

STABILOY® MC Cable



Alcan Cable's interlocked aluminum armor Type MC Cable is designed for above-ground applications. The cable is also available with a jacket over the armor, listed for direct burial, for application in cable tray and for sunlight resistance. STABILOY® MC meets the requirements of UL Standard #1569, Metal-Clad Cables. Insulated conductors within the cable meet the requirements of UL-44, Type XHHW-2. STABILOY® MC Cable is approved for use in accordance with applicable portions of the National Electrical Code. STABILOY® alloy conductor is recognized by ASTM in Standards B800 and B801.

Product Features

The distinctive features unique to STABILOY® MC Cable provide a significant savings in installation cost and time. It is quicker and easier to install than conventional pipe and wire and is the product of choice for many electrical contractors.

STABILOY® MC Cable is designed to your advantage...

- **All-in-one assembly offers one-step installation**, which dramatically reduces installation time.
- **Strong, lightweight, aluminum alloy armor** weighs less than steel armor and is easier to strip back.
- **Bends around corners**, which alleviates the need for an elbow.
- **Not limited to 360° bend rule**, which eliminates the need for pull boxes.
- **Environmentally friendly** with a lead-free and cadmium-free PVC jacket. Suitable for wet locations, direct burial, encased in concrete and other uses per NEC.
- **Overall flexibility** not available with a conduit.
- **Factory tested engineered product** that protects conductors from damage during installation.
- **Exceeds requirements of the NEC**, as well as the UL Standards.



This catalog is intended to provide introductory technical data to aid the correct selection of wire and cable for permanent installation. Wire and cable products supplied by Alcan comply with the codes, standards and product specifications as indicated in this catalog. Weights and measurements are subject to manufacturing tolerances and product design changes. Consequently, Alcan does not accept responsibility for costs incurred by a purchaser as a result of weights and measurements not conforming exactly to those indicated.



Applications



Top: Venetian Hotel – Las Vegas, Nevada
Bottom: Georgia Dome – Atlanta, Georgia

Description

STABILOY® MC Cable's construction consists of either three or four insulated phase-identified conductors plus a bare equipment-grounding conductor inside interlocked aluminum alloy armor. All conductors are STABILOY® (AA-8030 electrical grade alloy) with type XHHW-2 insulation. STABILOY® MC Cable is a UL Listed assembly.

Marking

The cable assembly is identified with a marker tape placed under the wrapping tape. The legend on the marker tape includes, ALCAN TYPE MC-ST1 STABILOY® AA-8030 AL 600 V (UL) FOR CT USE (NOT "ST1" ON JACKETED MC UNLESS SO MARKED) NOM ANCE "SEQUENTIAL FOOTAGE". STABILOY® MC Cable with jacket is available upon request.

Applications

Feeder size STABILOY® MC Cable is a better alternative to the traditional pipe and wire method because it dramatically reduces installation time. STABILOY® MC Cable is approved for use in many applications including cable tray, power lighting and signal circuits as well as in hazardous locations as permitted in articles 501, 502, 503 and 504. Ideal applications include:

- Hotels
- Casinos
- Condominiums/
Apartments/Loft Buildings
- Sports Arenas
- Hospitals
- Commercial Buildings
- Schools
- Renovations

Approved for use in the following locations

Without PVC Jacket over Armor:

- For services, feeders and branch circuits
- For power lighting and signal circuits
- Indoors
- Where exposed or concealed
- In cable tray
- As open runs of cable
- In hazardous locations
- In dry locations and embedded in plaster finish on brick or other masonry except in damp or wet conditions
- Interior temporary power



Jacketed STABILOY® MC Cable

With the added durability of the PVC jacket, Jacketed STABILOY® MC Cable is a better choice, for some applications. A prime example is for utilization in single phase feeder applications within multi-family residential and similar commercial constructions. Additional applications for STABILOY® MC Cable with PVC jacket over armor include:

- Outdoors
- In wet locations (Type XHHW-2 conductors)
- Direct buried
- Encased in concrete
- Exterior/Interior temporary power
- As aerial cable on a messenger
- Hazardous locations

Alcan Cable stocks a selection of sizes of Jacketed and Unjacketed STABILOY® MC Cable for immediate availability.

Through-Penetration Fire Stop Systems

UL SYSTEMS #W-L-3041

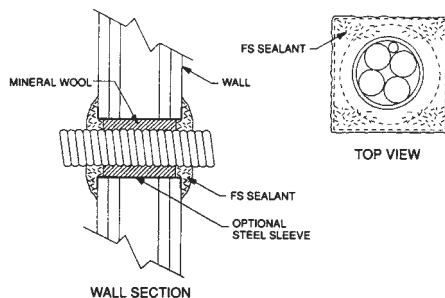
Fire Rating: 2 hours

Temperature Rating: 1/2 hour

Assembly: Wall assembly, 2 hour gypsum wall board

Penetrating Item: STABILOY® Type MC Cable - with or without PVC jacket

Firestop Product: 3M Company Fire Stop Sealant Types FB-2000 or FB 2000+ as applicable



UL SYSTEMS #C-AJ-3041

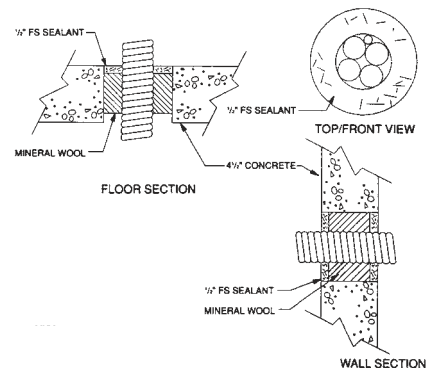
Fire Rating: 3 hours

Temperature Rating: 1/2 hour

Assembly: Floor or wall assembly, 4 1/2" light or normal weight concrete or block wall

Penetrating Item: STABILOY® Type MC Cable - with or without PVC jacket

Firestop Product: 3M Company Fire Stop Sealant types FB-2000, FB-2000+, or FB 2003 (floors only) as applicable



Installation and Complementary Accessories

Fittings

STABILOY® MC Cable works well with most fittings. The following is a list of suggested fitting manufacturers:

<i>ADALET PLM</i>	<i>Bridgeport</i>
<i>American Connectors</i>	<i>Crouse-Hinds</i>
<i>Appleton</i>	<i>O-Z Gedney</i>
<i>Arlington</i>	<i>Thomas & Betts</i>

Please consult your local Alcan Manufacturer Representative or an Alcan Field Application Engineer for more information on installation methods and accessories.



Minimum Acceptable Bend Radius for Interlocked Armor

Minimum radius = (7) x (diameter of metallic sheath)

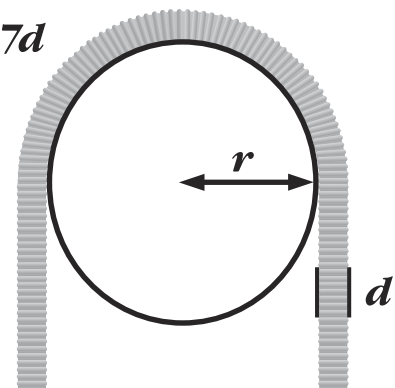
Example:

STABILOY® MC - 750 MCM - 4 conductor with 3/0 ground

- Overall diameter of metallic sheath = 2.93"
- Minimum bend radius = (7) x (2.93") = 20.51"
- Minimum diameter of wheel = (2)(20.51") = 41.02"

Use wheel with 42" diameter or larger

$$r \geq 7d$$



Three Conductor with Ground										
CONDUCTOR SIZE ¹ (AWG/kcmil)	DIAMETER (Inches)			LENGTH (Feet)	REEL SIZE		WEIGHT (LBS/MFT)		RATING OF OC DEVICE ⁵ (75° C) (AMP)	RATED AMPACITY (75° C) (AMP)
	SUB-ASSEMBLY ²	W/O JKT. ³	JKT. ⁴		W/O JKT.	JKT.	W/O JKT.	JKT.		
6-6-6-6	0.63	0.83	0.93	1000	36.22.18	36.22.18	237	320	50	50
4-4-4-6	0.72	0.93	1.03	1000	36.22.18	36.22.18	308	399	70	65
2-2-2-6	0.81	1.03	1.13	1000	38.22.20	42.28.20	402	503	90	90
1-1-1-4	0.94	1.16	1.26	1000	42.28.20	42.28.20	504	617	100	100
1/0-1/0-1/0-4	1.00	1.23	1.33	1000	42.28.20	42.28.20	584	703	125	120
2/0-2/0-2/0-4	1.05	1.28	1.38	1000	42.28.20	48.24.24	674	798	150	135
3/0-3/0-3/0-4	1.13	1.36	1.46	1000	48.28.24	48.28.24	796	928	175	155
4/0-4/0-4/0-2	1.27	1.51	1.63	1000	60.28.28	60.28.28	1005	1181	200	180
250-250-250-2	1.38	1.63	1.75	500	48.28.30	48.28.30	1166	1355	225	205
300-300-300-2	1.47	1.72	1.84	500	48.28.30	48.28.30	1337	1536	250	230
350-350-350-2	1.54	1.80	1.92	500	48.28.30	48.28.36	1505	1713	250	250
400-400-400-1	1.64	1.91	2.03	500	48.28.30	60.28.30	1692	1913	300	270
500-500-500-1	1.77	2.04	2.16	500	60.28.36	60.28.36	2023	2258	350	310
600-600-600-1	1.96	2.24	2.36	500	60.28.36	60.28.36	2416	2674	350	340
700-700-700-1/0	2.10	2.39	2.53	500	66.32.42	66.32.42	2765	3115	400	375
750-750-750-1/0	2.15	2.44	2.59	500	66.32.42	66.32.42	2926	3278	400	385
Four Conductor with Ground										
6-6-6-6-6	0.70	0.92	1.02	1000	36.22.18	38.22.20	286	377	50	50
4-4-4-4-6	0.77	1.04	1.14	1000	38.22.20	42.28.20	373	474	70	65
2-2-2-2-6	0.93	1.17	1.27	1000	42.28.20	42.28.20	503	617	90	90
1-1-1-1-4	1.07	1.31	1.41	1000	42.28.20	42.28.20	630	757	100	100
1/0-1/0-1/0-1/0-4	1.15	1.40	1.50	1000	42.28.20	48.28.24	736	871	125	120
2/0-2/0-2/0-2/0-4	1.26	1.47	1.64	1000	48.28.20	48.28.24	887	1071	150	135
3/0-3/0-3/0-3/0-4	1.32	1.58	1.70	1000	48.28.24	60.28.28	1051	1235	175	155
4/0-4/0-4/0-4/0-2	1.46	1.73	1.85	1000	60.28.28	60.28.28	1280	1480	200	180
250-250-250-250-1	1.62	1.89	2.01	500	48.28.30	60.28.36	1510	1730	225	205
300-300-300-300-1	1.73	2.01	2.13	500	60.28.36	60.28.36	1738	1970	250	230
350-350-350-350-1/0	1.85	2.13	2.25	500	60.28.36	60.28.36	1985	2231	250	250
400-400-400-400-1/0	1.94	2.23	2.35	500	60.28.36	60.28.36	2207	2468	300	270
500-500-500-500-2/0	2.13	2.43	2.58	500	60.28.36	60.28.36	2677	3028	350	310
500-500-500-500-250	2.21	2.51	2.66	500	60.28.36	60.28.36	2798	3166	350	310
600-600-600-600-2/0	2.37	2.68	2.83	500	66.32.42	66.32.42	3199	3591	350	340
600-600-600-600-400	2.52	2.84	2.99	500	66.32.42	66.32.42	3473	3886	350	340
700-700-700-700-2/0	2.50	2.83	2.98	500	66.32.42	-	3630	4043	400	375
750-750-750-750-3/0	2.60	2.93	3.08	500	66.32.42	-	3880	4300	400	385
750-750-750-750-750	2.86	3.20	3.37	500	66.32.42	-	4469	4998	400	385

Unique from Alcan Cable

Four Conductor with Ground (For Parallel Runs)			
CONDUCTOR SIZE ¹ (AWG/kcmil)	RATING OF OC DEVICE ⁵ (75° C) (AMP)	CONDUCTOR SIZE ¹ (AWG/kcmil)	RATING OF OC DEVICE ⁵ (75° C) (AMP)
250-250-250-250-1	400 (2)	600-600-600-600-400	1000 (3) 1600 (5) 2000 (6)
500-500-500-500-2/0	600 (2)	750-750-750-750-3/0	800 (2)
500-500-500-500-250	600 (2) 1200 (4)	750-750-750-750-750	2500 (7) 3000 (8) 4000 (11)

¹ Sizes shown in bold are in-stock items. Lengths cut to order. Other sizes and configurations available upon request.

^{2,3,4} Diameter of conductor assembly without armor, Diameter of cable with armor, and Diameter of cable with PVC jacket over armor.

⁵ The rating of the overcurrent device shown above is in accordance with the NEC. See 240-3 and 240-6. Also, see 110.14 and Table 310.16 of the NEC.