

# ZINC ALLOYS – ZAMAK

Metallurgy



# CINKARNA

## WHO ARE WE?

Cinkarna Celje, d.d., is a modern Slovenian metallurgical and chemical processing company with a diverse production and sales program. Our offer is expanded and adapted with keen awareness of our customers' needs and environmental issues. Our range includes titanium dioxide pigment, sheet manufacturing, graphics supplies, masterbatches, powder coatings, anti-corrosion coatings, tile adhesives, and products for chemical protection of plants.

## TRADITION

Cinkarna is a company with formidable tradition as the beginnings of manufacturing date back to 1873. Tradition, years of experience, and visibility are the hallmarks of our production program.

## QUALITY

Our policy of high quality and responsible attitude to our business partners, shareholders, employees, and the environment is consistently pursued throughout the production process. This is witnessed by our certificates: ISO 9001, ISO 14001, and BS OHSAS 18001. Development of products and choice of technology is aimed at production of quality products.

## MARKET ORIENTATION

Satisfied customers are the fundamental goal of Cinkarna's quality management policy. We are a market-oriented company constantly striving for improvement, development, flexibility, and reliability. We have a keen feel for the needs of the market and we are happy to help our customers find the optimum solutions for them.

## CARE FOR THE ENVIRONMENT

We understand the notion of sustainable development as a responsibility to the environment and the society, which permeates Cinkarna's vision, mission, and development plan. We use maximum care and employ state-of-the-art technology to preserve the nature for the generations of tomorrow while meeting today's needs. Our key goals are to reduce power consumption and emissions into the environment.

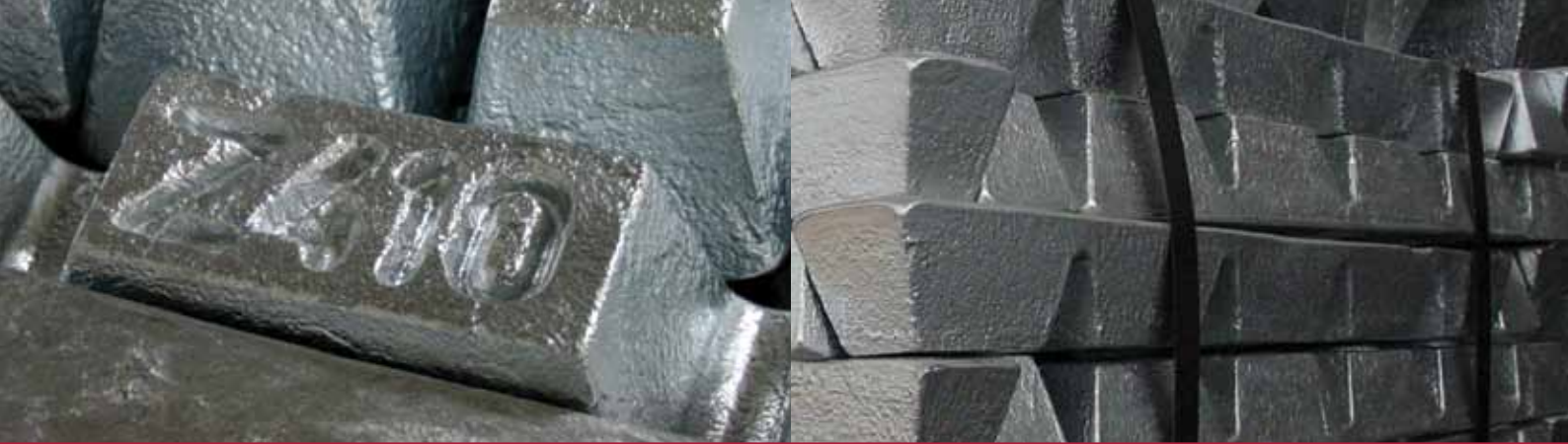
## Metallurgy

Titanium zinc sheets  
Zinc wire  
Zinc alloys - Zamak  
Zinc anodes

Cinkarna also manufactures the zinc alloy called ZAMAK. It is used predominantly for pressure moulding of furniture fittings, in automotive industry, electrical appliances industry, precision- and optomechanics etc. The key advantage of this material is low moulding temperature, exceptionally good mouldability, tensile strength, and good conditions for processing and galvanization.

Zamak is manufactured in compliance with the standard EN 12844.





**Packaging** Pallets, 1000 kg each.

**We manufacture**

### Zamak 400 (Z3)

*Al: 3.7 – 4.3%*  
*Cu: max 0.1%*  
*Mg: 0.025 – 0.06%*  
*Zinc purity: 99.995%*

*Tensile strength: 300 Mpa*  
*Stretch (elongation) A: 5%*  
*HB hardness: 82*  
*Elasticity modulus: 85 Gpa*  
*Specific weight: 6.65 kg/dm<sup>3</sup>*  
*Melting point: 380 - 386°C*

### Zamak 410 (Z5)

*Al: 3.7 – 4.3%*  
*Cu: 0.7 – 1.2%*  
*Mg: 0.025 – 0.06%*  
*Zinc purity: 99.995%*

*Tensile strength: 300 Mpa*  
*Stretch (elongation) A: 5%*  
*HB hardness: 92*  
*Elasticity modulus: 85 Gpa*  
*Specific weight: 6.7 kg/dm<sup>3</sup>*  
*Melting point: 379 - 388°C*

### Zamak 430 (Z2)

*Al: 3.7 – 4.3%*  
*Cu: 2.7 – 3.3%*  
*Mg: 0.025 – 0.06%*  
*Zinc purity: 99.995 %*

*Tensile strength: 335 Mpa*  
*Stretch (elongation) A: 5%*  
*HB hardness: 102*  
*Elasticity modulus: 85 Gpa*  
*Specific weight: 6.8 kg/dm<sup>3</sup>*  
*Melting point: 379 - 389°C*





# ZINC ALLOYS - ZAMAK

Metalurško - kemična industrija Celje, d.d.  
p.p. 1032 T +386 (0)3 427 60 00  
Kidričeva 26 F +386 (0)3 427 62 92  
3001 Celje E marketing@cinkarna.si  
Slovenia www.cinkarna.si



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