FEDERAL SUPPLY CLASS
6145

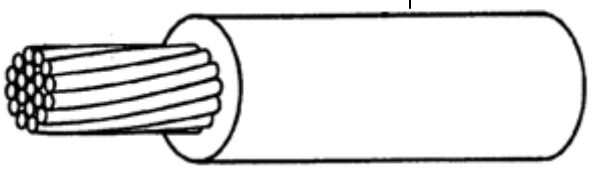
RATIONALE

CLARIFICATION OF COLOR FOR LASER MARKING CONTRAST REQUIREMENT IS NEEDED.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS22759.

CROSSLINKED, EXTRUDED, MODIFIED ETFE



ETFE - ETHYLENE TETRAFLUOROETHYLENE
CONDUCTOR - STRANDED SILVER COATED COPPER

FIGURE 1 - AS22759/52 CONFIGURATION

TABLE 1 - CONSTRUCTION DETAILS FOR FINISHED WIRE

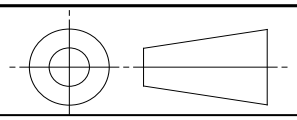
PART NO. 1/	WIRE SIZE	STRANDING (NUMBER OF STRANDS X SIZE GAUGE OF STRANDS)	DIAMETER OF STRANDED CONDUCTOR (INCHES) 2/		FINISHED WIRE		
			(MIN)	(MAX)	RESISTANCE AT 20 °C (68 °F) (OHMS/1000 FEET) MAX	DIAMETER (INCHES)	WEIGHT (LB/1000 FEET) (MAX)
M22759/52-30-*	30	7 X 38	.0105	.0124	100.7	.024 ± .002	.66
M22759/52-28-*	28	7 X 36	.0135	.0154	63.8	.027 ± .002	.91
M22759/52-26-*	26	19 X 38	.0175	.0194	38.4	.032 ± .002	1.4
M22759/52-24-*	24	19 X 36	.0225	.0244	24.3	.037 ± .002	2.0
M22759/52-22-*	22	19 X 34	.0285	.0304	15.1	.043 ± .002	2.8
M22759/52-20-*	20	19 X 32	.0365	.0384	9.19	.050 ± .002	4.3
M22759/52-18-*	18	19 X 30	.0455	.0484	5.79	.060 ± .002	6.5
M22759/52-16-*	16	19 X 29	.0515	.0544	4.52	.068 ± .002	8.3
M22759/52-14-*	14	19 X 27	.0645	.0684	2.88	.085 ± .003	13.0
M22759/52-12-*	12	37 X 28	.0835	.0874	1.90	.103 ± .003	19.7

1/ PART NUMBER: THE ASTERISKS IN THE PART NUMBER COLUMN, TABLES 1 AND 3, SHALL BE REPLACED BY COLOR CODE DESIGNATORS IN ACCORDANCE WITH MIL-STD-681. EXAMPLES: SIZE 20, WHITE-M22759/52-20-9; WHITE WITH ORANGE STRIPE - M22759/52-20-93. PRINTING OF COLOR CODE DESIGNATOR ON SURFACE OF WIRE INSULATION IS NOT REQUIRED.

2/ CONDUCTOR SHALL CONFORM TO AS29606 TYPE SCC SMALL DIAMETER SILVER PLATED COPPER CONDUCTOR.

For more information on this standard, visit
https://www.sae.org/standards/content/AS22759/52C/

THIRD ANGLE PROJECTION



ISSUED 2013-07 REVISED 2025-02

CUSTODIAN: AE-8D

PROCUREMENT SPECIFICATION: AS22759

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS22759.

1. WIRE CONSTRUCTION:

   WIRE CONSTRUCTION SHALL BE IN ACCORDANCE WITH FIGURE 1 AND TABLES 1, 2, 3, AND 4.

2. WIRE PERFORMANCE RATING:

   TEMPERATURE RATING: 200 °C (392 °F) MAXIMUM CONTINUOUS CONDUCTOR TEMPERATURE.

   VOLTAGE RATING: 600 VOLTS (RMS) AT SEA LEVEL. THIS INSULATION SYSTEM HAS BEEN USED IN AEROSPACE APPLICATIONS USING 115 VOLTS (PHASE TO NEUTRAL), 400 HERTZ AC AND 28 VOLTS DC. VERIFICATION OF THE SUITABILITY OF THIS PRODUCT FOR USE IN OTHER ELECTRICAL SYSTEM CONFIGURATIONS IS THE RESPONSIBILITY OF THE USER.

3. MATERIALS AND PHYSICAL PROPERTIES:

   REFER TO AS22759 FOR MATERIAL REQUIREMENT. MATERIALS USED IN THE MANUFACTURE OF THESE PRODUCTS SHALL COMPLY WITH THE RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE 2002/95/EC.

4. FINISHED WIRE INSULATION PROPERTIES:

   FINISHED WIRE INSULATION PROPERTIES SHALL BE IN ACCORDANCE WITH TABLE 2.

TABLE 2 - FINISHED WIRE INSULATION PROPERTIES REQUIREMENTS

INSULATION PROPERTIES	
IMPULSE TEST VOLTAGE	8.0 KILOVOLTS (PEAK)
HIGH FREQUENCY TEST VOLTAGE	5.7 KILOVOLTS (RMS)
FLUORIDE OFF-GASSING	MAXIMUM 20 PPM
CROSSLINK PROOF	300 °C ± 3 °C (572 °F ± 5.4 °F), 7 HOURS
INSULATION BLOCKING	230 °C ± 3 °C (446 °F ± 5.4 °F)
SHRINKAGE	230 °C ± 3 °C (446 °F ± 5.4 °F)
	MAXIMUM CHANGE .125 INCH
ELECTRICAL RESISTANCE (IR)	5000 MEGOHMS (MIN) - 1000 FEET
ELECTRICAL SURFACE RESISTANCE	500 MEGOHMS - INCHES (MIN)
WET DIELECTRIC VOLTAGE	2500 VOLTS (RMS), 60 HERTZ
WALL THICKNESS	.005 INCH (MIN)
INSULATION TENSILE STRENGTH	5000 LBF/IN^2 (MIN)
INSULATION ELONGATION	75% (MIN)
UV LASER MARKING	70% MINIMUM AVERAGE
CONTINUOUS LENGTH SCHEDULE	B

5. FINISHED WIRE IDENTIFICATION:

   WIRE IDENTIFICATION EXCEPTIONS: NONE

   WIRE IDENTIFICATION DURABILITY: 125 CYCLES (250 STROKES) WITH 500 GRAMS WEIGHT.

   STRIPE AND BAND DURABILITY: 125 CYCLES (250 STROKES) WITH 500 GRAMS WEIGHT.

6. FINISHED WIRE PERFORMANCE:

   FINISHED WIRE FIXTURES APPLICABLE TO EACH WIRE SIZE SHALL BE IN ACCORDANCE WITH TABLE 3.