

Electrical Contacts

Mipalloy is India's most reputed manufacturer of Electrical Contacts for Switchgears with its products in use in all five continents across the Globe.

Mipalloy manufactures contacts for Switchgears and Tap changers in its state of art facility with cutting edge technology.

The total inhouse capability gives Mipalloy the start to finish control needed to pursue its business philosophy on all levels involved and through all stages of production.

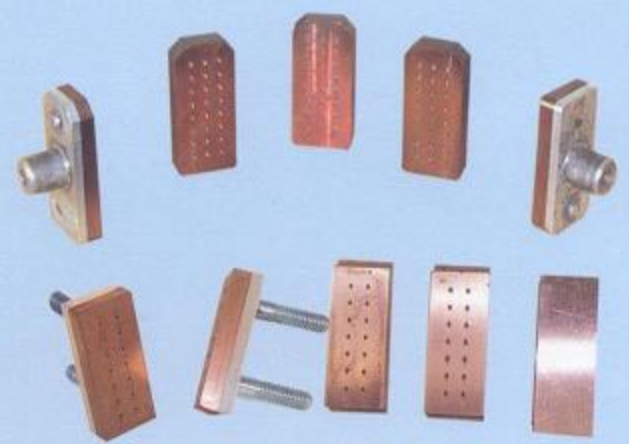
**World Class Electrical Contacts
@ Down to Earth Prices**



**EXTRA HIGH VOLTAGE SWITCHGEAR
TULIP CONTACTS**



**EXTRA HIGH VOLTAGE SWITCHGEAR
PLUNGER CONTACTS**



**TAP CHANGER
CONTACTS**



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Complete Competence in Copper



INTRODUCTION

Mipalloy is India's most reputed manufacturer of electrical contacts with sales to customers in all continents. Apart from having major market share in India, we export to USA, Canada, Mexico, UK, Germany, Spain, Czech Republic, Egypt, Italy, Singapore, Malaysia, Thailand, Australia etc.

Mipalloy is a three decade old ISO9001:2000 certified company with cutting edge manufacturing facilities. Over the years our products have established themselves as a benchmark for quality in the industry. Mipalloy's reputation of zero defect supplies have regularly secured repeat business from its customers for years.

Since copper forms the core of all our activities & as we have considerable experience in handling this precious red metal our motto is

Complete Competence in Copper

FACILITIES

Mipalloy with its superior high end technology & cutting edge manufacturing facilities leads the industry from the front. We have been manufacturing electrical contacts for three decades now and have a through knowledge of the field both with respect to manufacturing and application. Our cutting edge facilities comprise of;

- 100,000 square feet of built up factory building with contemporary features such as Factory Automation & Computer Assisted Manufacturing.
- Ball Mills for Tungsten Metal Powder
- Press Shop for Tungsten Metal Powder Compaction
- Batch Type controlled atmosphere furnaces for presintering
- High temperature controlled atmosphere continuous process furnaces for sintering.
- Induction brazing facilities for high volume induction brazing.
- Controlled atmosphere flameless continuous process furnaces for bulk silver brazing.
- Heat Treatment furnaces for Copper alloy production.
- Wide array of CNC Lathes & Horizontal machining centres for complex parts production.
- Diverse multi axis Vertical machining Centres for complicated part mass production.
- Co-ordinate measuring machines for Inspection & Reverse Engineering.



Special processes like Gun Drilling, Hot Forging, Cold Forging, Hot Extrusion, Friction welding & Silver plating add considerable prowess to our already formidable manufacturing capacities.

Mipalloy has inhouse inspection facilities and at a nominal cost provides;

- Chemical Test Reports
- Hardness Reports
- Electrical Conductivity Reports
- Metallography Photos & Grain Size Reports
- Ultrasonic Test Reports
- X-ray Reports
- Dimensional Co-ordinate Measuring Machine Reports.



Mipalloy supplies Electrical Contact materials conforming to international standards. The typical properties of Mipalloy Electrical Contact materials are given hereunder.

ALLOY	PRINCIPAL ELEMENTS	UNS No	RWMA	HARDNESS ROCKWELL	ELECTRICAL CONDUCTIVITY %I.A.C.S	DENSITY GMS / CC
MIPALLOY C Copper	Copper	C10100 C11000			+100	8.96
MIPALLOY AC Silver Copper	Silver Copper	C10700		45 B 60 B	+95	8.96
MIPALLOY 3 Chromium Copper	Chromium Copper	C18200	Group A Class 2	70 B 83 B	+75	8.96
MIPALLOY 3ZR Chromium Zirconium Copper	Chromium Zirconium Copper	C18150	Group A Class 2	70 B 83 B	+75	8.96
MIPALLOY M56WC Tungsten Copper	56W : 44Cu		Group B Class 10	72 B 82 B	55 60	12.6
MIPALLOY M68WC Tungsten Copper	68W : 32Cu		Group B Class 10	85 B 92 B	48 53	13.93
MIPALLOY M70WC Tungsten Copper	70W : 30Cu		Group B Class 10	88 B 95 B	47 52	14.18
MIPALLOY M75WC Tungsten Copper	75W : 25Cu		Group B Class 11	94 B 99 B	42 50	14.80
MIPALLOY M80WC Tungsten Copper	80W : 20Cu		Group B Class 12	98 B 104 B	41 49	15.60
MIPALLOY M100W Tungsten	100% W		Group B Class 13	69A	31	19.28
MIPALLOY M100M Molybdenum	100% Mo		Group B Class 14	89B	30	10.2



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ISO 9001: 2000

Complete Competence in Copper

Mipalloy's Electrical Contacts Division manufactures complete range of Electrical Contacts for Switchgears right from small Switchgears to Extra High Voltage Switchgears. Small switchgear uses contact rivets & contact rollers. Contact rivets are either supplied as solid Tungsten Copper contacts or Tungsten Copper tips brazed with brass backings. Contacts which require Silver plating on contact surface are also supplied as per customer requirements



CONTACT RIVETS & ROLLERS



Mipalloy makes Plunger and Tulip contacts for High voltage SF₆ Switchgear. Tungsten Copper is silver brazed on to Chromium Copper bases & CNC Machined to print. We employ induction brazing to perform Silver brazing which ensures quick production and reliable quality of brazing. CNC turning and VMC machining ensures part to part repeatability and consistency in dimensions.

Mipalloy uses only Oxygen free hard drawn Coppers for High Voltage Contacts. The Oxygen free Copper or Copper alloys when brazed on to Tungsten Copper offers excellent results. Due to absence of oxygen, hydrogen embrittlement is eliminated and a brazed joint of high integrity is achieved.

SF₆ PLUNGER & TULIP CONTACTS

This family of contacts forms the bulk of our production. We make several thousand tap changer contacts every week to cater to the requirements of customers in India and abroad. Intank Tap changers typically require Tungsten Copper brazed to steel backings. Mipalloy possesses the expertise to ensure 100% defect free bonding through Silver brazing. Our track record of a zero defect product secures us regular business.



TAP CHANGER CONTACTS



TUNGSTEN COPPER SWITCHGEAR CONTACTS WITH BRASS BACKING

Mipalloy makes C36000, C38000 and C38500 brass supports. Mipalloy possesses high end vertical machining centres which ensure the production of complex parts to high tolerances.



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ISO 9001: 2000

Complete Competence in Copper

Mipalloy's Electrical Contacts Division manufactures Tungsten Coppers for use as EDM/ ECM Electrodes. Tungsten Copper is usually silver brazed along with copper bases to save on cost. When it is required to do deep hole drilling or it is necessary to attain very fine detail, EDM electrodes have to be manufactured with Tungsten Copper material. Tungsten copper materials have excellent wear resistance, good material removal rates and have the ability to retain fine detail during repetitive usage .



EDM ELECTRODES



RESISTANCE WELDING ELECTRODES

We manufacture Tungsten Copper faced projection Welding Electrodes for nut welding. The increased wear resistance of Tungsten Copper facing offers enhanced working life of electrode and less frequent replacements. Our electrodes are the benchmark for quality in the industry as we control all operations inhouse like sintering, brazing and CNC machining. This gives us the start to finish control we need to achieve High Quality.

We manufacture fully machined Copper and Chromium Copper Contacts. All Copper alloys manufactured are of oxygen free quality. We also manufacture Copper / Chromium Copper Contacts & Terminals out of closed die Hot Forging. These hot forged contacts are supplied to our customers in fully machined ready to use condition.



COPPER AND CHROMIUM COPPER CONTACTS & TERMINALS



MIPALLOY ELECTRICAL CONTACTS DIVISION FACTORY



ELECTRICAL CONTACTS



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