Multi-Core Collectively Screened Special Flexing “LFH” Insulated and Sheathed Cable for Military Vessels

DS 02-526 (NES526) 440V 85°C

Application

Multi-core special flexing collectively screened cables for power, lighting, control circuits in HM surface ships and vessels. Incorporates LFH (Limited Fire Hazard) insulation and sheath for reduced levels of smoke and toxic fumes in the event of a fire. For use in fixed or flexible applications and suitable for use where fuel, lubricating oils, hydraulic fluids and water are present.

Specifications

- In accordance with DS 02-526.
- **Conductor:** Flexible Class 5 tinned copper conductors to BS EN 60228.
- **Insulation:** Dual layer LFH insulation to DS 02-526.
- **Core Identification:** Cores shall be number printed.
- Collective tinned copper wire braid screen (minimum 0.61 filling factor).
- **Outer Sheath:** Black LFH outer sheath to DEF61-12 part 31. In addition, the outer sheath also displays the following characteristics:
  Minimum oxygen index: 30%.
  Maximum HCL emission @ 800°C: 0.5%.
- Flame retardant to BS EN 60332-1-2 for completed cables with individual conductor size less than 4mm^2.
  BS EN 50266-2-3 NMV 3.5 (IEC60332-3-23 Category B) as a minimum, for completed cables with individual conductor sizes 4mm^2 and greater.
- **Voltage Rating:** 440V rms (between cores, or between cores and ships structure, or between cores and cable screen).
- **Temperature Rating:** 85°C maximum conductor operating temperature.

  N.B. Cables also retain a degree of flexibility under weatherdeck conditions of -30°C.

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N.S.N. 6145-99-521	Anixter Number A10DW-521	Nominal Cond Area mm^2	Nominal Cond Stranding #/mm	Number of Cores	Insulation Thickness mm	Braid Wire Size mm	Nominal O/D mm
-8509	-8509-M	2.5	50/0.25	2	0.9	7/0.15	13.0
-8510	-8510-M	1.0	32/0.2	3	0.8	7/0.15	11.5
-8511	-8511-M	2.5	50/0.25	3	0.9	7/0.15	13.6
-8512	-8512-M	2.5	50/0.25	4	0.9	7/0.15	14.8
-8513	-8513-M	0.75	24/0.2	8	0.8	14/0.15	17.8

N.B. Details of weights of cable to DS 02-526 are available on request.

Technical Information

for DS 02-526 (NES526) Cables

CURRENT RATINGS

Conductor Size mm²	Current Rating *A
1.0	17
1.5	23
2.5	33
4.0	43
6.0	55
10	79
16	100
25	140
35	165
50	200
70	250
95	315
120	380
150	420
185	480
240	560
300	660

* The ratings quoted are based on 40°C ambient air temperature and assume only one core carrying current. When more than one core carries current the following factors should be applied:

Number of cores loaded	2	3	4	7	14	18	30
Rating factor	0.8	0.7	0.7	0.6	0.5	0.45	0.4

Ambient air temp °C	30	40	45	50	55	60	65	70
Rating factor	1.05	1.0	0.94	0.88	0.82	0.75	0.67	0.58

MINIMUM BEND RADIUS

	Up to 10mm O/D	10.1 to 25.4mm O/D	Above 25.4mm O/D
Non-armoured cables	3D	4D	6D
Braid screened cables	6D	6D	6D