

Single Core and Multi-Core Silicone Insulated, “LFH” Sheathed Cables for Military Vessels

DS 02-527 (NES527) 440V 105°C



Application

Fire resistant cable for power, control, lighting use, etc., in military vessels where the cable is required to retain circuit integrity in the event of a fire, for emergency lighting, alarms, shutdown systems etc. Incorporates LFH (Limited Fire Hazard) sheath for reduced levels of smoke and toxic fumes in the event of a fire.

Specifications

- In accordance with DS 02-527.
- **Conductors:** Stranded Class 2 tinned copper conductors to BS EN 60228.
- **Insulation:**
 - Up to & including 16mm² - silicone rubber insulation to BS7655 + fibre glass braid and lacquer.
 - 25mm² and above - silicone impregnated glass tapes.
- **Core Identification:** Cores shall be number printed.
- **Outer Sheath:** Black LFH (Limited Fire Hazard) 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 50266-2-3 NMV 3.5 (IEC60332-3-23 Category B) as a minimum.
- Meets 3 hour 750°C fire test (identical to IEC60331).
- **Voltage Rating:** 440V.
- **Temperature Rating:** 105°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	Nominal O/D mm	Current Rating A†
-6808	-6808-M	1.0	7/0.44	1	0.5	5.60	17
-6809	-6809-M	1.5	7/0.53	1	0.5	5.90	23
-6810	-6810-M	2.5	7/0.67	1	0.6	6.50	33
-6811	-6811-M	4.0	7/0.85	1	0.6	7.00	43
-6812	-6812-M	6.0	7/1.04	1	0.7	7.80	55
-6813	-6813-M	10	19/0.85	1	0.9	9.30	79
-6814	-6814-M	16	19/1.04	1	0.9	10.30	100
-6815	-6815-M	25	19/1.35	1	1.1	11.90	140
-6816	-6816-M	35	19/1.53	1	1.1	12.80	165
-6817	-6817-M	50	19/1.78	1	1.1	14.10	200
-6818	-6818-M	70	19/2.14	1	1.1	16.20	250
-6819	-6819-M	95	37/1.78	1	1.4	18.70	315
-6820	-6820-M	120	37/2.03	1	1.4	20.90	380
-6821	-6821-M	150	37/2.25	1	1.4	22.40	420
-6822	-6822-M	185	37/2.52	1	1.4	24.50	480
-6823	-6823-M	240	61/2.25	1	1.4	27.30	560
-6824	-6824-M	300	61/2.52	1	1.4	29.90	660
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-6825	-6825-M	400	91/2.36	1	1.4	33.60	800 790
-6826	-6826-M	500	91/2.65	1	1.4	37.20	940 890
-6827	-6827-M	630	127/2.52	1	1.5	41.40	1110 970
-6828	-6828-M	1.0	7/0.44	2	0.5	8.60	17
-6829	-6829-M	1.5	7/0.53	2	0.5	9.10	23
-6830	-6830-M	2.5	7/0.67	2	0.6	10.40	33
-6831	-6831-M	4.0	7/0.85	2	0.6	11.60	43
-6832	-6832-M	6.0	7/1.04	2	0.7	13.10	55
-6833	-6833-M	10	19/0.85	2	0.9	16.50	79
-6834	-6834-M	16	19/1.04	2	0.9	18.60	100
-6835	-6835-M	25	19/1.35	2	1.1	22.10	140
-6836	-6836-M	35	19/1.53	2	1.1	24.10	165
-6837	-6837-M	50	19/1.78	2	1.1	26.80	200
-6838	-6838-M	70	19/2.14	2	1.1	30.60	250
-6839	-6839-M	95	37/1.78	2	1.4	35.90	315
-6840	-6840-M	1.0	7/0.44	3	0.5	9.10	17
-6841	-6841-M	1.5	7/0.53	3	0.5	9.60	23
-6842	-6842-M	2.5	7/0.67	3	0.6	11.10	33
-6843	-6843-M	4.0	7/0.85	3	0.6	12.20	43
-6844	-6844-M	6.0	7/1.04	3	0.7	13.90	55
-6845	-6845-M	10	19/0.85	3	0.9	17.70	79
-6846	-6846-M	16	19/1.04	3	0.9	19.70	100
-6847	-6847-M	25	19/1.35	3	1.1	23.70	140
-6848	-6848-M	35	19/1.53	3	1.1	25.60	165
-6849	-6849-M	50	19/1.78	3	1.1	28.70	200
-6850	-6850-M	70	19/2.14	3	1.1	33.00	250
-6851	-6851-M	95	37/1.78	3	1.4	38.50	315
-6852	-6852-M	120	37/2.03	3	1.4	42.90	380
-6853	-6853-M	150	37/2.25	3	1.4	46.40	420
-6854	-6854-M	185	37/2.52	3	1.4	50.90	480
-6855	-6855-M	240	61/2.25	3	1.4	57.10	560

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Single Core and Multi-Core Silicone Insulated, “LFH” Sheathed Cables for Military Vessels

DS 02-527 (NES527) 440V 105°C (continued)

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	Nominal O/D mm	Current Rating A†
-6856	-6856-M	16	19/1.04	7	0.9	29.50	60*
-6857	-6857-M	25	19/1.35	7	1.1	35.30	84*
-6858	-6858-M	35	19/1.53	7	1.1	38.60	90*
-6859	-6859-M	50	19/1.78	7	1.1	43.30	120*
-6860	-6860-M	70	19/2.14	7	1.1	49.80	150*
-6861	-6861-M	4.0	7/0.85	14	0.6	22.50	22*
-6862	-6862-M	6.0	7/1.04	14	0.7	26.30	25*
-6863	-6863-M	10	19/0.85	14	0.9	33.70	40*
-6864	-6864-M	16	19/1.04	14	0.9	38.30	50*
-6865	-6865-M	25	19/1.35	14	1.1	45.90	70*
-6866	-6866-M	35	19/1.53	14	1.1	50.10	80*
-6867	-6867-M	6.0	7/1.04	18	0.7	29.40	25*
-6868	-6868-M	10	19/0.85	18	0.9	37.80	36*
-6869	-6869-M	16	19/1.04	18	0.9	43.20	45*
-6870	-6870-M	1.5	7/0.53	30	0.5	23.60	9*
-6871	-6871-M	2.5	7/0.67	30	0.6	27.70	13*
-6872	-6872-M	4	7/0.85	30	0.6	31.80	17*
-6873	-6873-M	6	7/1.04	30	0.7	37.10	22*
-6874	-6874-M	10	19/0.85	30	0.9	48.00	32*
-6877	-6877-M	1.0	7/0.44	4	0.5	9.80	17
-6878	-6878-M	1.0	7/0.44	5	0.5	10.80	17
-6879	-6879-M	1.0	7/0.44	7	0.5	12.40	17
-6880	-6880-M	1.0	7/0.44	10	0.5	14.20	17
-6881	-6881-M	1.0	7/0.44	14	0.5	15.50	17
-6882	-6882-M	1.0	7/0.44	18	0.5	17.20	17
-6883	-6883-M	1.0	7/0.44	24	0.5	20.10	17
-6884	-6884-M	1.0	7/0.44	30	0.5	21.70	17
-6885	-6885-M	1.0	7/0.44	36	0.5	23.20	17
-6886	-6886-M	1.0	7/0.44	44	0.5	26.20	17
-6889	-6889-M	2.5	7/0.67	4	0.6	12.00	33
-6890	-6890-M	2.5	7/0.67	5	0.6	13.00	33
-6891	-6891-M	2.5	7/0.67	7	0.6	15.60	33
-6892	-6892-M	2.5	7/0.67	10	0.6	18.21	33
-6893	-6893-M	2.5	7/0.67	14	0.6	19.70	33
-6894	-6894-M	2.5	7/0.67	18	0.6	22.20	33
-6895	-6895-M	2.5	7/0.67	24	0.6	26.20	33
-6897	-6897-M	2.5	7/0.67	36	0.6	30.00	33
-6898	-6898-M	2.5	7/0.67	44	0.6	34.20	33
-6901	-6901-M	4.0	7/0.85	4	0.6	13.30	43
-6902	-6902-M	4.0	7/0.85	5	0.6	14.50	43
-6903	-6903-M	4.0	7/0.85	7	0.6	17.70	43
-6904	-6904-M	4.0	7/0.85	10	0.6	20.60	43
-6906	-6906-M	4.0	7/0.85	18	0.6	25.10	43
-6907	-6907-M	4.0	7/0.85	24	0.6	29.70	43
-6909	-6909-M	4.0	7/0.85	36	0.6	34.40	43

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† The current ratings are for **one core** only carrying current. When more than one core carries current the following rating factors should be applied.

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

* The current ratings are for each core when all cores are equally loaded.

N.B. All current ratings shown are based on an ambient air temperature of 50°C. For ambient air temperatures other than 50°C the following rating factors should be applied.

Ambient air temp °C	45	50	55	60	65	70	75	80	85	90	95	100
Rating factor	1.04	1.0	0.95	0.90	0.85	0.80	0.74	0.67	0.60	0.52	0.43	0.30

N.B. Details of weights for cables to DS 02-527 are available on request.