

AMETEK
AEROSPACE PRODUCTS INC.
WILMINGTON, MA 01887

CAGE CODE: 97424
FORMERLY GE INSTRUMENT PRODUCTS OPER.

MATERIALS-PROCESSES-FINISHES

INTERNAL SPECIFICATION

COVER SHEET

SPECIFICATION NUMBER: B50WB027
DATE FIRST ISSUED: May 30, 1984
REV. S1: January 2, 1991
REV. S2: September 20, 1991
REV. S3: _____

(Approved Source)

TITLE: FLUOROCARBON PLASTIC INSULATED CHROMEL THERMOCOUPLE WIRE

PREPARED BY:

DESIGN ENGINEERING

NAME

P. Beaton

DATE

6/25/84

UNIT

Tk Eng

DESIGN ASSURANCE
& STANDARDS

NAME

George M. Mantle

DATE

6-28-84

APPROVED BY:

DESIGN ENGINEERING

NAME

M. H. Allen

DATE

7-6-84

UNIT

T/C Eng'g

DESIGN ASSURANCE
& STANDARDS

NAME

J. P. McQuinn

DATE

7/11/89

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INTERNAL SPECIFICATION

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REVISIONS

LTR	DESCRIPTION	DATE ISSUED	APPROVED
S1	RDA6009 Added current design activity. Renumbered all pages	01/02/91	<i>Dec</i>
S2	EC14727 Rev. 1D Sh. 1 Rev. 1D Sh. 2, Color Ins. Rev. 1D Sh. 5 Rev. 1D Sh. 6	09/27/91	RJ Hunter

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MATERIALS-PROCESSES-FINISHES

INTERNAL SPECIFICATION

B50WB027-S1

CONTRACT NUMBERS

F33657-82-C-2117
F41608-82-C-C004
F33657-79-C-0439
F33657-86-D-0177

SPECIFICATION & PROPERTIES
FLUOROCARBON PLASTIC INSULATED CHROMEL THERMOCOUPLE WIRE

AAPI Material B50WB027 identifies fluorocarbon plastic insulated chromel-P single conductor thermocouple wire, as follows:

<u>AAPI Designation</u>	<u>Description</u>
B50WB027A	Solid

MATERIAL REQUIREMENTS:

Conductor - Shall be a nickel-chromium alloy thermocouple wire, commonly known as Chromel-P⁽¹⁾, conforming to the latest specification requirements for AAPI Material B50WB002B.

Insulation - Shall be a fluorocarbon plastic compounded from a copolymer of tetrafluoroethylene and hexafluoropropylene, commonality known as Teflon FEP 100⁽²⁾.

- (1) Hoskins Mfg, Company, Detroit, Michigan
- (2) E.I. DePont DeMemours & Company, Wilmington, Delaware

PROPERTIES:

Electrical continuity - Conductor shall have electrical continuity throughout its spool length. Both ends of a spool length of wire shall be brought out of the spool to a length of five feet for test purposes.

Thermal emf - The thermal emf of the bare wire shall not be changed by the application of the insulation.

MANUFACTURE:

Splicing - Splicing shall be kept to an absolute minimum. When splicing is required during the insulation of the wire, the ends of the conductor shall be butt welded.

Repairs or joints - Where repairs or joints are made in the insulation, the work shall be done in such a manner that the repaired part of the joint and all parts affected in the process shall be as strong and durable electrically and mechanically as the remainder of the insulation, and shall not exceed the limitations on thickness.

SPECIFICATION & PROPERTIES
FLUOROCARBON PLASTIC INSULATED CHROMEL THERMOCOUPLE WIRE

Surface - The surface of the finished wire shall be smooth and free from tackiness.

Stripping - Insulation shall strip readily and cleanly from the conductor.

Color - Insulation shall be yellow in accordance with ISA Recommended Color Code. Tracer (if required) shall be specified on the Purchase Order.

DIMENSIONS:

Size of wire shall be as specified on purchase order.

PACKING AND MARKING:

Material shall be suitably packed to prevent loss or damage during shipment. Each spool, package, or other container shall be legible marked with the purchase order number, the manufacturer's name or trade name, and the AAPI designation.

SPECIFICATION & PROPERTIES
INSULATED CHROMEL THERMOCOUPLE WIRE

AAPI Material B50WB027 identifies fluorocarbon plastic (Teflon FEP 100) insulated chromel-P single conductor thermocouple wire, as follows:

<u>AAPI Designation</u>	<u>Description</u>
B50WL027A	Solid

Engineering Standards has furnished supplier with copies of specification B50WB027.

Orders for this material should specify:

Material name - Fluorocarbon plastic insulated chromel thermocouple wire
Designation - AAPI Material B50WB027A (add proper suffix)
Specification - B50WB027
Quantity and Size
Tracer color on the insulation (if required)

The approved source of supply for AAPI Material B50WB027A is:

<u>Supplier</u>	<u>Supplier Designation</u>
Thermo Electric Co. Saddle Brook, New Jersey CAGE: 2G782	T (ex) -*--CTP

* Insert desired AWG wire size, e.g., T (ex) -24-CRP for AWG #24.