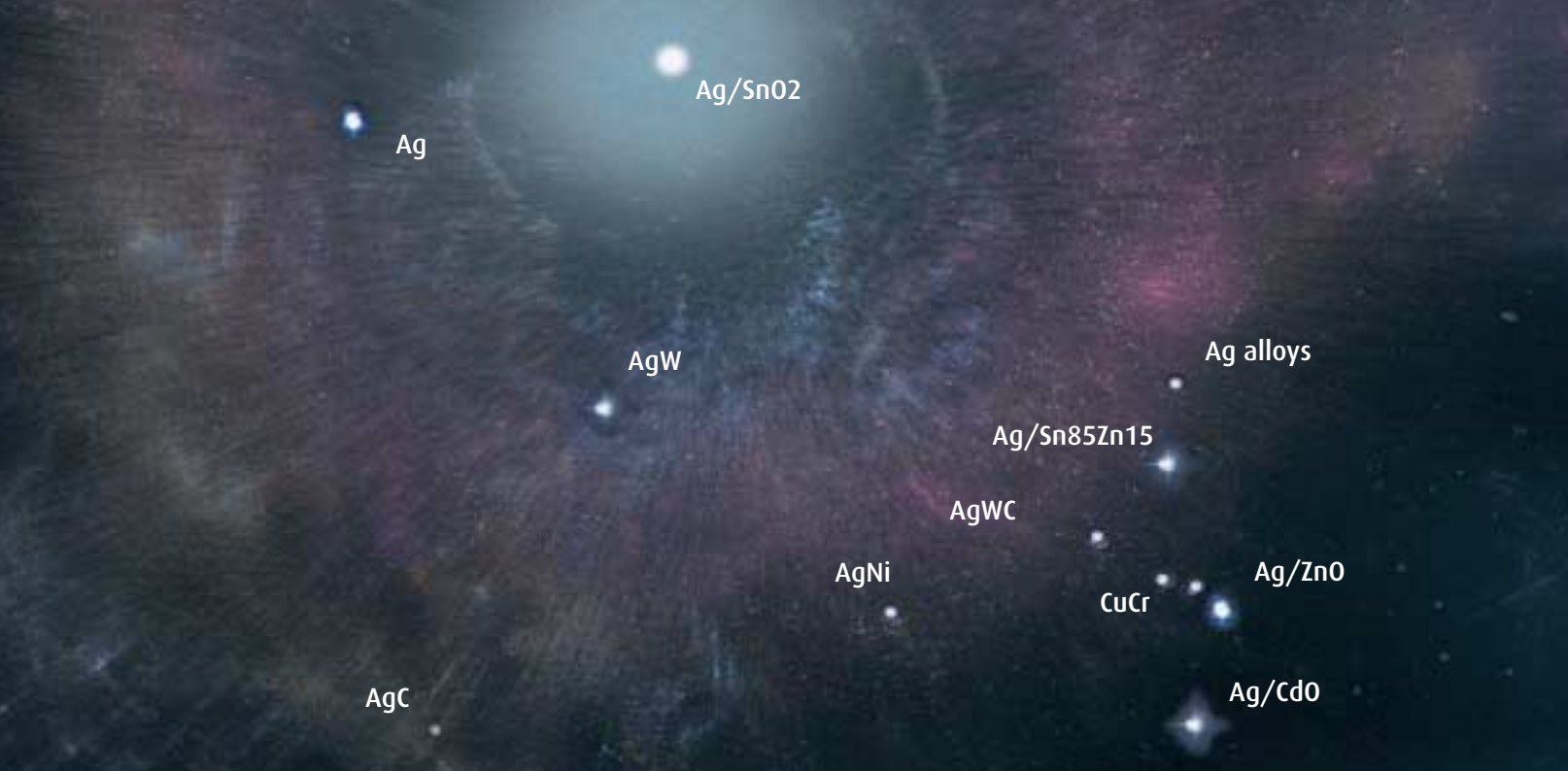
Mixing

Isostatic pressing

Extruding

Sintering



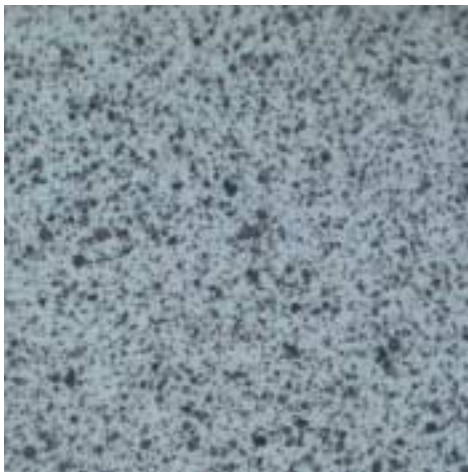


Contact Materials

Everything revolves around the material.

You may be asking yourself the question "What does Umicore offer me?" The answer follows, "Materials for all applications in low and medium voltage technology." Thanks to our wide variety of materials, this claim is no exaggeration, as we are able to offer the optimum solutions for each and every requirement. Often, however, the deciding factor for our customers is that we are a partner who offers more than simple "off-the-rack" materials.

So although we sell products, Umicore offers a lot more – production plants, unsurpassed expertise and responsive service.



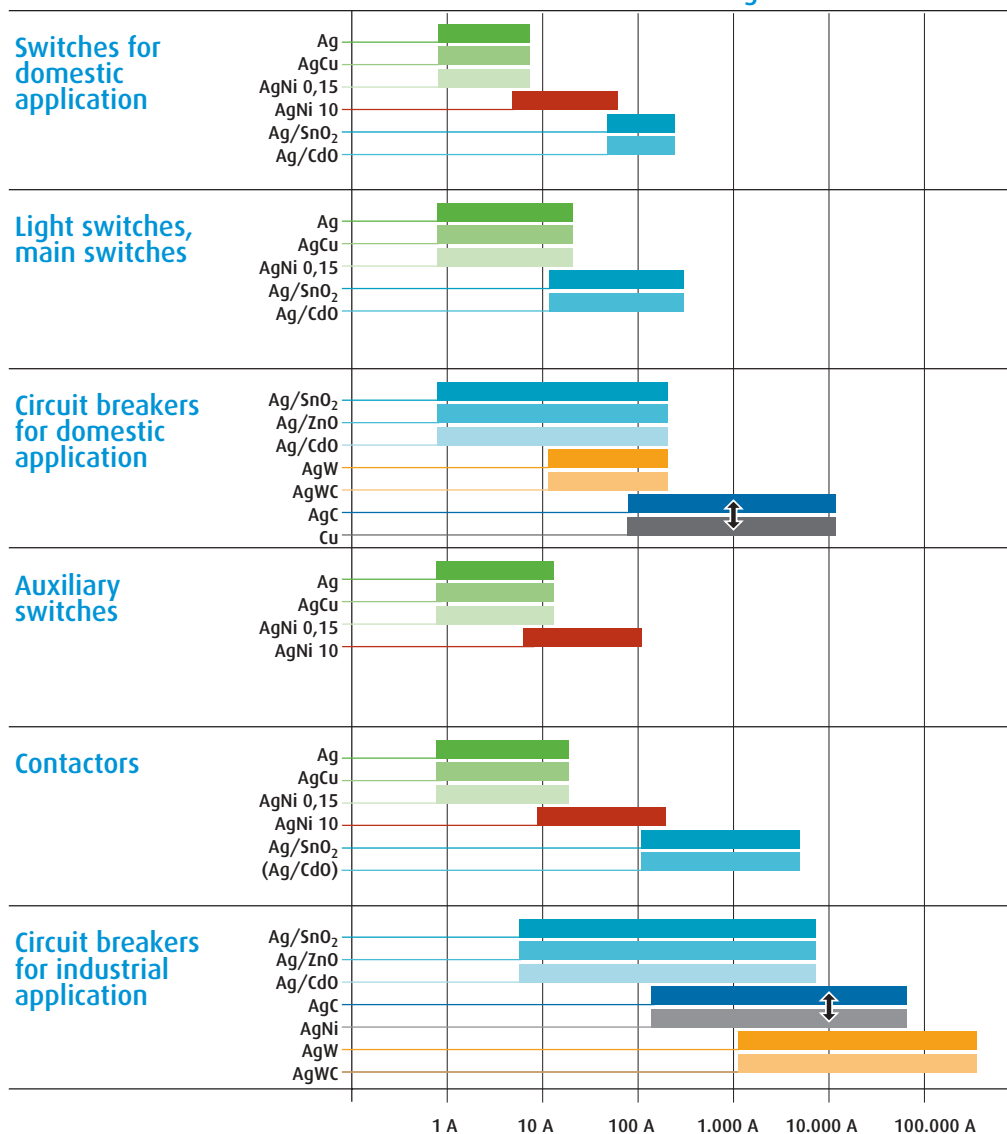
1| Ag/SnO₂ standard

2| Ag/SnO₂ NCF



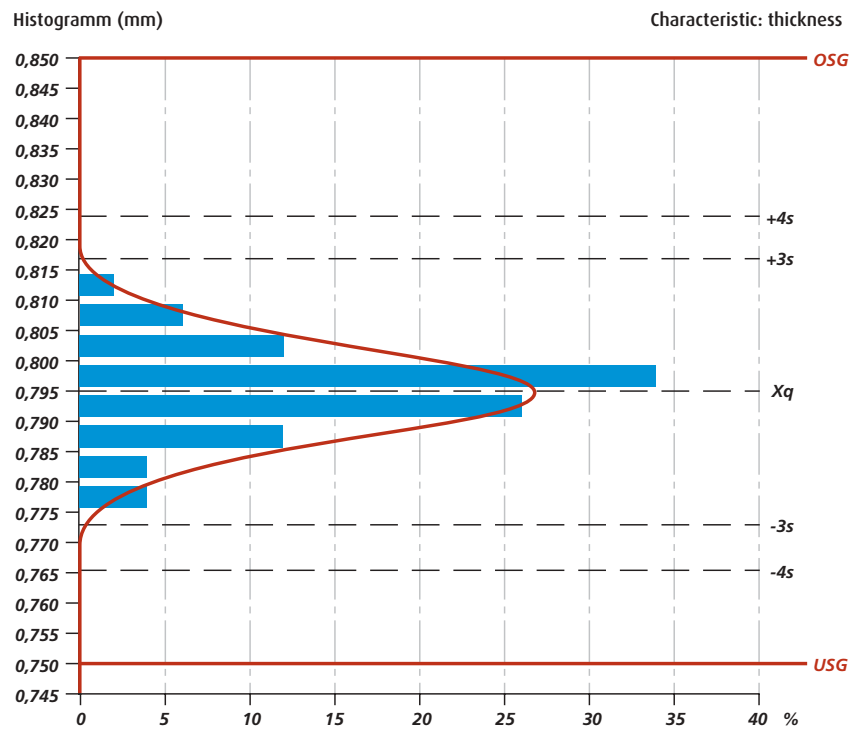
Applications for Contact Materials

Maximum switching currents





- 1| Contact testing laboratory
- 2| Wire drawing equipment
- 3| Stamping
- 4| Tensile strength test



Zero defect

Ship to line

CpK/SPC

TPM

Impurity analysis GDMS



Production and Total Quality Management

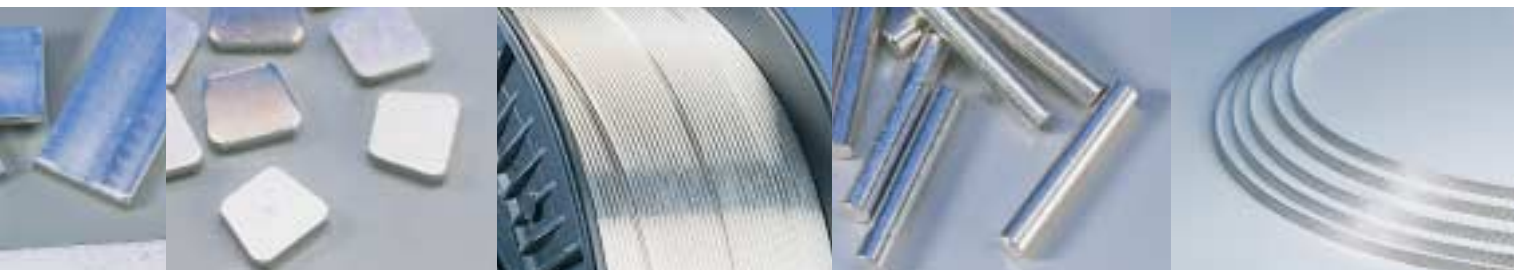
Quality begins in your head.

Our highest priority is maximum product quality. Consequently, all of our efforts are guided by this maxim.

Quality, however, cannot be reached by testing. The concept of quality must be permanently anchored in the organization and demonstrated day-by-day. For our staff, this means: constant further education and continuous improvement. After all, "being good is alright, but improve-

ment is better." For this reason, Technical Materials has implemented a "Team Work" concept in production and has been operating a Kaizen Zero-Defect program for a number of years.

Contact Materials is currently certified in accordance with ISO 9001, QS-9000, and ISO 14001 and is committed to Responsible Care. Moreover, the unit is regularly audited by customers.



Germany

Umicore AG & Co. KG
Technical Materials
Contact Materials

Rodenbacher Chaussee 4
63457 Hanau (Wolfgang)
Germany
phone: +49 (6181) 59-5298
fax: +49 (6181) 59-5163
e-mail: contact.mat@eu.umicore.com
www.umicore.com

Brazil

Umicore Brazil Ltda.
Technical Materials
Contact Materials

Av. Barao do Rio Branco 440
Caixa Postal 101
Guarulhos-Sao Paulo- Brazil
07042-010
phone: +55 (11) 6421-1389
fax: +55 (11) 6421-8787
www.umicore.com

North America

Umicore Precious Metals NJ, LLC
Technical Materials
Contact Materials

3900 South Clinton Avenue
South Plainfield, NJ 07080
USA
phone: +1 (908) 226-2000
fax: +1 (908) 757-9047
www.umicore.com

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