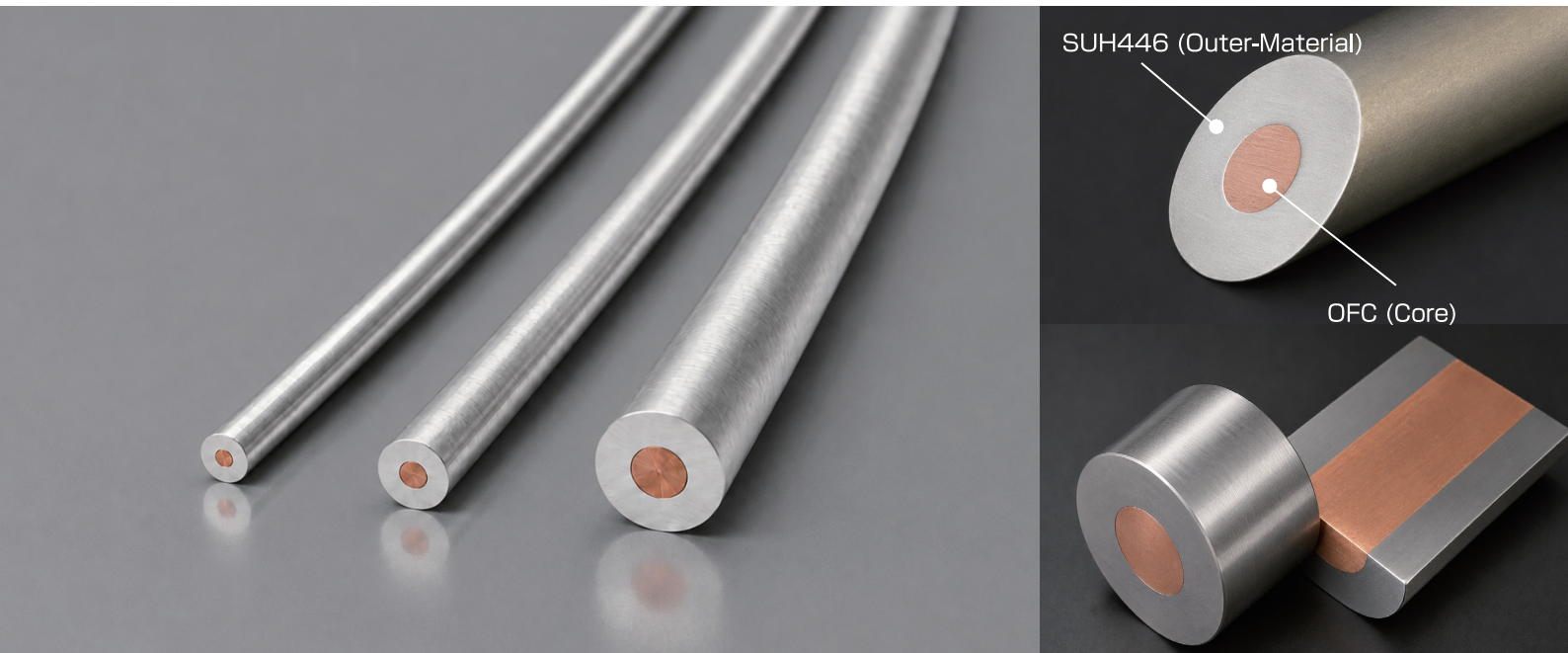


A high-hermetic clad wire that achieves both glass sealing and high-current capability

COPPER-CORE CLAD WIRE

SUH446

OFC



High Hermeticity

Interfacial Reliability after Sealing



High Electrical Conductivity

OFC Core



High Thermal Conductivity

Enhances Thermal Management Performance

Manufactured with an oxygen-free copper (OFC) core and a SUH446 alloy outer-material whose thermal expansion coefficient closely matches that of glass, this clad wire is ideal for components utilizing glass-sealing technology and supports a wide range of high-current applications.

This clad wire, manufactured using KMCT's proprietary process, offers excellent hermeticity and meets the demands for higher performance and downsizing in vacuum components for the electrical and electronics fields as well as industrial vacuum equipment.

Characteristics

01

Thermal Expansion Characteristics Close to Those of Glass

It features a thermal expansion coefficient equivalent to that of glass, while also providing excellent electrical and thermal conductivity.

02

Maintains High Interfacial Reliability Even After Heating to Around 1000°C

With excellent metallurgical bonding, it exhibits no interfacial leakage even after exposure to the approximately 1000°C heat involved in glass-sealing processes.

03

Stable Composite Ratio Along the Longitudinal Direction

The composite ratio remains constant along the longitudinal direction.

04

The Composite Ratio Can be Adjusted

The composite ratio can be adjusted, allowing compatibility with ratios from 2:1 to 3:1.

Main Application

Various hermetic seal components

Usage examples:
hermetic power feedthrough terminals
(for air conditioners, refrigerators, automobiles, and data-center equipment)

Production Range

Unit	Outside Diameter
Bobbin	Φ0.5~1.5mm
Coil	Φ1.5~5mm
Bar	Φ5~20mm

Production tolerances and any manufacturing ranges not listed above can be discussed separately.

COPPER-CORE CLAD WIRE (SUH446/OFC)

SUH446
OFC

Material Properties

SUH446/OFC (Composite ratio 2 : 1)

A. Chemical Composition (specification values) unit:wt%

Material	Cu	O	Ni	C	Mn	S
SUH446	0.50max	-	0.50max	0.06max	1.50max	0.03max
OFC	99.99min	0.001max	-	-	-	-
Material	P	Cr	Si	N	Mo	Fe
SUH446	0.04max	23-25	1.00max	0.10max	0.20max	Rest
OFC	-	-	-	-	-	-

B. Mechanical Properties (reference values)

SUH446	OFC
Outer material Hardness(Hv)	Core material Hardness(Hv)
200-300	110-130

C. Electrical Properties (reference values)

Electrical conductivity (%IACS)
25-27

D. Physical Properties (reference values)

SUH446/OFC Specific gravity
7.92

E. Coefficient of thermal expansion (reference values)

Coefficient of thermal expansion (x10 ⁻⁶ /°C)		
Temperature range (°C)	SUH446/OFC ϕ 3.2	SUH446 Single ϕ 3.2
25 ~ 100	11.1	9.7
25 ~ 200	11.8	10.1
25 ~ 300	12.0	10.4
25 ~ 400	17.6	10.7
25 ~ 500	20.8	10.9
25 ~ 600	23.9	11.1
25 ~ 700	24.0	11.4
25 ~ 800	24.3	11.9
25 ~ 900	24.2	12.4
25 ~ 1000	24.0	13.1



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