

BRASS RODS_INDUSTRY SUPERMETAVIT[®]



Leaded brass rods
for high performance machining



SUPERMETAVIT®



HIGH PRECISION EXCELLENCE

SUPERMETAVIT® is a range of leaded brass rods specially designed to meet the requirements of high speed machining.

The use of **SUPERMETAVIT®** rods is particularly recommended for mass production of high precision brass parts, mainly for applications such as connectors, micromechanics, electronics, electrical equipment and ballpoint pen tips.

SUPERMETAVIT® has been developed through research carried out by the KME BRASS RODS DIVISION in the field of high speed machining, in order to optimise the manufacturing processes involved in the high precision machining industry.



THE GUARANTEE OF EXCELLENT MACHINABILITY

SUPERMETAVIT® rods are distinguishable through their quality and the advantages they provide, and are supported by first-rate services.

➔ QUALITY

SUPERMETAVIT® rods offer the following qualities:

- an alloy specially designed for high speed machining,
- even distribution of lead particles throughout the brass, enabling better cutting and allowing the material to chip more easily,
- rigorous dimensional tolerances along the entire length of the rod,
- excellent rod straightness,
- highly accurate pointing and chamfering of the ends,
- perfectly smooth and shiny surface finish.

➔ ADVANTAGES

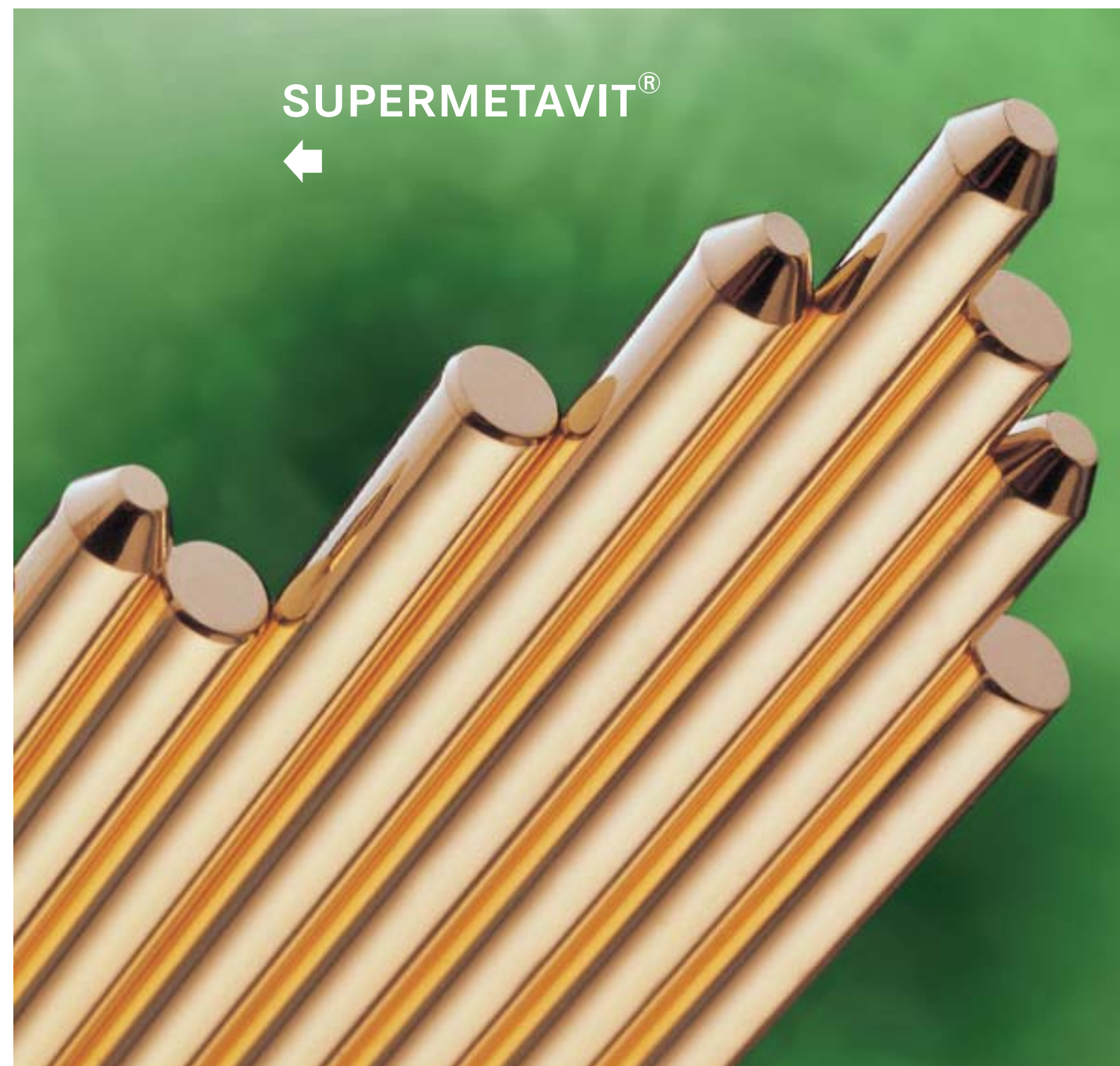
SUPERMETAVIT® rods offer the following advantages:

- increased cutting speed,
- reduced wear on the cutting tools,
- improved surface finish of the machined parts.

➔ SERVICES

The services accompanying **SUPERMETAVIT®** rods are:

- technical support,
- permanent stocks,
- a large sales and distribution network in Europe.



SUPERMETAVIT®



THE RANGE

ALLOY DESIGNATION

KME designation	Norm	
	EN 12164	ASTM
SUPERMETAVIT®	CW614N (CuZn39Pb3)	C38500

SUPERMETAVIT® leaded brass is an alloy designed specially for high speed machining.

MECHANICAL CHARACTERISTICS

Metallurgical state		R500
Ultimate tensile strength Rm (N/mm ²)		min. 500
Elasticity Rp 0.2 (N/mm ²)		≈ 430
Elongation A (%)		≈ 6
Hardness HB		≈ 150

MICROSTRUCTURE

The microstructure of SUPERMETAVIT® rods is characterised by a balanced distribution between the alpha and beta phases as well as a homogeneous distribution of the lead particles.

Distribution of lead particles





➔ DIAMETERS AND DIMENSIONAL TOLERANCES

Diameter	Tolerance		Ovalisation
(mm)	(mm)	EN 12164 Class	(mm)
$2.0 \leq D \leq 3.0$	+ 0.0 - 0.025	B / h9	≤ 0.005
$3.0 < D \leq 6.0$	+ 0.0 - 0.030	B / h9	≤ 0.005
$6.0 < D \leq 10.0$	+ 0.0 - 0.036	B / h9	≤ 0.008
$10.0 < D \leq 13.0$	+ 0.0 - 0.043	B / h9	≤ 0.008

In a given package the variation of diameters is less than 0.010 mm.

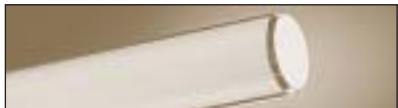

➔ STRAIGHTNESS TOLERANCES

Diameter	Tolerance		
	h1 per meter	h2 per 400 mm	h3 [end]
$2.0 \leq D \leq 10.0$	≤ 0.5 mm	≤ 0.4 mm	≤ 0.5 mm
$10.0 < D \leq 13.0$	≤ 1.0 mm	≤ 0.6 mm	≤ 0.5 mm

➔ ROD LENGTH AND TOLERANCE

Diameter	Length	Tolerance
(mm)	(mm)	(mm)
$2.0 \leq D \leq 13.0$	3000	+ 5.0 / - 0.0

➔ ROD ENDS

	
Chamfer diameter	Point diameter
$0.85 * D \leq d \leq 0.95 * D$	$0.6 * D \leq d \leq 0.8 * D$

D : rod diameter

d : chamfer or point diameter



➔ **SURFACE FINISH CHARACTERISTICS**

SUPERMETAVIT® rods are perfectly smooth and shiny, free from surface oxidation. Each rod is Eddy currents tested.

➔ **PACKAGING & TRACEABILITY**

SUPERMETAVIT® rods are packed in wooden cases or 500 kg bundles. For any other packaging, please contact our sales network.

Note: the variation of diameters in a given package is less than 0.010 mm.

A special label on each package guarantees product traceability.





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Mirastrasse 10-14 1
3509 Berlin
GERMANY
Phone +49 (0)30 4097-0
info-germany@kme.com
www.kme.com

?A9'6fUgg': fUbW'G5 G

11, bis rue de l'hôtel de ville
92411 Courbevoie Cedex
FRANCE
Phone +33 (0)1 47 89 68 68
kme-france.drh@kme.com
www.kme.com

?A9'6fUgg' #UmGT""

Via dei Barucci, 2
50127 Firenze
ITALY
Phone +39 055 44111
www.kme.com