

Alcan Aluminum Underground ALHIDE® Single Layer Ruggedized Cables:

Alcan Cable's ALHIDE® Single Layer Ruggedized Cables provide superior performance and reliability when used in underground circuits where extra protection from mechanical abuse is required. The ruggedized insulation of high-density polyethylene protects the cable from possible damage that may occur during installation. Alcan's ALHIDE® Cable is available in a full range of sizes to meet any 600 volt electric distribution application, as a single conductor or with one, two or three phase conductors and a neutral twisted together with no overall cover.

Product Application and Features:

- Designed for use in electric distribution circuits not exceeding 600 volts phase to phase and may be directly buried or installed in ducts.
- May be used in wet or dry locations at conductor temperatures not exceeding 90° C for normal operation, 130° C for emergency overloads and 250° C under short circuit conditions.
- Meets or exceeds industry requirements per ASTM B-231.
- Manufactured in accordance with ICEA S-81-570, the industry standard for ruggedized cable.

Product Construction:

Alcan Single Layer ALHIDE® Cables are constructed of:

- Three-Quarter hard drawn Class B stranded, compressed 1350 aluminum conductors.
- Black, weather resistant crosslinked high-density polyethylene insulation on the phase conductors and the neutral.
- TRISTRIPLE® cable features a neutral conductor that is insulated with black, weather resistant crosslinked high-density polyethylene with three continuous extruded yellow stripes located 120° apart. The identification stripes are weather resistant.
- In multiplexed cable assemblies, the phase conductors and neutral are twisted together with a left-hand lay not greater than 60 times the outside diameter of one phase conductor.



Product Markings:

Each conductor will display the following surface markings:

- Alcan (Plant of Manufacture), conductor size, AL XLHDPE 600V USE-2 (UL) ALHIDE® (Year of Manufacture).
- The center aluminum wire in each stranded conductor is indent printed "Alcan (Year of Manufacture)."
- Sequential footage markings are printed every two feet on one phase conductor to ensure length measurement accuracy.
- "USE-2" is a UL designation for a 90°C wet or dry rating.



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.



ALHIDE® SINGLE LAYER RUGGEDIZED CABLES

Single Aluminum Conductor 600v

Code Word	Conductor Size	Nominal Insulation XLHDE Milis	Approx O.D. Inches	ESTIMATED WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
				Aluminum	Total		
PRINCETON/ALHIDE®	6	60	0.298	25	45	108	1000
MERCER/ALHIDE®	4	60	0.345	39	64	140	1000
CLEMSON/ALHIDE®	2	60	0.403	62	92	180	1000
KENYON/ALHIDE®	1	80	0.473	78	121	203	1000
HARVARD/ALHIDE®	1/0	80	0.512	99	146	231	1000
YALE/ALHIDE®	2/0	80	0.555	125	177	263	1000
TUFTS/ALHIDE®	3/0	80	0.603	157	216	299	1000
BELOIT/ALHIDE®	4/0	80	0.658	198	264	338	1000
HOFSTRA/ALHIDE®	250	95	0.732	234	315	368	1000
GONZAGA/ALHIDE®	300	95	0.784	281	369	407	1000
RUTGERS/ALHIDE®	350	95	0.831	328	422	444	1000
DARTMOUTH/ALHIDE®	400	95	0.875	376	476	475	1000
EMORY/ALHIDE®	500	95	0.956	469	579	540	1000
DUKE/ALHIDE®	600	110	1.060	562	699	595	1000
FURMAN/ALHIDE®	700	110	1.127	656	803	645	1000
SEWANEE/ALHIDE®	750	110	1.159	703	855	667	1000

Duplexed Aluminum Conductor 600v

Black Neutral – TRISTRIFE®

Code Word	Conductor Size		Nominal Insulation XLHDE Milis		Approx O.D. Inches	ESTIMATED WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
	Phase	Neutral	Phase	Neutral		Aluminum	Total		
CLAFLIN/ALHIDE®	6	6	60	60	0.596	50	90	112	2000
DELGADO/ALHIDE®	4	4	60	60	0.690	79	128	146	2000

Triplexed Aluminum Conductor 600v

Black Neutral – TRISTRIFE®

Code Word	Conductor Size		Nominal Insulation XLHDE Milis		Approx O.D. Inches	ESTIMATED WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
	Phase	Neutral	Phase	Neutral		Aluminum	Total		
ERSKINE/ALHIDE®	6	6	60	60	0.642	75	134	100	1000
VASSAR/ALHIDE®	4	4	60	60	0.742	118	191	130	1000
STEPHENS/ALHIDE®	2	4	60	60	0.830	164	250	168	1000
RAMAPO/ALHIDE®	2	2	60	60	0.867	187	279	168	1000
BRENAU/ALHIDE®	1/0	2	80	60	1.039	261	387	219	1000
BERGEN/ALHIDE®	1/0	1/0	80	80	1.103	298	441	219	1000
CONVERSE/ALHIDE®	2/0	1	80	80	1.144	330	479	249	1000
HUNTER/ALHIDE®	2/0	2/0	80	80	1.196	377	535	249	1000
HOLLINS/ALHIDE®	3/0	1/0	80	80	1.241	415	581	284	1000
ROCKLAND/ALHIDE®	3/0	3/0	80	80	1.299	474	650	284	1000
SWEETBRIAR/ALHIDE®	4/0	2/0	80	80	1.352	524	708	322	1000
MONMOUTH/ALHIDE®	4/0	4/0	80	80	1.418	598	795	322	1000
PRATT/ALHIDE®	250	3/0	95	80	1.497	629	850	356	1000
WESLEYAN/ALHIDE®	350	4/0	95	80	1.687	859	1113	431	1000
NEWARK/ALHIDE®	350	350	95	95	1.791	989	1272	431	1000
RIDER/ALHIDE®	500	350	95	95	1.978	1271	1590	525	1000
WESTCHESTER/ALHIDE®	500	500	95	95	2.060	1412	1745	525	1000
VILLANOVA/ALHIDE®	750	350	110	95	2.325	1743	2142	615	1000
SETON HALL/ALHIDE®	750	750	110	110	2.500	2120	2578	615	1000

* Ampacities are based on 90° C conductor temperature, 20° C ambient RHO-90 earth, for cables buried 36" deep, only the phase conductors carrying current, 100% load factor. DO NOT USE THESE FIGURES FOR NEC APPLICATIONS.



ALHIDE® SINGLE LAYER RUGGEDIZED CABLES



Triplex Aluminum Conductor 600v

Impedance Data

Code Word	Phase	Neutral	RESISTANCE (OHMS/1000 FT.)			INDUCTIVE REACTANCE (OHMS/1000 FT.)
			25° C	50° C	75° C	X1
ERSKINE/ALHIDE®	6	6	0.6725	0.7392	0.8059	0.0337
VASSAR/ALHIDE®	4	4	0.4227	0.4645	0.5064	0.0335
STEPHENS/ALHIDE®	2	4	0.2655	0.2929	0.3182	0.0319
RAMAPO/ALHIDE®	2	2	0.2655	0.2929	0.3182	0.0315
BRENAU/ALHIDE®	1/0	2	0.1671	0.1837	0.2002	0.0301
BERGEN/ALHIDE®	1/0	1/0	0.1671	0.1837	0.2002	0.0301
CONVERSE/ALHIDE®	2/0	1/0	0.1326	0.1456	0.1587	0.0293
HUNTER/ALHIDE®	2/0	2/0	0.1326	0.1456	0.1587	0.0293
HOLLINS/ALHIDE®	3/0	1/0	0.1053	0.1157	0.1259	0.0286
ROCKLAND/ALHIDE®	3/0	3/0	0.1053	0.1157	0.1259	0.0286
SWEETBRIAR/ALHIDE®	4/0	2/0	0.0835	0.0917	0.1000	0.0279
MONMOUTH/ALHIDE®	4/0	4/0	0.0835	0.0917	0.1000	0.0279
PRATT/ALHIDE®	250	3/0	0.0706	0.0777	0.0847	0.0284
WESLEYAN/ALHIDE®	350	4/0	0.0506	0.0557	0.0606	0.0275
NEWARK/ALHIDE®	350	350	0.0506	0.0557	0.0606	0.0275
RIDER/ALHIDE®	500	350	0.0356	0.0390	0.0426	0.0266
WESTCHESTER/ALHIDE®	500	500	0.0356	0.0390	0.0426	0.0266
FAIRFIELD/ALHIDE®	750	500	0.0251	0.0263	0.0286	0.0264

RHO = 90, phase spacing is phase conductor outside diameter.
DO NOT USE these values for "reduced wall" designs.

Quadruplex Aluminum Conductor 600v

Impedance Data

Code Word	Phase	Neutral	POSITIVE SEQUENCE RESISTANCE (OHMS/1000 FT.)			POSITIVE SEQUENCE INDUCTIVE REACTANCE (OHMS/1000 FT.)
			25° C	50° C	75° C	X1
TULSA/ALHIDE®	4	4	0.4227	0.4645	0.5064	0.0335
DYKE/ALHIDE®	2	4	0.2655	0.2929	0.3182	0.0319
WITTENBERG/ALHIDE®	2	2	0.2655	0.2929	0.3182	0.0315
NOTRE DAME/ALHIDE®	1/0	2	0.1671	0.1837	0.2002	0.0301
PURDUE/ALHIDE®	1/0	1/0	0.1671	0.1837	0.2002	0.0301
SYRACUSE/ALHIDE®	2/0	1	0.1326	0.1456	0.1587	0.0293
LAFAYETTE/ALHIDE®	2/0	2/0	0.1326	0.1456	0.1587	0.0293
SWARTHMORE/ALHIDE®	3/0	1/0	0.1053	0.1157	0.1259	0.0286
DAVIDSON/ALHIDE®	3/0	3/0	0.1053	0.1157	0.1259	0.0286
WAKE FOREST/ALHIDE®	4/0	2/0	0.0835	0.0917	0.1000	0.0280
EARLHAM/ALHIDE®	4/0	4/0	0.0835	0.0917	0.1000	0.0280
RUST/ALHIDE®	250	3/0	0.0706	0.0777	0.0847	0.0284
SLIPPERY ROCK/ALHIDE®	350	4/0	0.0506	0.0557	0.0606	0.0275
NIAGARA/ALHIDE®	350	350	0.0506	0.0577	0.0606	0.0275
WOFFORD/ALHIDE®	500	350	0.0356	0.0390	0.0426	0.0267
WINDHAM/ALHIDE®	750	500	0.0251	0.0263	0.0286	0.0264

RHO = 90, phase spacing is phase conductor outside diameter.
DO NOT use these values for "reduced wall" designs.

ALHIDE® SINGLE LAYER RUGGEDIZED CABLES



Quadruplexed Aluminum Conductor 600v

Black Neutral – TRISTRIFE®

Code Word	Conductor Size		Nominal Insulation XLHDPE Mils		Approx O.D. Inches	ESTIMATED WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
	Phase	Neutral	Phase	Neutral		Aluminum	Total		
TULSA/ALHIDE®	4	4	60	60	0.833	157	255	119	1000
DYKE/ALHIDE®	2	4	60	60	0.940	227	343	153	1000
WITTENBERG/ALHIDE®	2	2	60	60	0.973	250	372	153	1000
NOTRE DAME/ALHIDE®	1/0	2	80	60	1.176	361	534	198	1000
PURDUE/ALHIDE®	1/0	1/0	80	80	1.236	398	588	198	1000
SYRACUSE/ALHIDE®	2/0	1	80	80	1.293	455	657	226	1000
LAFAYETTE/ALHIDE®	2/0	2/0	80	80	1.340	502	713	226	1000
SWARTHMORE/ALHIDE®	3/0	1/0	80	80	1.404	574	797	257	1000
DAVIDSON/ALHIDE®	3/0	3/0	80	80	1.456	632	867	257	1000
WAKE FOREST/ALHIDE®	4/0	2/0	80	80	1.530	724	973	291	1000
EARLHAM/ALHIDE®	4/0	4/0	80	80	1.589	798	1061	291	1000
RUST/ALHIDE®	250	3/0	95	80	1.695	865	1166	319	1000
SLIPPERY ROCK/ALHIDE®	350	4/0	95	80	1.910	1188	1536	385	1000
NIAGARA/ALHIDE®	350	350	95	95	2.006	1318	1695	385	1000
WOFFORD/ALHIDE®	500	350	95	95	2.237	1742	2170	437	1000
MARSHALL/ALHIDE®	500	500	95	95	2.308	1883	2328	437	1000

Reduced Wall Triplex Alhide®

Black Neutral – TRISTRIFE®

Code Word	Conductor Size		Insulation XLHDPE Mils		Approx O.D. Inches	NOMINAL WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
	Phase	Neutral	Phase	Neutral		Aluminum	Total		
PRATT/ALHIDE®-RW	250	3/0	80	80	1.450	629	822	331	1000
WESLEYAN/ALHIDE®-RW	350	4/0	80	80	1.640	859	1081	399	1000
NEWARK/ALHIDE®-RW	350	350	80	80	1.726	989	1224	399	1000
RIDER/ALHIDE®-RW	500	350	80	80	1.914	1271	1535	485	1000
WESTCHESTER/ALHIDE®-RW	500	500	80	80	2.000	1412	1690	485	1000

Reduced Wall Quadruplex Alhide®

Black Neutral – TRISTRIFE®

Code Word	Conductor Size		Insulation XLHDPE Mils		Approx O.D. Inches	NOMINAL WT. LBS./1000 FT.		Ampacity* Directly Buried	Standard Package (Ft.)
	Phase	Neutral	Phase	Neutral		Aluminum	Total		
RUST/ALHIDE®-RW	250	3/0	80	80	1.638	865	1124	300	1000
SLIPPERY ROCK/ALHIDE®-RW	350	4/0	80	80	1.854	1188	1488	360	1000
NIAGRA/ALHIDE®-RW	350	350	80	80	1.934	1318	1632	360	1000
WOFFORD/ALHIDE®-RW	500	350	80	80	2.165	1742	2099	438	1000
MARSHALL/ALHIDE®-RW	500	500	80	80	2.235	1883	2253	438	1000

*Ampacities are based on 90° C conductor temperature, 20°C ambient RHO-90 earth, for cables buried 36" deep, only the phase conductors carrying current, 100% load factor. DO NOT USE THESE FIGURES FOR NEC APPLICATIONS.