



# CM238E

Special Brass Alloy

Standardization:

**Free-Cutting / Leaded Brass Alloy**

## ALLOY DESCRIPTION

A highly optimized leaded brass designed specifically for high-speed machining, valve, and armature manufacturing. A true industrial standard for mass production.

## CHEMICAL COMPOSITION (% WEIGHT)

Fe (%)	C (%)	Si (%)	Ni (%)	P (%)	Al (%)	Ace (%)	Pb (%)	Se (%)	Mg (%)	Zn (%)	Sb (%)	Bi (%)	Sn (%)	Te (%)
max 0.1	max 0.05	max 0.05	max 0.2	max 0.02	max 0.5	max 0.1	max 0.03	max 0.005	9 - 11	max 0.1	max 0.01	max 0.005	max 0.05	max 0.005

## MECHANICAL PROPERTIES (MIN.)

Unspecified

## PHYSICAL PROPERTIES

- Density	<b>8.45 [kg/dm<sup>3</sup>]</b>
Melting Temperature	<b>~880 - 900 [°C]</b>
Elk. Conductivity	<b>~13 - 15 [MS/m]</b>
Elasticity Modulus	<b>98 [kN/mm<sup>2</sup>]</b>

## CASTING / MANUFACTURING METHODS

EK	<b>Extrusion (Rod/Profile)</b>
GS	<b>sand casting</b>
GM	<b>Permanent mold casting</b>
GZ	<b>Centrifugal casting</b>

## AREAS OF APPLICATION

- Free-Cutting Parts
- Valves and Fittings
- Fasteners and Screws
- Plumbing Connections
- Precision Watch Parts

## MACHINABILITY & CHARACTERISTICS

The addition of lead ensures short and brittle chip breakage during turning and milling, along with low tool wear. Machinability index is the reference standard for extrusion and hot forging parts.

The technical information specified in this document reflects the standard reference values of international EN and DIN norms. Deviations may be observed depending on final production conditions.