



MATERION



Appliance
Applications

**BRUSH
PERFORMANCE
ALLOYS**



Materion Brush Performance Alloys is one of the world's leading suppliers of high performance alloys for a wide range of markets, including appliances. From product design and development to innovative manufacturing practices, our engineers and technical staff will work with you to provide the best solution for your appliance application.

Appliance Applications

Specialty Alloys for White Goods and Small Appliances

Appliance manufacturers are constantly being challenged to make their products more reliable, more compact, safer and longer lasting, while improving performance and meeting tough energy-efficiency requirements. Our high performance copper beryllium strip alloys help design engineers meet these challenges with materials that perform at elevated operating temperatures and high current levels, and under varying ambient conditions. Engineers specify our alloys for key components in washing machines, clothes dryers, dishwashers, refrigerators, stoves, ovens, and small appliances.

- Thermostats with greater sensitivity and consistency
- Control switches, rotary switches and micro switches that provide greater reliability and longer life
- Pressure switches that control water levels to prevent overflow
- Relays with longer life and higher current compatibility
- Door locks that require high functionality at elevated operating temperatures
- Connectors that provide minimal power loss and signal distortion

Selected Alloys for Appliance Applications

Alloy 174 is a copper beryllium alloy designed for high conductivity applications requiring high strength, superior resistance to stress relaxation, and high reliability.

Brush 60® is a new generation, high conductivity copper beryllium alloy specifically engineered for lighter, more compact products with smaller footprints and lower profiles.

Alloy 360 is a copper nickel beryllium alloy used for mechanical and electrical/electronic components subjected to elevated temperatures (up to 370° C) and requiring good spring characteristics at these temperatures.



Pressure switches



Door lock

ALLOY (UNS NUMBER)	TEMPER		HEAT TREATMENT	0.2% OFFSET YIELD STRENGTH	TENSILE STRENGTH	ELONGATION IN 50MM	ELECTRICAL CONDUCTIVITY
	MATERION	ASTM		MPa	MPa	%	% IACS
Alloy 174 (C17410)	1/2 HT	TH02	Mill Hardened	550 - 690	650 - 800	10 - 20	50 min.
	HT	TH04		690 - 830	750 - 900	7 - 17	45 - 60 min.
Brush 60® (C17460)	3/4 HT	TH03	Mill Hardened	650 - 800	790 - 940	11 min.	50 min.
	HT	TH04		720 - 870	820 - 970	10 min.	50 min.
Alloy 360 (No3360)	1/2 H		As Rolled	790 - 1180	890 - 1210	4 min.	4 min.
	H			1030 - 1320	1060 - 1340	1 min.	4 min.
	1/2 HT		1.5 hours @ 510°C	1100 - 1350	1680 min.	9 min.	6 min.
	HT			1150 - 1400	1860 min.	8 min.	6 min.

Visit www.materion.com/brushalloys for additional information on properties and availability.



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MATERION CORPORATION

Materion (NYSE: MTRN) is a global advanced materials company dedicated to providing solutions that enable our customers' technologies and drive their growth. Our products include precious and non-precious specialty metals, precision optical filters, inorganic chemicals and powders, specialty coatings, specialty-engineered beryllium alloys, beryllium and beryllium composites, and engineered clad and plated metal systems. www.materion.com