Caledonian
www.caledonian-cables.co.uk

Caledonian Mining Cables

ICEA S-75-381 Standard
CAN/CSA C22.2 No. 96 Standard

ADDISON
www.addison-cables.com

COMPANY PROFILE

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard, ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

ISO 9001
REGISTERED FIRM

Registration Certificate

This document certifies that the administration systems of

Caledonian Cables Limited / Addison Technology Limited

Marchants Industrial Centre, Mill Lane, Laughton, Lewes, Sussex, BN8 6AJ, United Kingdom

have been assessed and approved by QAS International to the following management systems, standards and guidelines:

ISO 9001 : 2008

With the permitted exclusion of clauses 7.3 Design and Development

The approved administration systems apply to the following:

The manufacture and supply of electrical cables and ancillary power equipment to customers internationally.

Original Approval 6th September 1997
Current Certificate 7th February 2013
Certificate Expiry 7th February 2014
Certificate Number A6211

On behalf of QAS International
www.qas-international.com

This certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines stated above, which will be audited annually by QAS International. The holder is entitled to display the above registration mark for the duration of this certificate. This certificate must be returned to QAS International on reasonable request.
Issuing Office: QAS International, 354 Oxford Street, Mamesbury, Wiltshire, SN16 9AX

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.

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Type W Single Conductor Portable Power Cable 2kV

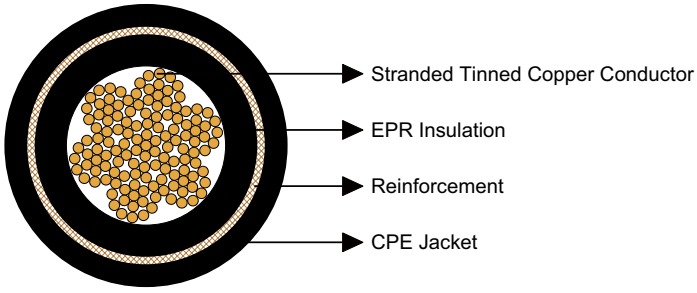
» Applications

These cables are designed for use on electric mining locomotives and other mobile equipment of the gathering-reel type, where the cable must withstand constant flexing and reeling.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Reinforcement:

A layer of polyester braid, applied between the insulation and jacket for mechanical strength.

Jacket:

Heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
1×8	133	0.060	1.5	0.060	1.5	0.44	11.2	150	223	83
1×6	168	0.060	1.5	0.080	2.0	0.51	13.0	205	305	109
1×4	259	0.060	1.5	0.080	2.0	0.57	14.5	280	417	145
1×3	329	0.060	1.5	0.095	2.4	0.63	16.0	350	521	167
1×2	259	0.060	1.5	0.095	2.4	0.66	16.8	370	550	192
1×1	329	0.080	2.0	0.110	2.8	0.74	18.8	500	744	223
1×1/0	259	0.080	2.0	0.110	2.8	0.77	19.6	550	818	258
1×2/0	329	0.080	2.0	0.110	2.8	0.82	20.1	660	982	298
1×3/0	427	0.080	2.0	0.125	3.2	0.87	22.1	830	1235	345
1×4/0	532	0.080	2.0	0.125	3.2	0.93	23.6	950	1413	400
1×250	608	0.095	2.4	0.140	3.6	1.03	26.2	1240	1845	445
1×300	741	0.095	2.4	0.140	3.6	1.09	27.7	1400	2083	500
1×350	855	0.095	2.4	0.155	3.9	1.15	29.2	1480	2202	552
1×500	1221	0.095	2.4	0.155	3.9	1.31	33.3	2140	3184	695

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Two-Conductor Flat Portable Power Cable 2kV

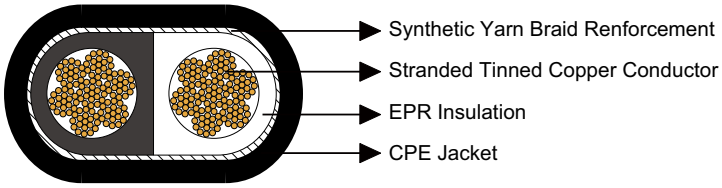
» Applications

These flat parallel cables are designed for use on DC mining equipment, such as D.C. shuttle cars, drills, cutting and loading machines.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Reinforcement:

Synthetic yarn.

Jacket:

Heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter Height×Width		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
2×8	133	0.06	1.5	0.080	2.0	0.51×0.84	13.0×21.3	340	506	72
2×6	133	0.06	1.5	0.080	2.0	0.56×0.93	14.2×23.6	440	655	95
2×4	259	0.06	1.5	0.095	2.4	0.61×1.05	15.5×26.7	550	818	127
2×3	259	0.06	1.5	0.095	2.4	0.68×1.14	17.3×29.0	675	1005	145
2×2	259	0.06	1.5	0.095	2.4	0.73×1.24	18.5×31.5	810	1205	167
2×1	259	0.08	2.0	0.110	2.8	0.81×1.40	20.6×35.6	1020	1520	191
2×1/0	259	0.08	2.0	0.125	3.2	0.93×1.51	23.6×38.2	1265	1880	217
2×2/0	329	0.08	2.0	0.125	3.2	0.99×1.63	25.1×41.4	1515	2255	250
2×3/0	413	0.08	2.0	0.140	3.6	1.03×1.77	26.2×45.0	1810	2694	286
2×4/0	532	0.08	2.0	0.140	3.6	1.10×1.89	27.9×48.0	2175	3237	328

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Two-Conductor Round Portable Power Cable 2kV

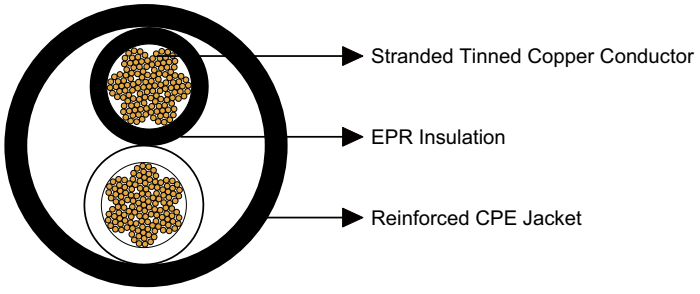
» Applications

These cables are designed for general use where bare grounding conductors are not required or desired.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
2×8	166	0.06	1.5	0.110	2.8	0.83	21.1	391	581	72
2×6	259	0.06	1.5	0.125	3.2	0.94	23.9	571	849	95
2×4	412	0.06	1.5	0.140	3.6	1.07	27.3	793	1180	127
2×2	259	0.06	1.5	0.155	3.9	1.26	32.1	1142	1699	167
2×1/0	414	0.08	2.0	0.170	4.3	1.51	38.3	1693	2520	217
2×2/0	522	0.08	2.0	0.170	4.3	1.65	41.9	1908	2840	250
2×3/0	658	0.08	2.0	0.190	4.8	1.77	45.0	2600	3870	286
2×4/0	829	0.08	2.0	0.190	4.8	1.92	48.8	2675	3980	328
2×250	973	0.095	2.4	0.205	5.2	2.10	53.3	3434	5110	363

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Three-Conductor Round Portable Power Cable 2kV

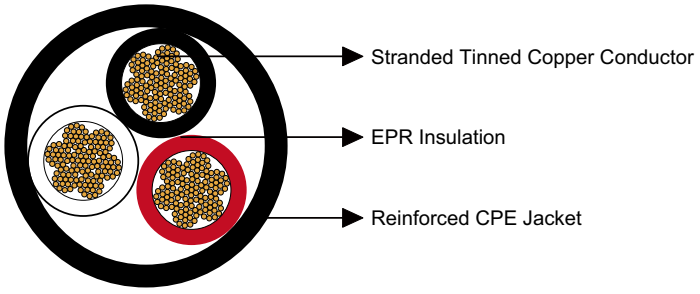
» Applications

These cables are designed for general use where bare grounding conductors are not required or desired.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×8	133	0.06	1.5	0.125	3.2	0.91	23.1	550	818	59
3×6	133	0.06	1.5	0.140	3.6	1.01	25.7	730	1086	79
3×4	259	0.06	1.5	0.155	3.9	1.17	29.7	1020	1518	104
3×2	259	0.06	1.5	0.155	3.9	1.34	34.0	1430	2128	138
3×1	259	0.08	2.0	0.170	4.3	1.51	38.4	1800	2678	161
3×1/0	266	0.08	2.0	0.170	4.3	1.65	41.9	2140	3184	186
3×2/0	342	0.08	2.0	0.190	4.8	1.75	44.5	2580	3839	215
3×3/0	418	0.08	2.0	0.190	4.8	1.89	48.0	2922	4347	249
3×4/0	532	0.08	2.0	0.205	5.2	2.04	51.8	3800	5654	287
3×250	741	0.095	2.4	0.220	5.6	2.39	60.7	4368	6500	320
3×350	888	0.095	2.4	0.235	6.0	2.66	67.5	5895	8772	394
3×500	1221	0.095	2.4	0.250	6.4	2.98	75.8	7820	11638	487

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Four-Conductor Flat Portable Power Cable 2kV

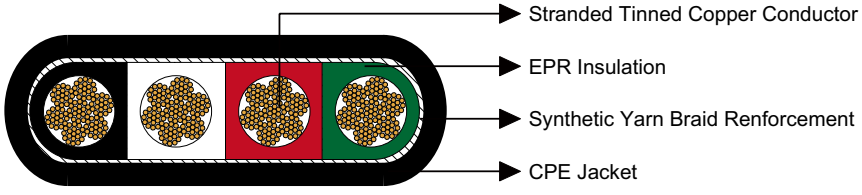
» Applications

These flat parallel cables are designed for use on AC mining equipment, such as A.C. shuttle cars, drills, cutting and loading machines.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Reinforcement:

Synthetic yarn.

Jacket:

Heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter Height×Width		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
4×6	133	0.06	1.5	0.095	2.4	0.67×1.69	17.0×42.9	895	1332	72
4×4	259	0.06	1.5	0.110	2.8	0.75×1.89	19.0×48.0	1185	1764	93
4×2	259	0.06	1.5	0.110	2.8	0.84×2.23	20.6×56.6	1620	2411	122
4×1	259	0.08	2.0	0.125	3.2	0.97×2.60	24.6×66.0	2100	3125	143
4×1/0	259	0.08	2.0	0.140	3.6	1.01×2.73	25.7×69.3	2500	3721	165
4×2/0	329	0.08	2.0	0.140	3.6	1.10×2.96	27.9×75.2	2900	4316	192
4×3/0	413	0.08	2.0	0.155	3.9	1.18×3.25	30.0×82.6	3500	5209	221
4×4/0	532	0.08	2.0	0.155	3.9	1.29×3.46	32.8×87.9	4225	6288	255

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Four-Conductor Round Portable Power Cable 2kV

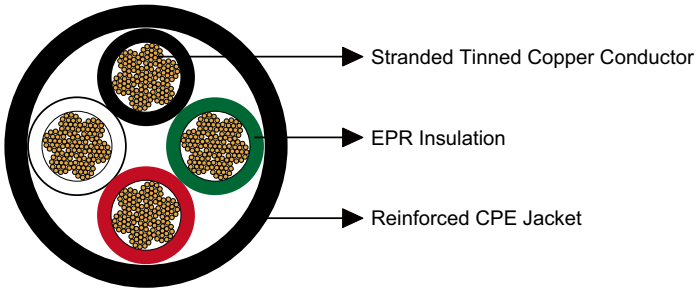
» Applications

These cables are designed for use with mobile mining equipment such as continuous miners, drills, cutters, loading machines and AC shuttle cars. Type W cables are for applications where bare grounding conductors are not required or desired.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
4×8	133	0.06	1.5	0.125	3.2	0.99	25.2	670	997	54
4×6	133	0.06	1.5	0.140	3.6	1.10	27.9	838	1247	72
4×4	259	0.06	1.5	0.155	3.9	1.27	32.3	1174	1747	93
4×3	259	0.06	1.5	0.155	3.9	1.34	34.0	1377	2049	106
4×2	259	0.06	1.5	0.170	4.3	1.48	37.6	1701	2531	122
4×1	259	0.08	2.0	0.190	4.8	1.68	42.7	2192	3262	143
4×1/0	266	0.08	2.0	0.190	4.8	1.79	45.5	2549	3793	165
4×2/0	342	0.08	2.0	0.190	4.8	1.93	49.0	3078	4581	192
4×3/0	418	0.08	2.0	0.205	5.2	2.07	52.6	3685	5485	221
4×4/0	532	0.08	2.0	0.220	5.6	2.26	57.4	4540	6758	255
4×250	627	0.095	2.4	0.235	6.0	2.66	67.6	5746	8553	280
4×350	888	0.095	2.4	0.250	6.4	2.98	75.7	7574	11275	335
4×500	1221	0.095	2.4	0.280	7.1	3.40	86.4	10376	15441	395

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type W Five-Conductor Round Portable Power Cable 2kV

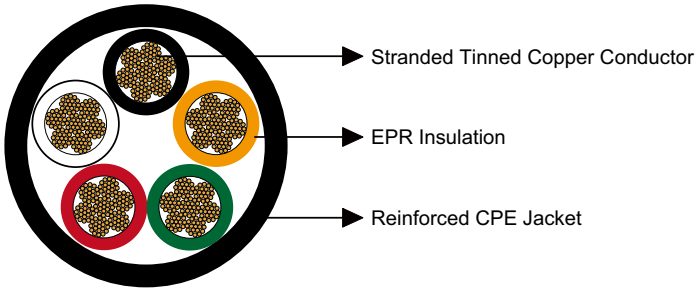
» Applications

These cables are designed for use with mobile mining equipment such as continuous miners, drills, cutters, loading machines and AC shuttle cars. Type W cables are for applications where bare grounding conductors are not required or desired.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
5×8	133	0.06	1.5	0.140	3.6	1.07	27.2	776	1154	50
5×6	133	0.06	1.5	0.155	3.9	1.24	31.5	1024	1524	68
5×4	259	0.06	1.5	0.155	3.9	1.36	35.2	1432	2131	88
5×2	259	0.06	1.5	0.170	4.3	1.56	39.8	2051	3052	116
5×1	259	0.06	1.5	0.190	4.8	1.85	47.1	2665	3967	136
5×1/0	266	0.08	2.0	0.205	5.2	1.98	50.4	3406	5069	150
5×2/0	342	0.08	2.0	0.205	5.2	2.13	54.1	3596	5351	172
5×3/0	418	0.08	2.0	0.220	5.6	2.27	57.6	4728	7035	200
5×4/0	532	0.08	2.0	0.220	5.6	2.46	62.6	5512	8203	230

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G Two-Conductor Flat Portable Power Cable 2kV

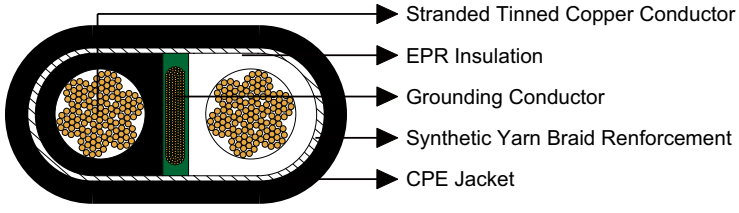
» Applications

These flat parallel cables are designed for use on D.C. off-track mining equipment, such as D.C. shuttle cars, drills, cutting and loading machines.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Reinforcement:

Synthetic yarn.

Jacket:

Heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter Height×Width		Nominal Weight		Ampacity
No. of cores× AWG/kcmil	-	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
2×6	133	8	0.06	1.5	0.080	2.0	0.56×1.02	14.2×25.9	500	744	95
2×4	259	7	0.06	1.5	0.095	2.4	0.61×1.15	15.5×29.2	635	945	127
2×3	259	6	0.06	1.5	0.095	2.4	0.68×1.26	17.3×32.0	785	1170	145
2×2	259	5	0.06	1.5	0.095	2.4	0.73×1.35	18.5×34.3	935	1390	167
2×1	259	4	0.08	2.0	0.110	2.8	0.81×1.55	20.6×39.4	1185	1760	191
2×1/0	259	3	0.08	2.0	0.125	3.2	0.93×1.67	23.6×42.4	1470	2190	217
2×2/0	329	2	0.08	2.0	0.125	3.2	0.99×1.85	25.1×47.0	1790	2660	250
2×3/0	413	1	0.08	2.0	0.140	3.6	1.03×2.00	26.2×50.8	2145	3190	286
2×4/0	532	1/0	0.08	2.0	0.140	3.6	1.10×2.10	27.9×53.3	2545	3790	328

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G Two-Conductor Round Portable Power Cable 2kV

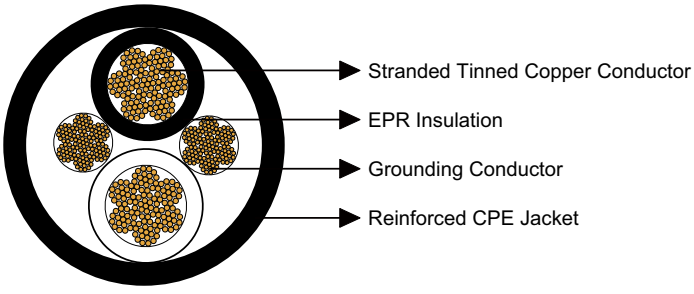
» Applications

These cables are designed for use in heavy duty services as power supply cable, mobile and portable electrical.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
2×8	133	10	0.06	1.5	0.110	2.8	0.81	20.6	495	736	72
2×6	259	10	0.06	1.5	0.125	3.2	0.93	23.6	650	967	95
2×4	259	8	0.06	1.5	0.140	3.6	1.08	27.4	940	1399	127
2×2	259	6	0.06	1.5	0.155	3.9	1.27	32.3	1360	2023	167
2×1	259	5	0.08	2.0	0.170	4.3	1.44	36.6	1730	2574	191
2×1/0	259	4	0.08	2.0	0.170	4.3	1.52	38.6	2000	2976	217
2×2/0	259	3	0.08	2.0	0.170	4.3	1.65	41.9	2240	3333	250
2×3/0	259	2	0.08	2.0	0.190	4.8	1.77	45.0	2860	4255	286
2×4/0	259	1	0.08	2.0	0.190	4.8	1.92	48.8	3500	5207	328

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G Three-Conductor Round Portable Power Cable 2kV

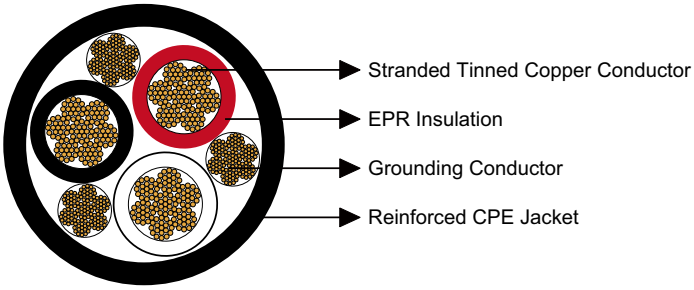
» Applications

These cables are designed for use with mobile mining equipment, such as continuous miners, cutting or loading machines, conveyors, drills or pumps.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×8	133	10	0.06	1.5	0.125	3.2	0.91	23.1	590	878	59
3×6	168	10	0.06	1.5	0.140	3.6	1.01	25.7	760	1131	79
3×4	259	8	0.06	1.5	0.155	3.9	1.17	29.7	1070	1592	104
3×3	329	8	0.06	1.5	0.155	3.9	1.24	31.5	1280	1904	120
3×2	259	8	0.06	1.5	0.155	3.9	1.34	34.0	1530	2276	138
3×1	329	7	0.08	2.0	0.170	4.3	1.51	38.4	1890	2812	161
3×1/0	259	6	0.08	2.0	0.170	4.3	1.65	41.9	2320	3452	186
3×2/0	329	5	0.08	2.0	0.190	4.8	1.75	44.5	2700	4017	215
3×3/0	413	4	0.08	2.0	0.190	4.8	1.89	48.0	3270	4865	249
3×4/0	532	3	0.08	2.0	0.205	5.2	2.04	51.8	3970	5907	287
3×250	608	2	0.095	2.4	0.220	5.6	2.39	60.7	5080	7558	320
3×300	741	1	0.095	2.4	0.235	6.0	2.56	65.0	6080	9046	357
3×350	855	1	0.095	2.4	0.235	6.0	2.68	68.1	7140	10623	394
3×400	988	1/0	0.095	2.4	0.250	6.4	2.82	71.6	7780	11575	430
3×500	1221	2/0	0.095	2.4	0.250	6.4	3.03	77.0	9065	13487	487

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G Four-Conductor Round Portable Power Cable 2kV

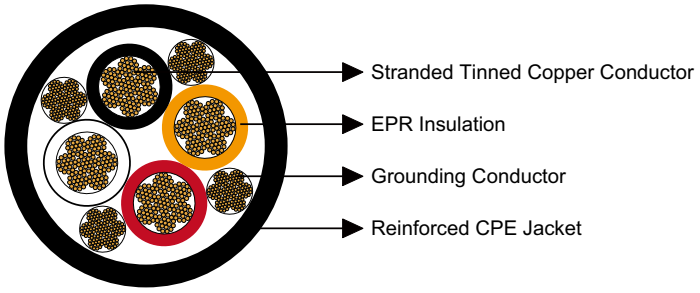
» Applications

These cables are designed for use with mobile mining equipment, such as continuous miners, cutting or loading machines, conveyors, drills or pumps.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
4×6	259	12	0.06	1.5	0.140	3.6	1.10	27.9	910	1354	72
4×4	412	10	0.06	1.5	0.155	3.9	1.27	32.3	1378	2050	93
4×2	259	9	0.06	1.5	0.170	4.3	1.48	37.6	1914	2848	122
4×1	331	8	0.08	2.0	0.190	4.8	1.68	42.7	2311	3438	143
4×1/0	414	7	0.08	2.0	0.190	4.8	1.79	45.5	2810	4181	165
4×2/0	522	6	0.08	2.0	0.190	4.8	1.93	49.0	3253	4840	192
4×3/0	658	5	0.08	2.0	0.205	5.2	2.07	52.6	4099	6099	221
4×4/0	829	4	0.08	2.0	0.220	5.6	2.26	57.4	4925	7327	255
4×250	973	3	0.095	2.4	0.235	6.0	2.66	67.6	6060	9016	280
4×350	1361	1	0.095	2.4	0.250	6.4	2.98	75.7	8126	12090	335
4×500	1921	1/0	0.095	2.4	0.280	7.1	3.40	86.4	10758	16006	395

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G-GC Three-Conductor Flat Portable Power Cable 2kV

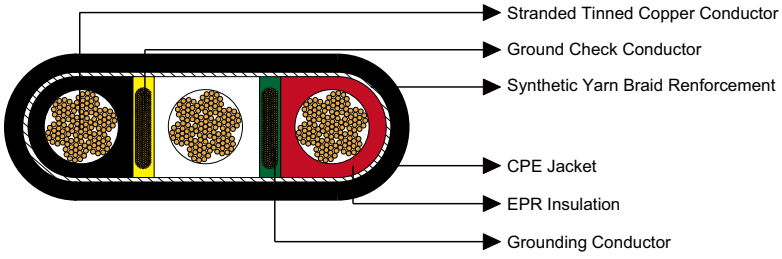
» Applications

These flat parallel cables are designed for use on AC mining equipment, such as A.C. shuttle cars, drills, cutting and loading machines.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Ground Check Conductor:

Tinned copper conductor with a yellow insulation.

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Reinforcement:

Synthetic yarn.

Jacket:

Heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter Height×Width		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	133	8	8	0.06	1.5	0.095	2.4	0.66×1.67	16.8×42.4	900	1340	79
3×4	259	7	8	0.06	1.5	0.095	2.4	0.72×1.87	18.3×47.5	1175	1750	104
3×3	259	6	6	0.06	1.5	0.110	2.8	0.78×2.08	19.8×52.8	1395	2080	120
3×2	259	5	6	0.06	1.5	0.110	2.8	0.85×2.23	21.6×56.6	1625	2415	138
3×1	259	4	6	0.08	2.0	0.125	3.2	0.96×2.50	24.4×63.5	2090	3110	161
3×1/0	259	3	5	0.08	2.0	0.140	3.6	1.01×2.67	25.6×67.8	2470	3675	186
3×2/0	329	2	5	0.08	2.0	0.140	3.6	1.09×2.86	27.7×68.1	2940	4375	215
3×3/0	413	1	5	0.08	2.0	0.155	3.9	1.18×3.12	30.0×79.2	3515	5230	249
3×4/0	532	1/0	5	0.08	2.0	0.155	3.9	1.24×3.30	31.5×83.8	4245	6315	287

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type G-GC Three-Conductor Round Portable Power Cable 2kV

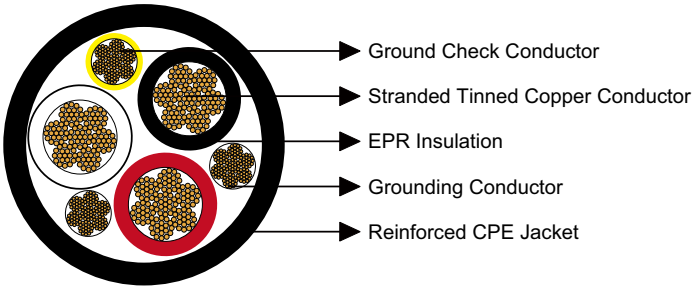
» Applications

These cables are suitable for use with mobile mining equipment such as continuous miners, drills, cutters, loading machines, AC shuttle cars and pumps. Type G-GC is for applications where grounding conductors and a ground check conductor are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor with an optional green outer covering.

Jacket:

Reinforced heavy-duty/extra-heavy-duty Chlorinated Polyethylene (CPE), black. (Cables having a nominal outside diameter of more than 2.0 inches require extra-heavy-duty jackets.)

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×8	133	10	10	0.06	1.5	0.125	3.2	0.97	24.6	600	893	59
3×6	133	10	10	0.06	1.5	0.140	3.6	1.05	26.7	735	1094	79
3×4	259	8	10	0.06	1.5	0.155	3.9	1.19	30.2	1065	1585	104
3×3	259	8	10	0.06	1.5	0.155	3.9	1.25	31.8	1245	1853	120
3×2	259	7	10	0.06	1.5	0.155	3.9	1.34	34.0	1480	2202	138
3×1	259	6	8	0.08	2.0	0.170	4.3	1.51	38.4	1885	2805	161
3×1/0	266	5	8	0.08	2.0	0.170	4.3	1.65	41.9	2290	3408	186
3×2/0	329	4	8	0.08	2.0	0.190	4.8	1.75	44.5	2710	4033	215
3×3/0	418	2	8	0.08	2.0	0.190	4.8	1.89	48.0	3270	4866	249
3×4/0	532	2	8	0.08	2.0	0.205	5.2	2.04	51.8	3975	5915	287
3×250	627	2	6	0.095	2.4	0.220	5.6	2.39	60.7	4950	7366	320
3×350	888	1/0	6	0.095	2.4	0.235	6.0	2.68	68.1	6625	9859	394
3×500	1221	2/0	6	0.095	2.4	0.250	6.4	3.03	77.0	8890	13230	487

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD Three-Conductor Flat Portable Power Cable 2kV

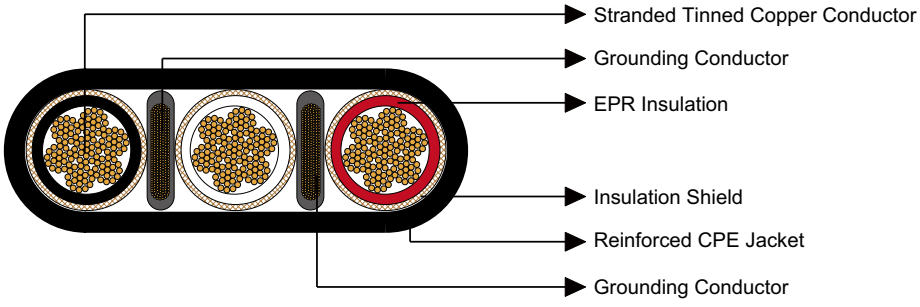
» Applications

These flat parallel cables are designed for use on continuous miners requiring grounding conductors and metallic shielding over each conductor.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Grounding Conductor:

Tinned copper conductor covered with a conducting extrusion layer.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter Height×Width		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	259	6	0.07	1.8	0.125	3.2	0.94×2.45	23.9×62.2	2243	3338	159
3×1	259	5	0.08	2.0	0.140	3.6	1.04×2.64	26.4×67.1	2540	3780	184
3×1/0	259	4	0.08	2.0	0.140	3.6	1.08×2.82	27.4×71.6	2915	4338	211
3×2/0	329	3	0.08	2.0	0.155	3.9	1.18×2.99	30.0×76.0	3346	4980	243
3×3/0	413	2	0.08	2.0	0.155	3.9	1.25×3.29	31.8×83.6	3890	5789	279

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-PCG Three-Conductor Round Portable Power Cable 2kV

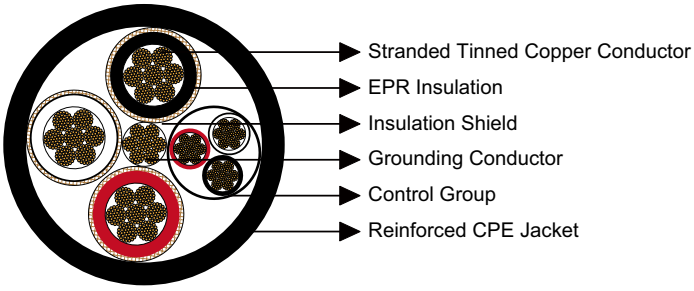
» Applications

These heavy duty cables are designed for use on longwall shearers, where three shielded power conductors, three unshielded control conductors, and a grounding conductor are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Control Group (3 Conductor):

Tinned copper conductor, EPR insulation and thermosetting jacket. Colour of insulation: Black, white and red.

Grounding Conductor:

Tinned copper conductor, located in the center of the cable.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Control Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×1/0	259	3	8	0.08	2.0	0.205	5.2	2.05	52.1	3092	4602	211
3×2/0	329	2	8	0.08	2.0	0.220	5.6	2.25	57.1	3698	5503	243
3×3/0	413	1	8	0.08	2.0	0.220	5.6	2.32	58.9	4295	6392	279
3×4/0	532	1/0	8	0.08	2.0	0.250	6.3	2.62	66.5	5115	7612	321

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-PCG Three-Conductor Round Portable Power Cable 5kV

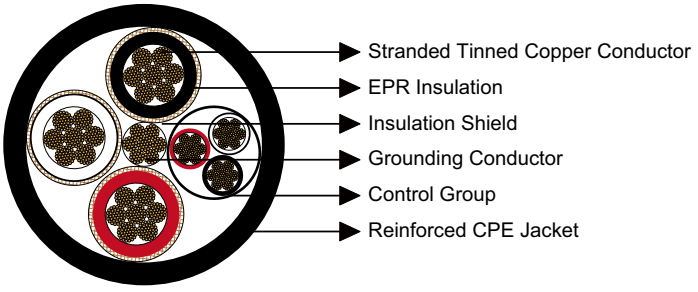
» Applications

These heavy duty cables are designed for use on longwall shearers, where three shielded power conductors, three unshielded control conductors, and a grounding conductor are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Control Group (3 Conductors):

Tinned copper conductor, EPR insulation and thermosetting jacket. Colour of insulation: Black, white and red.

Grounding Conductor:

Tinned copper conductor, located in the center of the cable.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Control Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	259	4	8	0.11	2.8	0.205	5.2	2.03	51.5	2769	4120	159
3×1	259	4	8	0.11	2.8	0.220	5.6	2.12	53.8	2825	4205	184
3×1/0	266	3	8	0.11	2.8	0.220	5.6	2.27	57.7	3571	5313	211
3×2/0	329	2	8	0.11	2.8	0.220	5.6	2.45	62.2	3774	5615	243
3×3/0	418	1	8	0.11	2.8	0.235	6.0	2.58	65.3	4752	7070	279
3×4/0	532	1/0	6	0.11	2.8	0.250	6.4	2.76	69.9	6030	8971	321

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-CGC Three-Conductor
Round Portable Power Cable 2kV

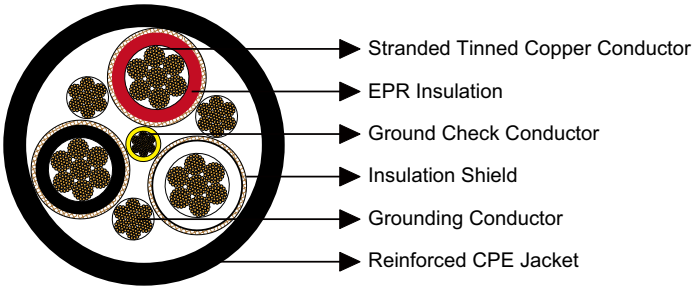
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners, loaders, drills, conveyors, pumps, and other mobile equipment requiring grounding conductors, where a ground check conductor, and metallic shielding are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow insulation, located in the center of the cable.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD
Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2/0	342	5	16	0.08	2.0	0.205	5.2	2.09	53.1	3400	5059	243
3×3/0	418	4	16	0.08	2.0	0.205	5.2	2.21	56.1	3934	5853	279
3×4/0	532	3	16	0.08	2.0	0.220	5.6	2.36	59.9	4860	7231	321
3×350	888	1	16	0.95	2.4	0.250	6.3	2.81	71.4	7400	11010	435

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-CGC Three-Conductor Round Portable Power Cable 5kV

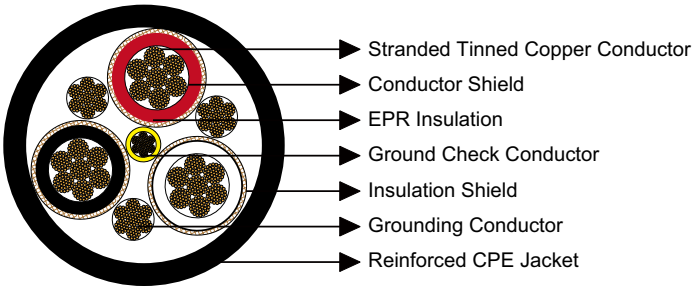
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners, loaders, drills, conveyors, pumps, and other mobile equipment requiring grounding conductors, where a ground check conductor, and metallic shielding are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow insulation, located in the center of the cable.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2/0	323	5	16	0.11	2.8	0.220	5.6	2.20	55.9	3716	5529	243
3×3/0	418	4	16	0.11	2.8	0.235	6.0	2.36	59.9	4130	6145	279
3×4/0	532	3	16	0.11	2.8	0.235	6.0	2.50	63.5	5190	7722	321
3×350	888	1	16	0.12	3.0	0.265	6.7	2.95	74.9	7571	11264	435

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor
Round Portable Power Cable, CPE Jacket 2kV

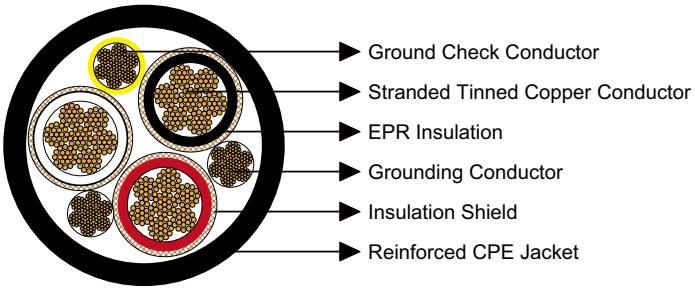
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners, loaders, drills, conveyors, pumps and mobile equipment where grounding conductors, a ground check conductor and metallic shielding are required.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	133	10	10	0.07	1.8	0.155	3.9	1.29	32.8	1130	1682	93
3×4	259	8	10	0.07	1.8	0.155	3.9	1.40	35.6	1460	2173	122
3×3	259	7	10	0.07	1.8	0.170	4.3	1.51	38.3	1680	2500	140
3×2	259	6	10	0.07	1.8	0.170	4.3	1.59	40.4	1990	2961	159
3×1	259	5	8	0.08	2.0	0.190	4.8	1.76	44.7	2385	3549	184
3×1/0	266	4	8	0.08	2.0	0.190	4.8	1.86	47.2	2765	4115	211
3×2/0	329	3	8	0.08	2.0	0.205	5.2	2.00	50.8	3255	4844	243
3×3/0	418	2	8	0.08	2.0	0.205	5.2	2.13	54.1	3890	5789	279
3×4/0	532	1	8	0.08	2.0	0.220	5.6	2.31	58.7	4720	7024	321
3×250	627	1/0	6	0.095	2.4	0.220	5.6	2.51	63.8	5460	8125	355
3×300	741	1/0	6	0.095	2.4	0.235	6.0	2.68	68.1	6395	9517	398
3×350	888	2/0	6	0.095	2.4	0.235	6.0	2.81	71.4	7280	10834	435
3×500	1221	4/0	6	0.095	2.4	0.265	6.7	3.19	81.0	9820	14614	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor
Round Portable Power Cable, TPU Jacket 2kV

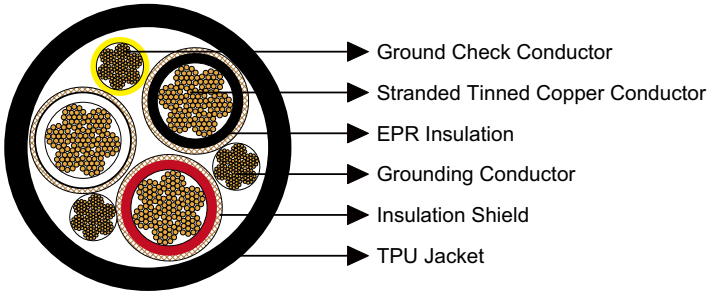
» Applications

These heavy duty cables are designed for heavy mobile equipment such as drag lines, shovels, dredges, drills and for power feeders.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Thermoplastic Polyurethane (TPU) Jacket, black.

» Options

- Other jacket materials such as CPE/CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	133	10	10	0.07	1.8	0.155	3.9	1.29	32.8	1069	1590	93
3×4	259	8	10	0.07	1.8	0.155	3.9	1.40	35.6	1295	1927	122
3×2	259	6	10	0.07	1.8	0.170	4.3	1.59	40.4	1778	2645	159
3×1	259	5	8	0.08	2.0	0.190	4.8	1.76	44.7	2163	3218	184
3×1/0	266	4	8	0.08	2.0	0.190	4.8	1.86	47.2	2508	3731	211
3×2/0	323	3	8	0.08	2.0	0.205	5.2	2.00	50.8	3001	4465	243
3×3/0	418	2	8	0.08	2.0	0.205	5.2	2.13	54.1	3470	5163	279
3×4/0	532	1	8	0.08	2.0	0.220	5.6	2.31	58.7	4192	6237	321
3×250	627	1/0	6	0.095	2.4	0.220	5.6	2.51	63.8	5213	7756	355
3×350	888	2/0	6	0.095	2.4	0.235	6.0	2.81	71.4	6824	10153	435
3×500	1221	4/0	6	0.095	2.4	0.265	6.7	3.19	81.0	9014	13411	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, CPE Jacket 5kV

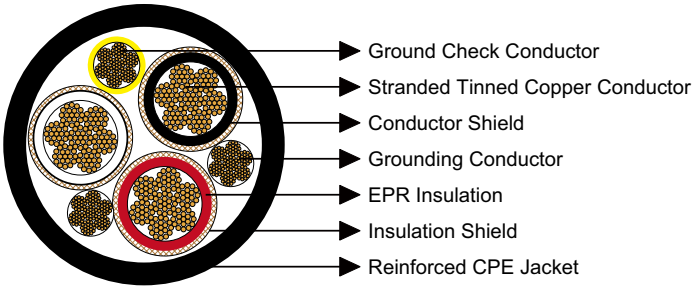
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners and mobile equipment such as shovels, dredges and drills.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	133	10	8	0.110	2.8	0.185	4.7	1.56	39.6	1560	2322	93
3×4	259	8	8	0.110	2.8	0.185	4.7	1.68	42.7	1895	2820	122
3×2	259	6	8	0.110	2.8	0.205	5.2	1.87	47.5	2445	3639	159
3×1	259	5	8	0.110	2.8	0.205	5.2	1.95	49.5	2800	4167	184
3×1/0	266	4	8	0.110	2.8	0.220	5.6	2.08	52.8	3230	4807	211
3×2/0	329	3	8	0.110	2.8	0.220	5.6	2.20	55.9	3800	5655	243
3×3/0	418	2	8	0.110	2.8	0.235	6.0	2.36	59.9	4475	6660	279
3×4/0	532	1	8	0.110	2.8	0.235	6.0	2.50	63.5	5265	7835	321
3×250	627	1/0	6	0.120	3.0	0.250	6.4	2.69	68.3	6105	9085	355
3×300	741	1/0	6	0.120	3.0	0.250	6.4	2.81	71.4	6875	10231	398
3×350	888	2/0	6	0.120	3.0	0.265	6.7	2.95	74.9	7795	11600	435
3×500	1221	4/0	6	0.120	3.0	0.280	7.1	3.31	84.1	10415	15499	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, TPU Jacket 5kV

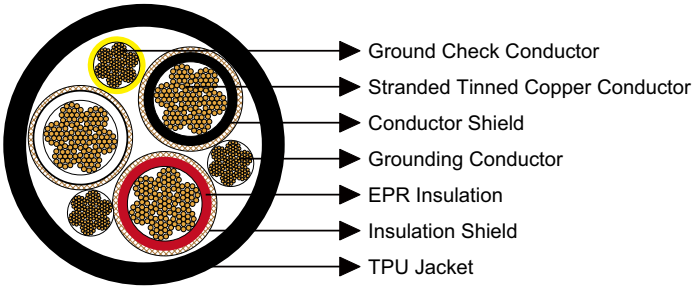
» Applications

These heavy duty cables are designed for heavy mobile equipment such as drag lines, shovels, dredges, drills and for power feeders.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Thermoplastic Polyurethane (TPU) Jacket, black.

» Options

- Other jacket materials such as CPE/CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	133	10	8	0.110	2.8	0.185	4.7	1.56	39.6	1342	1997	93
3×4	259	8	8	0.110	2.8	0.185	4.7	1.68	42.7	1629	2424	122
3×2	259	6	8	0.110	2.8	0.205	5.2	1.87	47.5	2228	3315	159
3×1	259	5	8	0.110	2.8	0.205	5.2	1.95	49.5	2447	3641	184
3×1/0	266	4	8	0.110	2.8	0.220	5.6	2.08	52.8	2760	4106	211
3×2/0	323	3	8	0.110	2.8	0.220	5.6	2.20	55.9	3238	4818	243
3×3/0	418	2	8	0.110	2.8	0.235	6.0	2.36	59.9	3792	5642	279
3×4/0	532	1	8	0.110	2.8	0.235	6.0	2.50	63.5	4548	6767	321
3×250	627	1/0	6	0.120	3.0	0.250	6.4	2.69	68.3	5427	8074	355
3×350	888	2/0	6	0.120	3.0	0.265	6.7	2.95	74.9	7070	10519	435
3×500	1221	4/0	6	0.120	3.0	0.280	7.1	3.31	84.1	9407	13996	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, CPE Jacket 8kV

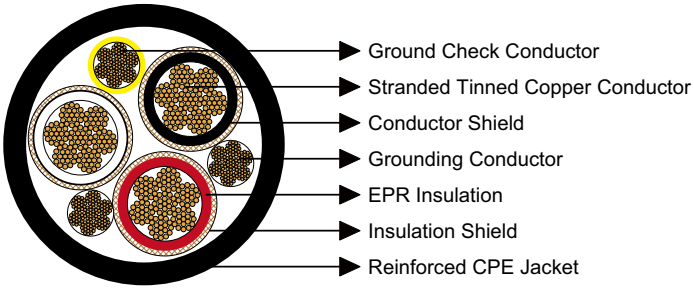
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners and mobile equipment such as shovels, dredges and drills.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×4	259	8	8	0.150	3.8	0.205	5.2	1.94	49.3	2308	3594	122
3×2	259	6	8	0.150	3.8	0.220	5.6	2.12	53.8	2920	4554	159
3×1	329	5	8	0.150	3.8	0.220	5.6	2.21	56.1	3292	5104	184
3×1/0	259	4	8	0.150	3.8	0.220	5.6	2.32	58.9	3675	5700	211
3×2/0	329	3	8	0.150	3.8	0.235	6.0	2.46	62.5	4304	6593	243
3×3/0	413	2	8	0.150	3.8	0.250	6.4	2.62	66.5	5200	7738	279
3×4/0	532	1	8	0.150	3.8	0.250	6.4	2.75	69.8	5840	8713	321
3×250	608	1/0	6	0.150	3.8	0.250	6.4	2.89	73.4	6774	9948	355
3×300	741	1/0	6	0.150	3.8	0.265	6.7	3.04	77.2	7423	11384	398
3×350	888	2/0	6	0.150	3.8	0.280	7.1	3.21	81.3	8543	12739	435
3×500	1221	4/0	6	0.150	3.8	0.295	7.5	3.56	90.4	11260	16757	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, TPU Jacket 8kV

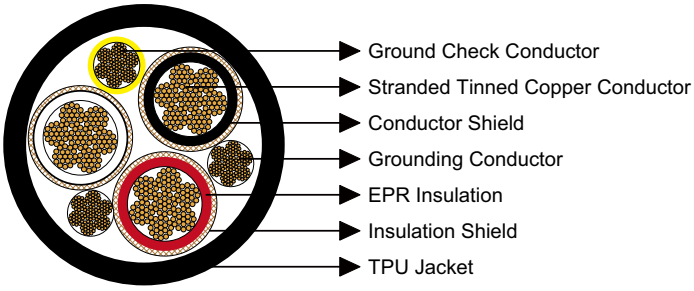
» Applications

These heavy duty cables are designed for heavy mobile equipment such as drag lines, shovels, dredges, drills and for power feeders.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Thermoplastic Polyurethane (TPU) Jacket, black.

» Options

- Other jacket materials such as CPE/CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×4	259	8	8	0.150	3.8	0.205	5.2	1.94	49.3	2019	3004	122
3×2	259	6	8	0.150	3.8	0.220	5.6	2.12	53.8	2603	3873	159
3×1	259	5	8	0.150	3.8	0.220	5.6	2.21	56.1	2913	4334	184
3×1/0	266	4	8	0.150	3.8	0.220	5.6	2.32	58.9	3351	4986	211
3×2/0	323	3	8	0.150	3.8	0.235	6.0	2.46	62.5	3946	5871	243
3×3/0	418	2	8	0.150	3.8	0.250	6.4	2.62	66.5	4582	6817	279
3×4/0	532	1	8	0.150	3.8	0.250	6.4	2.75	69.8	5321	7917	321
3×250	627	1/0	6	0.150	3.8	0.250	6.4	2.89	73.4	6101	9077	355
3×350	888	2/0	6	0.150	3.8	0.280	7.1	3.21	81.3	7696	11450	435
3×500	1221	4/0	6	0.150	3.8	0.295	7.5	3.56	90.4	10199	15174	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, CPE Jacket 15kV

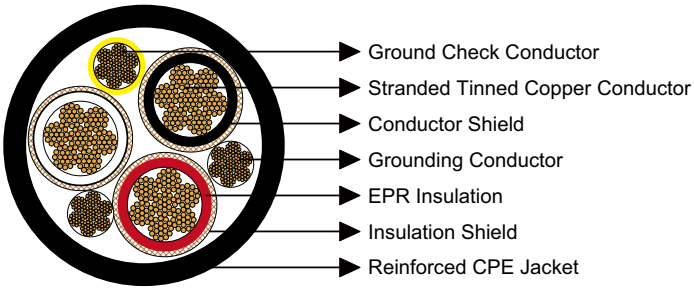
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners and mobile equipment such as shovels, dredges and drills.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	259	6	8	0.210	5.3	0.235	6.0	2.41	61.2	3572	5529	164
3×1	259	5	8	0.210	5.3	0.235	6.0	2.52	64.0	4060	6042	187
3×1/0	259	4	8	0.210	5.3	0.250	6.4	2.64	67.0	4495	6927	215
3×2/0	329	3	8	0.210	5.3	0.250	6.4	2.73	69.3	5010	7783	246
3×3/0	413	2	8	0.210	5.3	0.265	6.7	2.90	73.7	5995	8922	283
3×4/0	532	1	8	0.210	5.3	0.265	6.7	3.05	77.5	6860	10209	325

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor
Round Portable Power Cable, TPU Jacket 15kV

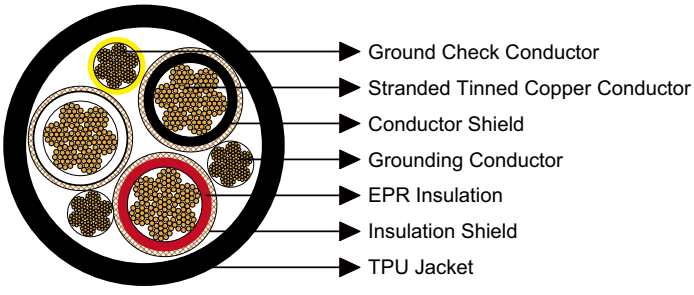
» Applications

These heavy duty cables are designed for heavy mobile equipment such as drag lines, shovels, dredges, drills and for power feeders.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Thermoplastic Polyurethane (TPU) Jacket, black.

» Options

- Other jacket materials such as CPE/CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	259	6	8	0.210	5.3	0.235	6.0	2.41	61.2	3145	4679	164
3×1	259	5	8	0.210	5.3	0.235	6.0	2.52	64.0	3567	5307	187
3×1/0	266	4	8	0.210	5.3	0.250	6.4	2.64	67.0	3976	5916	215
3×2/0	323	3	8	0.210	5.3	0.250	6.4	2.73	69.3	4526	6734	246
3×3/0	418	2	8	0.210	5.3	0.265	6.7	2.90	73.7	5231	7783	283
3×4/0	532	1	8	0.210	5.3	0.265	6.7	3.05	77.5	6033	8976	325

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, CPE Jacket 25kV

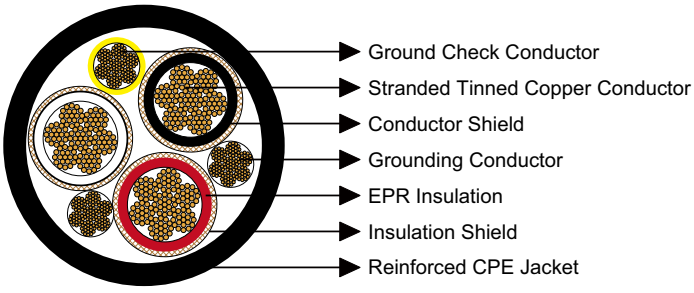
» Applications

These heavy duty cables are designed for applications such as longwall shearers, continuous miners and mobile equipment such as shovels, dredges and drills.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Reinforced extra-heavy-duty Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×1	259	5	8	0.260	6.6	0.265	6.7	2.95	74.9	5290	7872	191
3×1/0	259	4	8	0.260	6.6	0.265	6.7	3.05	77.5	5800	8631	218
3×2/0	329	3	8	0.260	6.6	0.280	7.1	3.20	81.3	6515	9695	249
3×3/0	413	2	8	0.260	6.6	0.280	7.1	3.33	84.6	7215	10737	286
3×4/0	532	1	8	0.260	6.6	0.295	7.5	3.50	88.9	8250	12277	327

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type SHD-GC Three-Conductor

Round Portable Power Cable, TPU Jacket 25kV

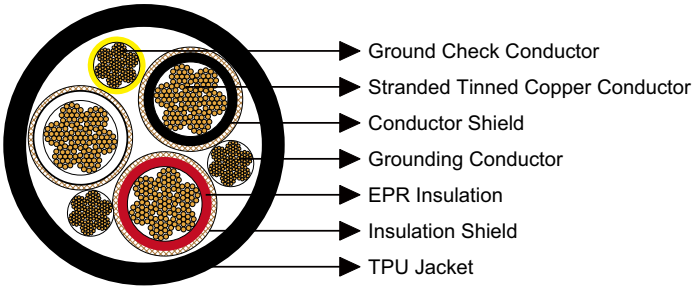
» Applications

These heavy duty cables are designed for heavy mobile equipment such as drag lines, shovels, dredges, drills and for power feeders.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed tinned copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting tape + Tinned copper/textile braid.

Ground Check Conductor:

Tinned copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Thermoplastic Polyurethane (TPU) Jacket, black.

» Options

- Other jacket materials such as CPE/CSP/PCP/NBR/PVC are available upon request.
- Two-layer jacket with reinforcing fibre between the two layers can be offered as an option.

» Mechanical and Thermal Properties

Minimum Bending Radius: 8×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×1	259	5	8	0.260	6.6	0.265	6.7	2.95	74.9	4410	6561	191
3×1/0	266	4	8	0.260	6.6	0.265	6.7	3.05	77.5	4866	7240	218
3×2/0	323	3	8	0.260	6.6	0.280	7.1	3.20	81.3	5560	8272	249
3×3/0	418	2	8	0.260	6.6	0.280	7.1	3.33	84.6	6192	9213	286
3×4/0	532	1	8	0.260	6.6	0.295	7.5	3.50	88.9	7110	10578	327

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Portable Arc-Welding Cable 600V

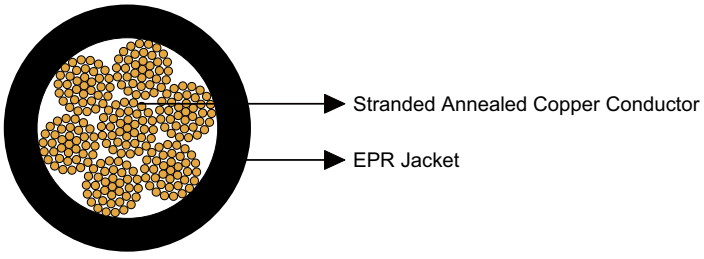
» Applications

These cables are designed for use as flexible welding leads connecting the electrode holder to the welding machine in the secondary circuit of electric arc welding systems.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B 172
ASTM B 33
CAN/CSA C22.2 No. 96
UL 1581

» Construction



Conductors:

Class K/M stranded annealed copper conductor.

Jacket:

Heavy-duty/medium-duty Ethylene Propylene Rubber (EPR).

» Options

- Other jacket materials such as NR/CSP/PCP/NBR/PVC are available upon request.
- Heavy-duty, two-layer jacket with reinforcement between the two layers can be offered as an option.

Portable Welding Cables

» Mechanical and Thermal Properties

Minimum Bending Radius: 6×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Nominal Insulation Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	inch	mm	inch	mm	lbs/kft	kg/km	A
1×6	259	0.060	1.5	0.37	9.4	124	184	125
1×4	420	0.060	1.5	0.42	10.7	180	268	182
1×2	665	0.060	1.5	0.49	12.5	268	399	271
1×1	836	0.080	2.0	0.53	13.3	319	475	360
1×1/0	1045	0.080	2.0	0.59	14.9	415	617	444
1×2/0	1330	0.080	2.0	0.64	16.3	508	756	535
1×3/0	1672	0.080	2.0	0.70	17.8	628	934	667
1×4/0	2107	0.080	2.0	0.81	20.7	775	1153	809
1×250	2499	0.095	2.4	0.88	22.4	934	1390	1048
1×350	3458	0.095	2.4	1.01	25.6	1267	1885	1396
1×500	5054	0.095	2.4	1.18	30.0	1801	2680	1973

Type MP-GC Three-Conductor

Mine Power Feeder Cable, CPE Jacket, 5kV

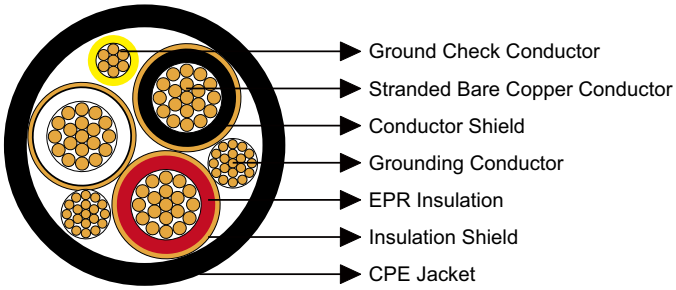
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standarhads

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	7	10	8	0.09	2.3	0.11	2.8	1.30	33.0	1060	1577	93
3×4	7	8	8	0.09	2.3	0.11	2.8	1.41	35.8	1441	2144	122
3×2	7	6	8	0.09	2.3	0.11	2.8	1.47	37.3	1827	2718	159
3×1	19	5	8	0.09	2.3	0.11	2.8	1.54	39.1	2168	3226	184
3×1/0	19	4	8	0.09	2.3	0.11	2.8	1.63	41.4	2602	3871	211
3×2/0	19	3	8	0.09	2.3	0.11	2.8	1.72	43.7	3010	4478	243
3×3/0	19	2	8	0.09	2.3	0.14	3.6	1.89	48.0	3265	4859	279
3×4/0	19	1	8	0.09	2.3	0.14	3.6	2.01	51.0	4190	6234	321
3×250	37	1/0	8	0.09	2.3	0.14	3.6	2.10	53.3	4825	7179	355
3×350	37	2/0	8	0.09	2.3	0.14	3.6	2.31	58.7	6062	9019	435
3×500	37	4/0	8	0.09	2.3	0.14	3.6	2.59	65.8	8427	12538	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, CPE Jacket, 8kV

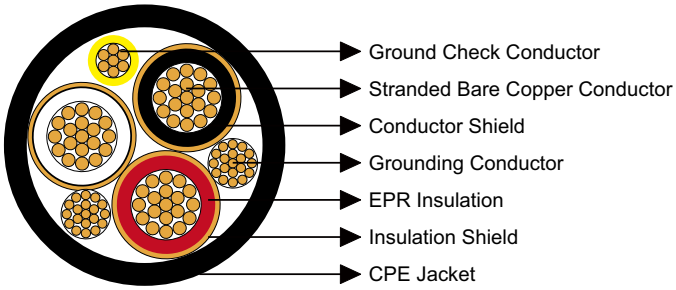
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×6	7	10	8	0.115	2.9	0.11	2.8	1.41	35.8	1175	1749	93
3×4	7	8	8	0.115	2.9	0.11	2.8	1.52	38.6	1608	2392	122
3×2	7	6	8	0.115	2.9	0.11	2.8	1.58	40.1	1919	2855	159
3×1	19	5	8	0.115	2.9	0.11	2.8	1.66	42.2	2507	3730	184
3×1/0	19	4	8	0.115	2.9	0.11	2.8	1.74	44.2	2660	3958	211
3×2/0	19	3	8	0.115	2.9	0.14	3.6	1.90	48.3	3257	4846	243
3×3/0	19	2	8	0.115	2.9	0.14	3.6	2.00	50.8	3432	5107	279
3×4/0	19	1	8	0.115	2.9	0.14	3.6	2.12	53.8	4382	6520	321
3×250	37	1/0	8	0.115	2.9	0.14	3.6	2.22	56.4	4965	7387	355
3×350	37	2/0	8	0.115	2.9	0.14	3.6	2.43	61.7	6484	9647	435
3×500	37	4/0	8	0.115	2.9	0.14	3.6	2.70	68.6	8857	13178	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, CPE Jacket, 15kV

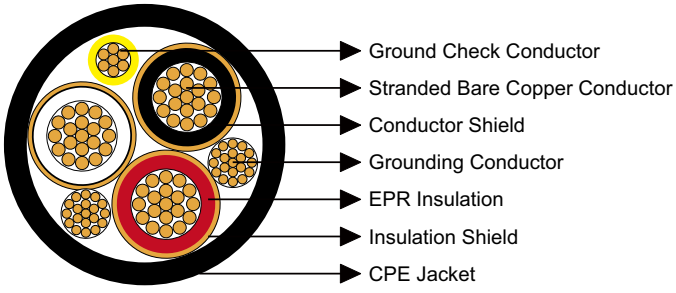
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor SizeL	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/KCMI	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	7	6	8	0.175	4.4	0.14	3.6	1.90	48.3	2517	3745	164
3×1	19	5	8	0.175	4.4	0.14	3.6	1.99	50.6	3023	4498	187
3×1/0	19	4	8	0.175	4.4	0.14	3.6	2.07	52.6	3296	4904	215
3×2/0	19	3	8	0.175	4.4	0.14	3.6	2.16	54.9	3679	5474	246
3×3/0	19	2	8	0.175	4.4	0.14	3.6	2.27	57.7	3878	5771	283
3×4/0	19	1	8	0.175	4.4	0.14	3.6	2.39	60.7	5146	7656	325
3×250	37	1/0	8	0.175	4.4	0.14	3.6	2.48	63.0	5618	8359	359
3×350	37	2/0	8	0.175	4.4	0.14	3.6	2.70	68.6	7055	10496	438
3×500	37	4/0	8	0.175	4.4	0.17	4.3	3.08	78.2	9405	13993	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, CPE Jacket, 25kV

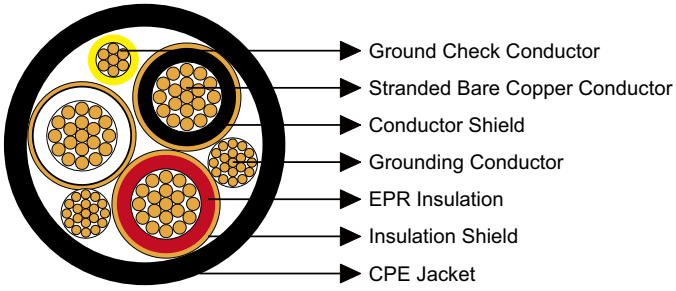
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Ethylene Propylene Rubber (EPR).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Chlorinated Polyethylene (CPE), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/PVC/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×1	19	5	8	0.260	6.4	0.14	3.6	2.37	60.2	3435	5112	187
3×1/0	19	4	8	0.260	6.4	0.14	3.6	2.45	62.2	3815	5677	218
3×2/0	19	3	8	0.260	6.4	0.14	3.6	2.54	64.5	4290	6384	249
3×3/0	19	2	8	0.260	6.4	0.14	3.6	2.65	67.3	4875	7255	286
3×4/0	19	1	8	0.260	6.4	0.14	3.6	2.81	71.4	5665	8430	327
3×250	37	1/0	8	0.260	6.4	0.17	4.3	2.97	75.4	6495	9666	360
3×350	37	2/0	8	0.260	6.4	0.17	4.3	3.18	80.8	7970	11860	438
3×500	37	4/0	8	0.260	6.4	0.17	4.3	3.45	87.6	10300	15328	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, PVC Jacket, 5kV

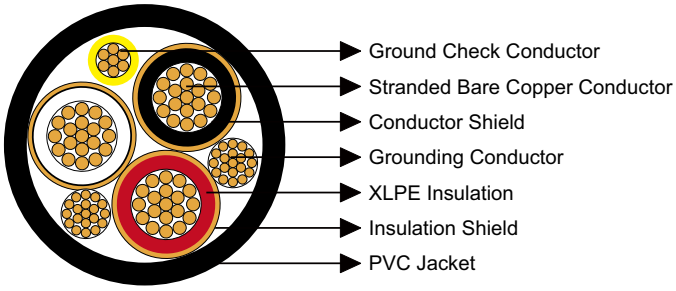
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA C22.2 No. 96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Cross-Linked Polyethylene (XLPE).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Polyvinyl Chloride (PVC), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/CPE/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×4	7	8	8	0.09	2.3	0.11	2.8	1.41	35.8	1224	1821	122
3×2	7	6	8	0.09	2.3	0.11	2.8	1.47	37.3	1653	2459	159
3×1	19	5	8	0.09	2.3	0.11	2.8	1.54	39.1	1950	2901	184
3×1/0	19	4	8	0.09	2.3	0.11	2.8	1.63	41.4	2200	3273	211
3×2/0	19	3	8	0.09	2.3	0.11	2.8	1.72	43.7	2721	4048	243
3×3/0	19	2	8	0.09	2.3	0.14	3.6	1.89	48.0	3170	4720	279
3×4/0	19	1	8	0.09	2.3	0.14	3.6	2.01	51.0	3845	5721	321
3×250	37	1/0	8	0.09	2.3	0.14	3.6	2.10	53.3	4321	6429	355
3×350	37	2/0	8	0.09	2.3	0.14	3.6	2.31	58.7	5652	8409	435
3×500	37	4/0	8	0.09	2.3	0.14	3.6	2.59	65.8	7721	11487	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, PVC Jacket, 8kV

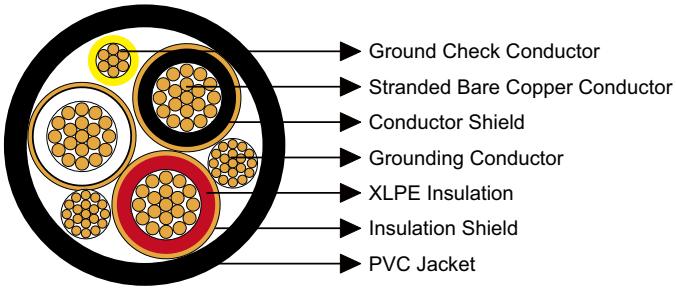
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Cross-Linked Polyethylene (XLPE).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Polyvinyl Chloride (PVC), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/CPE/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/kcmil	-	AWG/kcmil	AWG/kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×4	7	8	8	0.115	2.9	0.11	2.8	1.52	38.6	1366	2032	122
3×2	7	6	8	0.115	2.9	0.11	2.8	1.58	40.1	1727	2569	159
3×1	19	5	8	0.115	2.9	0.11	2.8	1.66	42.2	2174	3234	184
3×1/0	19	4	8	0.115	2.9	0.11	2.8	1.74	44.2	2656	3952	211
3×2/0	19	3	8	0.115	2.9	0.14	3.6	1.90	48.3	2895	4307	243
3×3/0	19	2	8	0.115	2.9	0.14	3.6	2.00	50.8	3320	4950	279
3×4/0	19	1	8	0.115	2.9	0.14	3.6	2.12	53.8	3983	5926	321
3×250	37	1/0	8	0.115	2.9	0.14	3.6	2.22	56.4	4484	6671	355
3×350	37	2/0	8	0.115	2.9	0.14	3.6	2.43	61.7	5827	8669	435
3×500	37	4/0	8	0.115	2.9	0.14	3.6	2.70	68.6	7893	11743	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Type MP-GC Three-Conductor

Mine Power Feeder Cable, PVC Jacket, 15kV

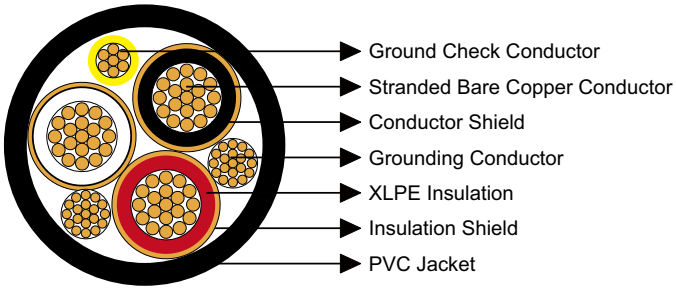
» Applications

These cables are designed for connections between units of mine distribution systems, suitable for installed in duct, conduit or open air and for direct burial in wet and dry locations.

» Standards

ICEA S-75-381/NEMA WC 58
ASTM B-8
CAN/CSA-C22.2 No.96

» Construction



Conductors:

Stranded annealed bare copper conductor.

Conductor Shield:

Conducting layer.

Insulation:

Cross-Linked Polyethylene (XLPE).

Insulation Shield:

Conducting layer + copper tape.

Ground Check Conductor:

Copper conductor with a yellow polypropylene insulation.

Grounding Conductor:

Tinned copper conductor.

Jacket:

Polyvinyl Chloride (PVC), black.

» Options

- Other jacket materials such as CSP/PCP/NBR/CPE/TPU are available upon request.

» Mechanical and Thermal Properties

Minimum Bending Radius: 12×OD

Maximum Conductor Operating Temperature: +90℃

» Dimensions and Weight

Construction	No. of Strands	Grounding Conductor Size	Ground Check Conductor Size	Nominal Insulation Thickness		Nominal Jacket Thickness		Nominal Overall Diameter		Nominal Weight		Ampacity
No. of cores×AWG/ kcmil	-	AWG/ kcmil	AWG/ kcmil	inch	mm	inch	mm	inch	mm	lbs/kft	kg/km	A
3×2	7	6	8	0.175	4.4	0.14	3.6	1.90	48.3	2021	3007	164
3×1	19	5	8	0.175	4.4	0.14	3.6	1.99	50.6	2503	3724	187
3×1/0	19	4	8	0.175	4.4	0.14	3.6	2.07	52.6	2658	3955	215
3×2/0	19	3	8	0.175	4.4	0.14	3.6	2.16	54.9	3066	4562	246
3×3/0	19	2	8	0.175	4.4	0.14	3.6	2.27	57.7	3710	5530	283
3×4/0	19	1	8	0.175	4.4	0.14	3.6	2.39	60.7	4369	6500	325
3×250	37	1/0	8	0.175	4.4	0.14	3.6	2.48	63.0	4875	7253	359
3×350	37	2/0	8	0.175	4.4	0.14	3.6	2.70	68.6	6412	9540	438
3×500	37	4/0	8	0.175	4.4	0.17	4.3	3.08	78.2	8610	12810	536

Ampacity-Based on a conductor temperature of 90℃ and an ambient air temperature of 40℃, per ICEA S-75-381.

Cable Type Definition According to ICEA S-75-381

Portable cables for use in mining machines, dredges, shovels and similar equipments	
Type W	Portable cables without grounding conductors
Type G	Portable cables with grounding conductors
Type G-GC	Portable cables with grounding conductors and one ground-check conductor
Type SHD Flat	Multiconductor portable cables with individually shielded power conductors, and grounding conductors covered with a conducting extrusion layer.
Type SHD-PCG	Multiconductor portable cables with individually shielded power conductors, center grounding conductor, and one or more control conductors.
Type SHD-CGC	Portable cables with individually shielded power conductors, grounding conductor, and one ground-check conductor in center.
Type SHD-GC	Portable cables with individually shielded power conductors, grounding conductor, and one ground-check conductor.
Mine power cables for use as connections between units of mine distribution systems	
Type MP-GC	Mine power cables with individually shielded power conductors, grounding conductor, and one ground-check conductor.

Ampacities According to ICEA S-75-381

» Ampacities for Portable Power Cables--Table 1 .....

Power Conductor Size (AWG or kcmil)	Single Conductor				Two Conductor Round and Flat 0-2000V	Three Conductor Round and Flat 0-5000V Nonshielded
	0-2000V Nonshielded	2001-8000V Shielded	8001-15000V Shielded	15001-25000V Shielded		
8	83	—	—	—	72	59
6	109	112	—	—	95	79
4	145	148	—	—	127	104
3	167	171	—	—	145	120
2	192	195	195	—	167	138
1	223	225	225	222	191	161
1/0	258	260	259	255	217	186
2/0	298	299	298	293	250	215
3/0	345	345	343	337	286	249
4/0	400	400	397	389	328	287
250	445	444	440	430	363	320
300	500	496	491	480	400	357
350	552	549	543	529	436	394
400	600	596	590	572	470	430
450	650	640	633	615	497	460
500	695	688	678	659	524	487

» Ampacities for Portable Power Cables--Table 2 .....

Power Conductor Size (AWG or kcmil)	Three Conductor Round			Four Conductor	Five Conductor	Six Conductor
	0-8000V Shielded	8001-15000V Shielded	15001-25000V Shielded	0-2000V	0-2000V	0-2000V
8	—	—	—	54	50	48
6	93	—	—	72	68	64
4	122	—	—	93	88	83
3	140	—	—	106	100	95
2	159	164	178	122	116	110
1	184	187	191	143	136	129
1/0	211	215	218	165	—	—
2/0	243	246	249	192	—	—
3/0	279	283	286	221	—	—
4/0	321	325	327	255	—	—
250	355	359	360	280	—	—
300	398	—	—	310	—	—
350	435	—	—	335	—	—
400	470	—	—	356	—	—
450	503	—	—	377	—	—
500	536	—	—	395	—	—

» Ampacities for Mine Power Feeder Cables .....

5000~25,000V Copper			
Conductor Size	Ampacities		
(AWG or kcmil)	5000 & 8000V	15000V	25000V
6	93	—	—
4	122	125	—
2	159	164	—
1	184	187	189
1/0	211	215	216
2/0	243	246	247
3/0	279	283	284
4/0	321	325	325
250	355	359	359
300	398	401	401
350	435	438	438
400	470	473	473
500	536	536	536

Conductor Identification According to ICEA S-75-381

» Conductor Identification of Portable Power Cables

Power Conductors*					
Two-conductor cables	black	white			
Three-conductor cables type G, G-GC, SHD-GC, SHD-PCG, SHD-CGC and SHD	black	white	red		
Three-conductor cables type W	black	white	green		
Four-conductor cables type G	black	white	red	orange	
Four-conductor cables type W	black	white	red	green	
Five-conductor cables type G	black	white	red	orange	blue
Five-conductor cables type W	black	white	red	green	orange
Control and Ground Check Conductors					
Control conductors type PCG	black	white			
Ground check conductor type G-GC, G-CGC, SHD-GC, SHD-PCG and SHD-CGC	yellow				

*: If conducting nonmetallic tapes are used, identification may be by means of stripes or printing in a contrasting colour.

» Conductor Identification of Mine Power Feeder Cables

Power conductors	black	white	red
Ground check conductors	yellow		

Materials Requirements According to ICEA S-75-381

» Table 1 Power Conductor Insulation Requirements.....

The insulation for the power conductor shall meet the requirements given in the table below.

	Ethylene Propylene				Crosslinked Polyethylene	
	Type I		Type II			
	Up to 2 kV	Above 2 kV	Up to 2 kV	Above 2 kV	Up to 2 kV	Above 2 kV
1.INITIAL PHYSICAL PROPERTIES						
Tensile strength, minimum, psi	700	700	1200	1200	1800	1800
Tensile stress@100%						
Elongation, minimum, psi	-	-	500	500	-	-
Elongation at rupture, minimum,%	250	250	150	150	250	250
2.AIR OVEN AGING (After Conditioning@121℃ +/- 1℃ for 168 hours)						
Tensile strength & elongation minimum, percentage of unaged value	75	75	75	75	75	75
3.ACCELERATED WATER ABSORPTION						
Dielectric constant after 24 hours, maximum	6.0	4.0	6.0	4.0	6.0	3.5
Increase in capacitance maximum, percent						
1-14 days	5.0	3.5	5.0	3.5	3.0	3.0
7-14 days	3.0	1.5	3.0	1.5	1.5	1.5
*Stab. factor after 14 days or	1.0	1.0	1.0	1.0	1.0	1.0
*Alternate to Stability Factor (Stability Factor Difference) 1-14 days max.	0.5	0.5	0.5	0.5	0.5	0.5
4.INSULATION RESISTANCE						

	Ethylene Propylene				Crosslinked Polyethylene	
	Type I		Type II			
	Up to 2 kV	Above 2 kV	Up to 2 kV	Above 2 kV	Up to 2 kV	Above 2 kV
IR@15.6℃, minimum, Megohms-1000ft	10,000	20,000	10,000	20,000	10,000	20,000
5.ADDITIONAL REQUIREMENTS						
Power factor maximum, % after 24 hr	-	2.0	-	2.0	-	2.0
**Permittivity (SIC)	-	4.0	-	4.0	-	3.5
Hot creep (ICEA T-28-562) (After conditioning@150℃+/-2℃)					All Voltages	
					***Unfilled	***Filled
Elongation, maximum %	50	50	50	50	175	100
Set, maximum, %	5	5	5	5	10	5

* Only one of these two requirements needs to be satisfied, not both.

**Applies only to cables rated 5,001 volts and above.

***If this value is exceeded, the solvent extraction test may be performed and will serve as a referee method to determine compliance. Requirement shall be 30 percent maximum extractibles after 20 hours drying.

» Table 2 Ground Check Conductor & Control Conductor Insulation

Requirements .....

The insulation for the ground-check and control conductors shall be one of the types given in the table below and shall meet the requirements specified in it.

	Crosslinked					Thermoplastic	
	Ethylene Propylene		Crosslinked Polyethylene	Chlorinated Polyethylene	Chlorosulfonated Polyethylene	Thermoplastic Elastomer	Polypropylene
	Type I	Type II					
1.INITIAL PHYSICAL PROPERTIES (At Room Temperature)							
Tensile strength, minimum, psi	700	1200	1800	1500	1500	1500	3000
Tensile stress@100%							
Elongation, minimum, psi	-	500	-	-	-	-	2500
Elongation at rupture, minimum, percent	250	150	250	300	300	300	300
Set, maximum, percent	-	-		30	30		
2.AIR OVEN AGING REQUIREMENTS							
After conditioning@℃ +/- 1℃	121	121	121	121	121	121	100
Hours	168	168	168	168	168	168	48
Minimum percent retention of original value							
Tensile strength	75	75	75	85	85	75	75
Elongation	75	75	75	55	50	75	75

» Table 3 Extra-Heavy-Duty Crosslinked Jackets and Thermoplastic Polyurethane

The jacket for portable cables shall meet the appropriate requirements in Table 3 and 4

	Chlorinated Polyethylene (CPE)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)	Chlorosulfonated Polyethylene* (CSP/CSPE)	Thermoplastic Polyurethane (TPU)
1. PHYSICAL PROPERTIES					
Tensile strength, minimum, psi	2400	2400	2400	2400	3700
Tensile stress at 200 percent elongation, minimum, psi	700	700	700	700	800
Elongation at rupture, minimum, percent	300	300	300	300	400
Set, maximum, percent	30	20	30	30	N/A
Tear resistance, minimum, ppi	40	40	40	40	80
2.AGING REQUIREMENTS (After air oven test at 100℃ +/- 1℃ for 168 hours)					
Tensile strength, minimum, percentage of unaged value	70	50	50	70	50
Elongation at rupture, minimum, percentage of unaged value	55	50	50	60	75
3.AGING REQUIREMENTS (After oil immersion test at 121℃+/-1℃ for 18 hours)					
Tensile strength and elongation, minimum, percentage of unaged value	60	60	60	60	60
4.ELECTRICAL REQUIREMENTS					
Surface resistance,nonshielded cables minimum, megohms	100	100	100	100	N/A

*Also known as Chlorosulfonyl Polyethylene

» Table 4 Heavy-Duty Crosslinked Jackets .....

The jacket for portable cables shall meet the appropriate requirements in Table 3 and 4.

The jacket for mine power feeder cables shall be a crosslinked jacket meets the requirements of Table 4 or a thermoplastic jacket that meets the requirements of Table 5.

	Chlorinated Polyethylene (CPE)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)	Chlorosulfonated Polyethylene* (CSP/ CSPE)
1. PHYSICAL REQUIREMENTS				
Tensile strength, minimum, psi	1800	1800	1800	1800
Tensile stress at 200 percent elongation, minimum, psi	500	500	500	500
Elongation at Rupture, minimum, percent	300	300	300	300
Set, maximum, percent	30	20	30	30
2.AGING REQUIREMENTS (After air oven test at 100℃ +/- 1℃ for 168 hours)				
Tensile strength, minimum, percentage of unaged value	85	50	50	85
Elongation at rupture, minimum, percentage of unaged value	55	50	50	65
3.AGING REQUIREMENTS (After oil immersion test at 121℃+/-1℃ for 18 hours)				
Tensile strength and elongation, minimum, percentage of unaged value	60	60	60	60
4.ELECTRICAL REQUIREMENTS				
Surface resistance,nonshielded cables minimum, megohms	100	100	100	100

*Also known as Chlorosulfonyl Polyethylene

» Table 5 Thermoplastic Jacket Requirements

The jacket for mine power feeder cables shall be a crosslinked jacket meets the requirements of Table 4 or a thermoplastic jacket that meets the requirements of Table 5.

	Polyvinyl Chloride (PVC)	Chlorinated Thermoplastic Polyethylene (CM)	Thermoplastic Polyurethane (TPU)
1.INITIAL PHYSICAL PROPERTIES			
Tensile strength, minimum, psi	1500	1400	3700
Elongation at rupture, minimum, percent	100	150	400
2.AIR OVEN AGING REQUIREMENTS			
After conditioning@℃ +/- 1℃	100	121	100
Hours	120	168	168
Tensile strength, minimum, percent of unaged value	85	85	50
Elongation, minimum, percent of unaged value	60	50	75
3.OIL IMMERSION			
After conditioning@℃ +/- 1℃	70	100	121
Hours	4	18	18
Tensile strength, minimum, percent of unaged value	80	60	60
Elongation, minimum, percent of unaged value	60	60	60
4.HEAT DISTORTION,121℃+/-1℃, maximum,percent	50	25	-

» Table 6 Heavy Duty Jackets Requirements (Type A).....

The jacket for portable arc-welding cables shall be a heavy-duty jacket meets the requirements of Table 6 or a medium-duty jacket that meets the requirements of Table 7.

	Natural Rubber (NR)	Styrene Butadiene Rubber (SBR)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)*	Chlorinated Polyethylene (CPE) ,Crosslinked	Ethylene Propylene Rubber (EPR)	Chloro-sulfonated Polyethylene (CSP/CSPE)
1.PHYSICAL REQUIREMENTS							
Tensile strength, minimum, psi	3500	1800	1800	1800	1800	1800	1800
Tensile strength, minimum, MPa	24.1	12.4	12.4	12.4	12.4	12.4	12.4
Tensile stress at 200 percent elongation, minimum, psi	500	-	500	500	500	500	500
Tensile stress at 200 percent elongation, minimum, MPa	3.45	-	3.45	3.45	3.45	3.45	3.45
Elongation at rupture, minimum, percent	500	300	300	300	300	250	300
Set, Maximum, percent	15	20	20	30	30	-	30
Tear, resistance, mimimum, pounds per inch	40	-	-	-	-	-	-
Tear, resistance, mimimum, kN/m	7.01	-	-	-	-	-	-
2.AGING REQUIREMENTS							
After air oven test at 100℃+/-1℃ for 168 hours							
Tensile strength, minimum, percent of unaged value	-	-	50	50	85	75	85
Elongation at rupture, minimum percentage of unaged value	-	-	50	50	55	75	65
After air oven test at 70℃+/-1℃ for 168 hours							
Tensile strength, minimum, psi	-	1600	-	-	-	-	-
Tensile strength, minimum, MPa	-	11.0	-	-	-	-	-
Elongation at rupture, minimum percentage	-	250	-	-	-	-	-

	Natural Rubber (NR)	Styrene Butadiene Rubber (SBR)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)*	Chlorinated Polyethylene (CPE) ,Crosslinked	Ethylene Propylene Rubber (EPR)	Chloro-sulfonated Polyethylene (CSP/CSPE)
After air pressure heat test at 127℃+/-1℃ for 20 hours							
Tensile strength and Elongation at rupture, minimum, percent of unaged value	-	-	-	50	-	-	-
After oxygen pressure test at 70℃+/-1℃ for 96 hours							
Tensile strength, minimum, psi	2500	1600	-	-	-	-	-
Tensile strength, minimum, MPa	17.2	11.0	-	-	-	-	-
Elongation at rupture, minimum percentage	400	250	-	-	-	-	-
After oxygen pressure test at 80℃+/-1℃ for 168 hours							
Tensile strength and Elongation at rupture, minimum, percent of unaged value	-	-	-	50	-	-	-
After oil immersion test at 121℃+/-1℃ for 18 hours							
Tensile strength and Elongation at rupture, minimum, percent of unaged value	-	-	60	60	60	-	60

*Suitable for a minimum temperature of minus 10℃ (plus 14℉)

» Table 7 Medium Duty Jackets Requirements (Type B).....

The jacket for portable arc-welding cables shall be a heavy-duty jacket meets the requirements of Table 6 or a medium-duty jacket that meets the requirements of Table 7.

	Styrene Butadiene Rubber (SBR)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)*	Chlorinated Polyethylene (CPE) ,Crosslinked	Ethylene Propylene Rubber (EPR)	Chloro-sulfonated Polyethylene (CSP/CSPE)
1.PHYSICAL REQUIREMENTS						
Tensile strength, minimum, psi	1200	1200	1500	1500	1200	1200
Tensile strength, minimum, MPa	8.27	8.27	10.3	10.3	8.27	8.27
Elongation at rupture, minimum, percent	250	250	250	300	150	250
Set, Maximum, percent	-	20	30	35	-	30
Tear, resistance, mimimum, pounds per inch						
Tear, resistance, mimimum, kN/m						
2.AGING REQUIREMENTS						
After air oven test at 100℃+/-1℃ for 168 hours						
Tensile strength, minimum, percent of unaged value	-	50	50	85	75	85
Elongation at rupture, minimum percentage of unaged value	-	50	50	55	75	65
After oxygen pressure test at 70℃+/-1℃ for 48 hours						
Tensile strength, minimum, psi	1000	-	-	-	-	-
Tensile strength, minimum, MPa	6.89	-	-	-	-	-
Elongation at rupture, minimum percentage	100	-	-	-	-	-
After oxygen pressure test at 80℃+/-1℃ for 168 hours						
Tensile strength and Elongation at rupture, minimum percent of unaged value	-	-	50	-	-	-

	Styrene Butadiene Rubber (SBR)	Neoprene (PCP)	Nitrile Butadiene (NBR)/ Polyvinyl Chloride (PVC)*	Chlorinated Polyethylene (CPE) ,Crosslinked	Ethylene Propylene Rubber (EPR)	Chloro-sulfonated Polyethylene (CSP/CSPE)
After air pressure heat test at 127℃+/-1℃ for 20 hours						
Tensile strength and Elongation at rupture, minimum, percent of unaged value	-	-	50	-	-	-
After oil immersion test at 121℃+/-1℃ for 18 hours						
Tensile strength and Elongation at rupture, minimum percent of unaged value	-	60	60	60	-	60

*Suitable for a minimum temperature of minus 10℃ (plus 14℉)

Inuslation & Jacket Material Characteristics Comparison Chart

1=Poor, 2=Fair, 3=Good, 4=Very Good, 5=Excellent

Chemical	Neoprene (PCP)	Chlorinated Sulfonated Polyethylene (CSP/CSPE)	Chlorinated Polyethylene (CPE)	Polyurethane (PU)	Ethylene Propylene (EPR)	Polyvinyl Chloride (PVC)
Acetic acid	1	2	2	2	1	1
Benzene	2	2	2	1	1	2
Bitumous tar	3	3	3	3-4	1	3
Bleach (NaCLO2)	4	4	4	2	5	4
Coke oven gas	4	4	4	4	4	4
Diesel oil	2	4	4	4	2	4
Ethylene glycol	4	4	4	2	5	3
Gasoline	3	3	3	5	2	2
Hydraulic oil	4	4	4	5	1	4
Hydrochloric acid (21%)	5	5	5	2	1	4
Hydrogen sulphide	5	4	5	1	5	4
Kerosene	3	3	3	4	2	2
Methanol	5	5	5	2	5	3
Methyl ethyl keton	3	3	3	3	5	1
Nitric acid (10%)	3	5	5	2	5	4
Phosphoric acid (60%)	4	5	5	3	5	5
Picric acid (10%)	5	5	5	2	4	5
Potassium chloride	5	5	5	5	5	5
Sodium hydroxide (25%)	5	5	5	1	5	3
Sulphuric acid (50%)	5	5	5	1	5	4
Transformer oil	3-4	3	4	5	2	4
Trichlorethylene	1	1	1	1-2	1	1
Vegetable oils & fats	4	4	4	5	4	4
UV resistance	5	5	5	5	5	3
Ozone resistance	4	4-5	4-5	5	5	5
Water resistance	5	5	4	2	5	3
Tear & notch resistance	4-5	3	4	5	2-3	4
Low temp. flexibility	4-5	4	3	5	5	3
Abrasion resistance	4-5	4	3-4	5	3	4

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