Mining Cables
Your One Stop Supplier for Mining Cables

Mining Grade - Cable Types:
- Type W 2kV (Flat & Round)
- Type G 2kV (Flat & Round)
- Type G-GC 2kV (Flat & Round)
- Type SHD-GC 2, 5, 8,15, 25kV
- Type MP-GC 5, 8,15kV (EPR/CPE & XLP/PVC)
- Type DLO 2kV EPR/CPE UL RHW-2
- Type SOOW
- Welding cables (MSHA approved)
- Special constructions available upon request

Advanced Constructions:
Our Mining Grade Cables are constructed for durability and long life. Cable design features and compound formulations have a far greater impact on performance than the curing method.

These cables provide the performance you require!
- Thermoplastic Polyurethane (TPU) Jacket - Great Colors - Extremely Tough.
- Extra Heavy Duty CPE, Neoprene, & CSPE.
- Type MP-GC Cables are Triple Extruded for Enhanced Protection against Corona.
- Type SHD-GC & Type G-GC cables offer Integral filled construction improving Torsion resistance.
- Flat Mining cables offer Square and "D" shaped conductors for longer life.
- Type SOOW cables are constructed with rubber fillers to avoid moisture absorption.
- Industry leading approvals & acceptances: MSHA, UL, CSA, ICEA.

What can you expect from Priority Wire and Cable?
- Highest Quality Products
- Professional Service
- Cost Savings
- Multiple Inventory Locations
- On Time Delivery (same day shipment on stock items)
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWC-411</td>
<td>Two Conductor Flat Type W</td>
<td>1</td>
</tr>
<tr>
<td>PWC-414</td>
<td>Four Conductor Flat Type W</td>
<td>3</td>
</tr>
<tr>
<td>PWC-420</td>
<td>Two Conductor Flat Type G</td>
<td>5</td>
</tr>
<tr>
<td>PWC-422</td>
<td>Three Conductor Flat Type G-GC</td>
<td>7</td>
</tr>
<tr>
<td>PWC-431</td>
<td>Three Conductor Round Type W</td>
<td>9</td>
</tr>
<tr>
<td>PWC-432</td>
<td>Four Conductor Round Type W</td>
<td>11</td>
</tr>
<tr>
<td>PWC-442</td>
<td>Three Conductor Round Type G-GC</td>
<td>13</td>
</tr>
<tr>
<td>PWC-503</td>
<td>Three Conductor Type SHD-GC, 2,000 Volts</td>
<td>15</td>
</tr>
<tr>
<td>PWC-504</td>
<td>Type SHD-PCG Longwall Cables, 2,000 Volts</td>
<td>17</td>
</tr>
<tr>
<td>PWC-505</td>
<td>Three Conductor Type SHD-CGC, 2,000 Volts</td>
<td>19</td>
</tr>
<tr>
<td>PWC-510</td>
<td>Three Conductor Type SHG, 2,000 Volts</td>
<td>21</td>
</tr>
<tr>
<td>PWC-515</td>
<td>Three Conductor Type SHD-GC, 5,000 Volts</td>
<td>23</td>
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<tr>
<td>PWC-516</td>
<td>Type SHD-PCG Longwall Cables, 5,000 Volts</td>
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<td>PWC-517</td>
<td>Three Conductor Type SHD-GC, 8,000 Volts</td>
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</tr>
<tr>
<td>PWC-519</td>
<td>Three Conductor Type SHD-GC, 15,000 Volts</td>
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<td>PWC-525</td>
<td>Three Conductor Type SHD-GC, 25,000 Volts</td>
<td>31</td>
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<td>PWC-601</td>
<td>Three Conductor Type MP-GC EPR/CPE, 5,000 Volts</td>
<td>33</td>
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<td>PWC-602</td>
<td>Three Conductor Type MP-GC EPR/CPE, 8,000 Volts</td>
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<td>PWC-604</td>
<td>Three Conductor Type MP-GC EPR/CPE, 15,000 Volts</td>
<td>37</td>
</tr>
<tr>
<td>PWC-621</td>
<td>Three Conductor Type MP-GC XLP/PVC, 5,000 Volts</td>
<td>39</td>
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<td>PWC-622</td>
<td>Three Conductor Type MP-GC XLP/PVC, 8,000 Volts</td>
<td>41</td>
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<td>PWC-624</td>
<td>Three Conductor Type MP-GC XLP/PVC, 15,000 Volts</td>
<td>43</td>
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<tr>
<td>Ampacities Table</td>
<td></td>
<td>46</td>
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</tbody>
</table>

Important Notice:
Priority Wire & Cable, Inc. believes the information presented in this catalog to be reliable. All information enclosed is done so as a guide for product knowledge and selection. We can make no warranties as to the suitability of any product for any particular use and in no case shall we be held liable for any indirect or incidental damages that may arise from the sale of these products. All information is subject to change and Priority Wire & Cable, Inc. assumes no responsibility for revising this catalog to reflect such changes. The availability of specific products should be confirmed at the time of order and all specifications should be verified upon delivery.

Priority Wire & Cable has a zero return policy on special cut lengths.
Two Conductor
Flat Type W
600/2,000 volts

Applications:
For use on D.C. off-track mining equipment.
Especially designed for D.C. shuttle cars, drills,
cutting and loading machines. Recommended
maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the
Mine Safety and Health Administration and the
Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards
S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size of Conductor AWG</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Mils</th>
<th>Approx O.D. in. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>133 7x19</td>
<td>60</td>
<td>.51 x .84</td>
<td>340</td>
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</tr>
<tr>
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<td>133 7x19</td>
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<td>60</td>
<td>.73 x 1.24</td>
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<td>1</td>
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<td>80</td>
<td>.81 x 1.40</td>
<td>1070</td>
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<tr>
<td>1/0</td>
<td>259 7x37</td>
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<td>.93 x 1.51</td>
<td>1310</td>
<td>217</td>
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<tr>
<td>2/0</td>
<td>329 7x47</td>
<td>80</td>
<td>.99 x 1.63</td>
<td>1600</td>
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<td>80</td>
<td>1.10 x 1.89</td>
<td>2300</td>
<td>328</td>
</tr>
</tbody>
</table>

(1) Tolerances- Minor Dimension ± .030
   Major Dimension ± .040

(2) Ampacity- Based on 90°C conductor temperature.

Reel correction factors
For use with ampacities when one or more
layers of cable are wound on a reel.

<table>
<thead>
<tr>
<th>Number of Layers</th>
<th>Multiplying Correction Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>0.65</td>
</tr>
<tr>
<td>3</td>
<td>0.45</td>
</tr>
<tr>
<td>4</td>
<td>0.35</td>
</tr>
</tbody>
</table>

For other ratings under various conditions, see portable
power cable ampacities table Inside Back Cover
Two Conductor Flat Type W
SPECIFICATIONS

1. SCOPE  This specification describes 2 conductor flat twin type W portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended primarily for use on DC shuttle cars.

2. STANDARDS  
ICEA S-68-516/NEMA WC-8  
ICEA S-75-381/NEMA WC-58  
ASTM B-172  
ASTM B-33

3. CONDUCTORS  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 3-7 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION  Color coding of power conductors shall be black and white in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. REINFORCEMENT  Each cable shall have an open braid of synthetic yarn applied over the assembly for reinforcement and to control adhesion and movement between the insulated conductor and the outer jacket.

7. JACKET  A CPE jacket shall be extruded over the two parallel insulated conductors in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of Table 3-3 of ICEA S-75-381, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

8. OUTSIDE DIAMETER  Shall be in accordance with ICEA S-75-381 Table 3-7, and tolerance shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

9. SURFACE LEGEND  Shall be embossed in the jacket showing 600/2000V Twin (size) Type W MSHA. Additional information can be furnished on the surface legend to special order.

10. TESTS  Cable shall be tested in accordance with applicable ICEA requirements.
Four Conductor Flat Type W
600/2,000 volts

Applications:
For use on A.C. off-track mining equipment where bare grounding conductors are not required or desired. Especially designed for AC shuttle care service. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size of Conductor AWG</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Mils</th>
<th>Approx. O.D. in. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>133 7x19</td>
<td>60</td>
<td>.68 x 1.71</td>
<td>910</td>
<td>72</td>
</tr>
<tr>
<td>4</td>
<td>259 7x37</td>
<td>60</td>
<td>.76 x 1.91</td>
<td>1220</td>
<td>93</td>
</tr>
<tr>
<td>2</td>
<td>259 7x37</td>
<td>60</td>
<td>.82 x 2.25</td>
<td>1720</td>
<td>122</td>
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<td>1</td>
<td>259 7x37</td>
<td>60</td>
<td>.97 x 2.48</td>
<td>2240</td>
<td>143</td>
</tr>
</tbody>
</table>

(1) Tolerances- Minor Dimension ± .050
Major Dimension ± .080

(2) Ampacity- Based on 90°C conductor temperature.

For other ratings under various conditions, see portable power cable ampcapities table Inside Back Cover

Reel correction factors
For use with ampcapities when one or more layers of cable are wound on a reel.

<table>
<thead>
<tr>
<th>Number of Layers</th>
<th>Multiplying Correction Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>0.65</td>
</tr>
<tr>
<td>3</td>
<td>0.45</td>
</tr>
<tr>
<td>4</td>
<td>0.35</td>
</tr>
</tbody>
</table>

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Four Conductor Flat Type W

SPECIFICATIONS

1. **SCOPE**  This specification describes 4 conductor flat type W portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended primarily for use on AC shuttle cars and roof bolters.

2. **STANDARDS**  
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-172
   - ASTM B-33

3. **CONDUCTORS**  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. **INSULATION**  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   
   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-14 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. **CIRCUIT IDENTIFICATION**  Color coding of power conductors shall be black, white, red and green in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. **REINFORCEMENT**  Each cable shall have an open braid of synthetic yarn applied over the assembly for reinforcement and to control adhesion and movement between the insulated conductor and the outer jacket.

7. **JACKET**  A CPE jacket shall be extruded over the four parallel insulated conductors in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

8. **OUTSIDE DIAMETER**  Shall be in accordance with Table 3-14 of ICEA standard S-75-381 and tolerances shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

9. **SURFACE LEGEND**  Shall be embossed in the jacket showing 600/2000V 4/C (size) Type W MSHA. Additional information can be furnished on the surface legend to special order.

10. **TESTS**  Cable shall be tested in accordance with applicable ICEA requirements.
Two Conductor Flat Type G
600/2,000 volts

Applications:
For use on D.C. off-track mining equipment where grounding is required. Especially designed for D.C. shuttle cars, cutting and loading machines. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of Conductor AWG</strong></td>
<td><strong>No. of Wires per Conductor</strong></td>
</tr>
<tr>
<td>6</td>
<td>133 7x19</td>
</tr>
<tr>
<td>4</td>
<td>259 7x37</td>
</tr>
<tr>
<td>2</td>
<td>259 7x37</td>
</tr>
<tr>
<td>1</td>
<td>259 7x37</td>
</tr>
<tr>
<td>1/0</td>
<td>259 7x37</td>
</tr>
<tr>
<td>2/0</td>
<td>329 7x47</td>
</tr>
<tr>
<td>4/0</td>
<td>532 19x28</td>
</tr>
</tbody>
</table>

(1) Tolerances- Minor Dimension ± 0.030
Major Dimension ± 0.040

(2) Ampacity- Based on 90°C conductor temperature.

For other ratings under various conditions, see portable power cable ampacities table Inside Back Cover

Reel correction factors
For use with ampacities when one or more layers of cable are wound on a reel.

<table>
<thead>
<tr>
<th>Number of Layers</th>
<th>Multiplying Correction Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>0.65</td>
</tr>
<tr>
<td>3</td>
<td>0.45</td>
</tr>
<tr>
<td>4</td>
<td>0.35</td>
</tr>
</tbody>
</table>

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Two Conductor Flat Type G
SPECIFICATIONS

1. SCOPE This specification describes 2 conductor flat twin type G Portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended primarily for use on DC shuttle cars, cutting machines, loading machines, roof bolters and drills.

2. STANDARD
   ICEA S-68-516/NEMA WC-8
   ICEA S-75-381/NEMA WC-58
   ASTM B-172
   ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-7 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION Color coding of power conductors shall be black and white in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. GROUNDING CONDUCTOR The grounding conductor shall be annealed tin coated copper of not less than the size listed in Table 3-7 of ICEA S-75-381 for the corresponding power conductor sizes. The grounding conductor shall be covered with a green TPE.

7. ASSEMBLY Two insulated conductors are laid parallel with the grounding conductor between them.

8. REINFORCEMENT Each cable shall have an open braid of synthetic yarn applied over the assembly for reinforcement and to control adhesion and movement between the insulated conductor and the outer jacket.

9. JACKET A CPE jacket shall be extruded over the two parallel insulated conductors and ground in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

10. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-7, and tolerances shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

11. SURFACE LEGEND Shall be embossed in the jacket showing 600/2000V Twin (size) Type G MSHA. Additional information can be furnished on the surface legend to special order.

12. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Flat Type G-GC
600/2,000 Volts

Applications:
For use on A.C. off-track mining equipment. Especially designed for A.C. shuttle car service. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Approx. O.D. in. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40° C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Conductor AWG</td>
<td>No. of Wires per Conductor</td>
<td>Insulation Thickness Mils</td>
<td>Size AWG</td>
<td>No. of Wires</td>
</tr>
<tr>
<td>6</td>
<td>133 7x19</td>
<td>60</td>
<td>8</td>
<td>270 6x45</td>
</tr>
<tr>
<td>4</td>
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</tr>
</tbody>
</table>

(1) Tolerances- Minor Dimension ± .050
Major Dimension ± .080

(2) Ampacity- Based on 90°C conductor temperature.

For other ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

<table>
<thead>
<tr>
<th>Number of Layers</th>
<th>Multiplying Correction Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>0.65</td>
</tr>
<tr>
<td>3</td>
<td>0.45</td>
</tr>
<tr>
<td>4</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Reel correction factors
For use with ampacities when one or more layers of cable are wound on a reel.
Three Conductor Flat Type G-GC
SPECIFICATIONS

1. SCOPE  This specification describes 3 conductor flat type G-GC portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended for use on off track equipment such as continuous miners, AC shuttle cars, cutting machines, loading machines and drills.

2. STANDARD
   ICEA S-68-516/NEMA WC-8   ICEA S-75-381/NEMA WC-58   ASTM B-172   ASTM B-33

3. CONDUCTORS  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION  The insulation shall be a ethylene-propylene rubber (EPR) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-13 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION  Color coding of power conductors shall be black, white and red in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. GROUNDING CONDUCTOR  The grounding conductor shall be annealed tin coated copper of not less than the size shown in Table 3-13 of ICEA S-75-381 for the corresponding power conductor sizes. The grounding conductor shall be covered with extruded green TPE. The stranding shall be uni-directional lay.

7. GROUND CHECK CONDUCTOR  The ground check conductor shall be 8AWG as given in Table 3-13 of ICEA S-75-381 with 270 strands of tinned annealed copper. The conductor shall have a yellow TPE insulation. The stranding shall be uni-directional lay.

8. ASSEMBLY  Three power conductors shall be laid parallel with the ground check conductor between the black and white power conductors and grounding conductor between the white and red power conductors.

9. REINFORCEMENT  Each cable shall have an open braid of synthetic yarn applied over the assembly for reinforcement to control adhesion and movement between the insulated conductor and the outer jacket.

10. JACKET  A CPE jacket shall be extruded over the parallel assembly of conductors in accordance with Par. 3.21 of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER  Shall be in accordance with ICEA S-75-381 Table 3-13 and tolerances shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

12. SURFACE LEGEND  Shall be embossed in the jacket showing 600/2000V 3/C Type G-GC MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Round Type W
600/2,000 Volts

Applications:
Especially suitable for non-automatic reeling, or as a "drag" cable where bare grounding conductors are not required or desired. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size of Conductor AWG or MCM</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Mil</th>
<th>Approx. O.D. In.</th>
<th>Diameter Tolerance Plus &amp; Minus in.</th>
<th>Approx Weight lbs. per 1,000 ft.</th>
<th>Ampacity (1) 40°C C Ambient Temp.</th>
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<tr>
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<td>287</td>
</tr>
</tbody>
</table>

(1) Ampacity- Based on 90°C conductor temperature. For other ratings under various conditions, see portable power cable ampacities table Inside Back Cover

(2) Jacket- Black is standard. Colored jackets available upon request. Thermoplastic polyurethane (TPU) also available.

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Three Conductor Round Type W
SPECIFICATIONS

1. **SCOPE**  This specification describes 3 conductor round type W portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended for use on DC equipment where bare grounding conductors are not required or desired, such as shuttle cars, drills, pumps, etc.

2. **STANDARDS**  
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-172
   - ASTM B-33

3. **CONDUCTORS**  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. **INSULATION**  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-9 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. **CIRCUIT IDENTIFICATION**  Color coding of power conductors shall be black, white and green in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. **ASSEMBLY**  Three power conductors shall be cabled together with a left-handed lay meeting the requirements of Table 3-5 of ICEA S-75-381. A cured rubber filler is placed in each valley, with a synthetic binder overall.

7. **JACKET**  A reinforced CPE jacket providing an integral fill shall be extruded over the assembly in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistant to heat, moisture and the oils commonly used in mining applications.

8. **OUTSIDE DIAMETER**  Shall be in accordance with ICEA S-75-381 Table 3-9, and tolerances shall meet the requirements of ICEA Par. 3.22.2.

9. **SURFACE LEGEND**  Shall be embossed in the jacket showing 600/2000V 3/C (size) Type W MSHA. Additional information can be furnished on the surface legend to special order.

10. **TESTS**  Cable shall be tested in accordance with applicable ICEA requirements.
Four Conductor Round Type W
600/2,000 Volts

Applications:
Especially suitable for non-automatic reeling, or as a "drag" cable where bare grounding conductors are not required or desired. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size of Conductor AWG</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Mils</th>
<th>Approx. O.D. in.</th>
<th>Diameter Tolerance Plus &amp; Minus Inches</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (1) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
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<td>2/0</td>
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<td>1.93</td>
<td>0.04</td>
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<td>2.26</td>
<td>0.05</td>
<td>4650</td>
<td>255</td>
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</tbody>
</table>

(1) Ampacity- Based on 90°C conductor temperature. For other ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

Note: When 4/C cable is used on A.C. and one for the insulated conductors is used as a grounding conductor, the ampacities for 3/C Type W may be used.

(2) Jacket- Black is standard. Colored jackets available upon request. Thermoplastic polyurethane (TPU) also available.

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Four Conductor Round Type W
SPECIFICATIONS

1. **SCOPE**
   This specification describes 4 conductor round type W portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended for use on AC equipment where bare grounding conductors are not required or desired, such as shuttle cars, drills, pumps, etc.

2. **STANDARDS**
   ICEA S-68-516/ NEMA WC-8
   ICEA S-75-381/ NEMA WC-58
   ASTM B-172
   ASTM B-33

3. **CONDUCTORS**
   Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. **INSULATION**
   The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-10 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. **CIRCUIT IDENTIFICATION**
   Color coding of power conductors shall be black, white, red and green in accordance with Par. 3.18.1 of ICEA S-75-381. Stock cables shall have colored insulation.

6. **ASSEMBLY**
   Four power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. A cured rubber filler is placed in each valley with a synthetic binder overall.

7. **JACKET**
   A reinforced CPE jacket providing an integral fill shall be extruded over the assembly in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

8. **OUTSIDE DIAMETER**
   Shall be in accordance with ICEA S-75-381 Table 3-10 and tolerances shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

9. **SURFACE LEGEND**
   Shall be embossed in the jacket showing 600/2000V 4/C (size) Type W MSHA. Additional information can be furnished on the surface legend to special order.

10. **TESTS**
    Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Round Type G-GC
600/2,000 Volts

Applications:
Especially suitable for use with mobile mining
equipment such as continuous miners, drills, cutters,
loading machines, and AC shuttle cars. The type G-GC
is for applications where grounding conductors and a
ground check conductor are required. Recommended
maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by
the Mine Safety and Health Administration and the
Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards
S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stranding</td>
<td>Insulation Thickness Mils</td>
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<td>60</td>
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<td>60</td>
</tr>
<tr>
<td>1</td>
<td>259 7x37</td>
<td>80</td>
</tr>
<tr>
<td>1/0</td>
<td>266 19x14</td>
<td>80</td>
</tr>
<tr>
<td>2/0</td>
<td>342 19x18</td>
<td>80</td>
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<tr>
<td>4/0</td>
<td>532 19x28</td>
<td>80</td>
</tr>
<tr>
<td>250</td>
<td>627 19x33</td>
<td>95</td>
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<td>350</td>
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<td>95</td>
</tr>
<tr>
<td>500</td>
<td>1221 37x33</td>
<td>95</td>
</tr>
</tbody>
</table>

(1) Ground Check- 10 AWG (minimum 49 strand
7x7) ground check conductor on 8 AWG through 2
AWG cable.

8 AWG (minimum 133 strand 7x19) ground check
conductor on 1 AWG through 4/0 AWG cable.

6 AWG (minimum 133 strand 7x19) ground check
conductor on 250 MCM and larger cable.

(2) Ampacity- Based on 90°C conductor temperature.
For other ampacity ratings under various conditions,
see portable power cable ampacities table Inside
Back Cover.

(3) Jacket- Black is standard. Colored jackets
available upon request. Thermoplastic polyurethane
(TPU) also available.
Three Conductor Round Type G-GC
SPECIFICATIONS

1. SCOPE This specification describes 3 conductor round type G-GC portable power cable with ethylene-propylene rubber insulation for use on circuits not exceeding 2000 volts at a maximum continuous conductor temperature of 90°C. These cables are intended for use on AC off track equipment such as continuous miners, shuttle cars, cutting machines, loading machines and drills, as well as conveyors and pumps.

2. STANDARDS ICEA S-68-516/NEMA WC-8 ICEA S-75-381/NEMA WC-58 ASTM B-172 ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 3-12 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION Color coding of power conductors shall be black, white and red in accordance with Par. 7.2.15.1 of ICEA. Stock cables shall have colored insulation.

6. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-12 of ICEA S-75-381 for the corresponding power conductor sizes. Each grounding conductor shall be covered with a green Mylar tape.

7. GROUND CHECK CONDUCTOR The ground check conductor shall be as given in Table 3-12 of ICEA S-75-381 for the corresponding power conductor sizes. A minimum of 49 strands of annealed copper shall be used. The conductor shall have a yellow TPE insulation.

8. ASSEMBLY CORE Sizes 4/0AWG and smaller: Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381, the ground check conductor shall be laid in the valley between the black and white power conductors, a tinned copper grounding conductor in each of the other two valleys and a synthetic reinforcing binder overall. This assembly will provide integral filling when the jacket is applied. Sizes 250MCM and larger: Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381, the ground check conductor shall be laid in the valley between the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core, synthetic binder and a single faced rubber filled binder tape applied overall.

9. JACKET A CPE jacket shall be extruded over the assembly in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

10. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-12, and tolerances shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

11. SURFACE LEGEND Shall be embossed in the jacket showing 600/2000V 3/C (size) Type G-GC MSHA. Additional information can be furnished on the surface legend to special order.

12. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type SHD-GC
2,000 Volts

Applications:
Heavy duty portable power cable for use in circuits not exceeding 2,000 volts. Equipment such as longwall miners, continuous miners, loaders, drills, conveyors, pumps, and mobile equipment requiring grounding conductors, a ground check conductor, and metallic shielding overall. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating acceptance as flame resistant by the Pennsylvania Department of Environmental Resources and the Mine Safety and Health Administration.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
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<td>259</td>
</tr>
<tr>
<td>1/0</td>
<td>266</td>
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<tr>
<td>2/0</td>
<td>342</td>
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<tr>
<td>4/0</td>
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<tr>
<td>250</td>
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<td>350</td>
<td>888</td>
</tr>
<tr>
<td>500</td>
<td>1221</td>
</tr>
</tbody>
</table>

(1) Ground Check- 10 AWG (minimum 49 strand 7x7) ground check conductor on 6 AWG through 4 AWG cable.

8 AWG (minimum 133 strand 7x19) ground check conductor on 2 AWG through 4/0 AWG cable.

6 AWG (minimum 133 strand 7x19) ground check conductor on 250 MCM and larger cable.

Conductors
Flexible tinned copper

Separator Tape

Insulation
90°C Ethylene-Propylene rubber (EPR)

Tape colored rubber filled

Insulation Shielding
Tinned copper and color coded nylon braid

Ground Check Conductor
Flexible tinned copper with yellow insulation (1)

Ground Wires
Flexible tinned copper

Jacket
Reinforced CPE with permanent surface marking (2).

(2) Jacket- Black is standard. Colored jackets available upon request. Thermoplastic polyurethane (TPU) also available.

(3) Diameters- Subject to plus or minus 3% tolerance.

(4) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table inside Back Cover

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Three Conductor Type SHD-GC
SPECIFICATIONS

1. SCOPE This specification describes 3 conductor round type SHD-GC, shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. These cables are intended for use on longwall mining equipment, continuous miners, cutting machines, loading machines and drills, as well as conveyors and pumps.

2. STANDARDS
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-172
   - ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation. The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION AND SHIELDING The shielding system shall consist of a tinned copper/nylon braid applied over a lapped non-conducting bedding tape on each conductor. Both the tape, and the nylon in the shielding braid, are colored black, white, and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.1 can be furnished to order.

6. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-24 of ICEA S-75-381 for the corresponding power conductor sizes.

7. GROUND CHECK CONDUCTOR The ground check conductor shall be as given in Table 3-21 of ICEA S-75-381 for the corresponding power conductor size except that we shall use 6AWG in lieu of 8AWG minimum on sizes 250 MCM and larger. A minimum of 49 strands of annealed copper shall be used. The conductor shall have a yellow polypropylene insulation.

8. ASSEMBLY CORE Sizes 4/0AWG and smaller: Three conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381, the ground check conductor shall be laid in the valley between the black and white power conductors, a bare tinned copper grounding conductor in each of the other two valleys and a synthetic reinforcing binder overall. This assembly will provide integral filling when the jacket is applied. Size 250MCM and larger: Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a bare tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core, synthetic binder and a single faced rubber filled binder tape applied overall, so that it will adhere to the underside of the outer jacket.

9. JACKET A reinforced CPE jacket shall be extruded over the assembly in accordance with Par. 3.21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE, or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

10. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-21. (Note ICEA S-75-381 Par. 3.22.2 allows ±5% tolerance.)

11. Surface Legend Shall be embossed in the jacket showing 2000V 3/C (size) Type SHD-GC MSHA. Additional information can be furnished on the surface legend to special order.

12. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Type SHD-PCG
Longwall Cables
2,000 Volts

Applications:
Heavy duty portable power cable designed for use to power longwall shearsers, where three shielded power conductors, three unshielded control conductors, and a grounding conductor are required. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Control Conductors</th>
<th>Nominal O.D. in. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Conductor AWG (3)</td>
<td>No. of Wires per Conductor</td>
<td>Size AWG</td>
<td>No. of Wires</td>
<td>Size AWG</td>
<td>No. of Wires per Conductor</td>
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<tr>
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<td>342</td>
<td>19x18</td>
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<td>246</td>
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</tr>
<tr>
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<td>19x28</td>
<td>1/0</td>
<td>426</td>
<td>6x71</td>
</tr>
</tbody>
</table>

(1) Diameters- Subject to plus or minus 3% tolerance

(2) Ampacity- Based on 90°C conductor temperature. For other ratings under various conditions, see portable power cable ampcapities table inside back cover.

(3) Other sizes available.

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Type SHD-PCG Longwall Cables
SPECIFICATIONS

1. SCOPE This specification describes a type SHD-PCG longwall cable containing three shielded power conductors, a three conductor nonshielded control group and one central grounding conductor. It is intended for use on longwall mining equipment at a maximum continuous conductor temperature of 90°C.

2. STANDARDS
ICEA S-68-516/NEMA WC-8  ICEA S-75-381/NEMA WC-58  ASTM B-172  ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the power conductors shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION AND SHIELDING The power conductor shielding system shall consist of a tinned copper/nylon braid applied over a lapped non-conducting bedding tape on each conductor. Both the tape, and the nylon in the shielding braid, are colored black, white, and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2.

6. GROUNDING CONDUCTOR The grounding conductor shall be annealed tin coated copper of not less than the size shown in Table 3-17 of ICEA S-75-381 for the corresponding power conductor sizes.

7. CONTROL GROUP The control group shall consist of 3 flexible 133 wire 7 X 19 strand tinned copper conductors, with .045" ethylene propylene rubber insulation, color coded black, white and red. The 3 insulated control conductors shall be cabled, and overall, a thermosetting integral fill jacket to a diameter compatible with the shielded power conductors.

8. ASSEMBLY CORE Three shielded power conductors and one 3 conductor control group shall be cabled around a single grounding conductor, with the control group between the red and black shielded power conductors and a synthetic binder to hold the core assembly together.

9. JACKET A reinforced two layer thermosetting jacket providing an integral fill shall be extruded over the assembly in accordance with Par. 3.21 &Table 3-23 of ICEA-S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3 and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

10. OUTSIDE DIAMETER Shall be in accordance with the dimensions shown on the front of this sheet. (Note ICEA S-75-381 Par.3.22.2 allows +5% tolerance.)

11. SURFACE LEGEND Shall be embossed in the jacket showing 2 KV (size) Type SHD-PCG Longwall MSHA. Additional information can be furnished on the surface legend to special order.

12. TESTS Cable shall be tested in accordance with applicable ICEA requirements.

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Three Conductor Type SHD-CGC
2,000 Volts

Applications:
Heavy duty portable power cable for use in circuits not exceeding 2,000 volts. Equipment such as longwall miners, continuous miners, loaders, drills, conveyors, pumps, and other mobile equipment requiring grounding conductors, a ground check conductor, and metallic shielding overall. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating acceptance as flame resistant by the Pennsylvania Department of Environmental Resources and the Federal Mine Safety and Health Administration.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors Stranding</th>
<th>Insulation Thickness Milis</th>
<th>Grounding Conductor</th>
<th>Jacket Thickness Milis</th>
<th>Nominal Diameter In. (3)</th>
<th>Approx. Weight lbs. per 1000 ft.</th>
<th>Ampacity (4) 40° C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/0</td>
<td>342 19x18</td>
<td>80</td>
<td>5 133 7x19</td>
<td>205</td>
<td>2.09</td>
<td>3400</td>
<td>243</td>
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<tr>
<td>4/0</td>
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<td>3 259 7x37</td>
<td>220</td>
<td>2.36</td>
<td>4860</td>
<td>321</td>
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<tr>
<td>350</td>
<td>888 37x24</td>
<td>95</td>
<td>1 259 7x37</td>
<td>250</td>
<td>2.81</td>
<td>7400</td>
<td>435</td>
</tr>
</tbody>
</table>

(1) Ground Check- 16 AWG tinned copper conductor designed to withstand extreme flexing and be extensible insulated with yellow polypropylene.

(2) Jacket- Black is standard. Colored jackets are available on request. Thermoplastic polyurethane (TPU) also available.

(3) Diameters- Subject to plus or minus 3% tolerance.

(4) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table inside back cover.
Three Conductor Type SHD-CGC

SPECIFICATIONS

1. SCOPE This specification describes 3 conductor round type SHD-CGC shielded power cable with 3 ethylene-propylene rubber insulated power conductors for use at a maximum continuous conductor temperature of 90°C, 3 grounding conductors and 1 center ground check conductor. These cables are intended for use on longwall mining equipment, continuous miners, cutting machines, loading machines, conveyors, etc.

2. STANDARDS
   ICEA S-68-516/NEMA WC-8
   ICEA S-75-381/NEMA WC-58
   ASTM B-172
   ASTM B-33

3. CONDUCTORS An annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation. The average thickness of the insulation wall over the conductor shall be as specified in Table 3-22 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION AND SHIELDING
   The shielding system shall consist of a tinned copper/nylon braid applied over a lapped non-conducting bedding tape on each conductor. Both the tape, and the nylon in the shielding braid, are colored black, white, and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.3 can be furnished to order.

6. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-22 of ICEA S-75-381 for the corresponding power conductor sizes.

7. GROUND CHECK CONDUCTOR The center ground check conductor shall be 16AWG and consist of tinned copper strands laid around a nonmetallic core and designed to be extensible and withstand extreme flexing in accordance with Par. 3.12.2 of ICEA S-75-381. The conductor shall have yellow polypropylene insulation in accordance with Table 3-22 of ICEA S-75-381.

8. ASSEMBLY CORE Sizes 4/0AWG and smaller: Three conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381, the ground check conductor shall be laid in the center of the assembly with a bare tinned copper grounding conductor in each of the three valleys and a synthetic reinforcing binder overall. This assembly will provide integral filling when the jacket is applied.

   Sizes 250MCM and larger: Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381, the ground check conductor shall be laid in the center of the assembly with a bare tinned copper grounding conductor in each of the three valleys, cured rubber fillers as required to make an essentially round core, synthetic binder and a single faced rubber filled binder tape applied overall, so that it will adhere to the underside of the outer jacket.

9. JACKET A reinforced thermosetting jacket shall be extruded over the assembly in accordance with Table 3-22 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

10. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-22. (Note ICEA S-75-381 Par. 3.22.2 allows ±5% tolerance.)

11. SURFACE LEGEND Shall be embossed in the jacket showing 2000V 3/G (size) Type SHD-CGC MSHA. Additional information can be furnished on the surface legend to special order.

12. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Type SHG
2,000 Volts

Applications:
Heavy duty portable power cable for use in circuits not exceeding 2000 volts. Especially designed for use on continuous miners requiring grounding conductors and metallic shielding over each conductor. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating acceptance as flame resistant by the Pennsylvania Department of Environmental Resources and the Mine Safety and Health Administration.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Conductor AWG</td>
<td>Insulation</td>
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</table>

(1) Tolerances- Minor Dimension ± .050
Major Dimension ± .080

(2) Ampacity- based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampcalities table Inside Back Cover.
Three Conductor Type SHG
SPECIFICATIONS

1. SCOPE   This specification describes 3 conductor flat type SHG shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. This cable is intended primarily for use on continuous miners.

2. STANDARDS
ICEA S-68-516/NEMA WC-8       ICEA S-75-381/NEMA WC-58       ASTM B-172       ASTM B-33

3. CONDUCTORS   Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. INSULATION   The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

5. CIRCUIT IDENTIFICATION AND SHIELDING   The shielding system shall consist of a tinned copper/textile braid applied over a lapped color coded non-conducting bedding tape on each conductor. The tapes are colored black, white and red in accordance with ICEA S-75-381 Par. 3.18. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2.

6. GROUNDING CONDUCTORS   The grounding conductors shall be 3AWG (6X34) annealed tin coated copper shaped to approximately "0.135" x 0.580"" dimensions.

7. ASSEMBLY   Three shielded power conductors are laid parallel with a grounding conductor between the black and white power conductors and a second grounding conductor between the white and red power conductors.

8. JACKET   The area between all components filled with a semi-conductive thermosetting compound allowing approximately .020" bridgewall between each. Two open reverse wraps of synthetic reinforcement, and overall a .240" jacket of black extra heavy duty CPE are applied over the core. The jacket shall meet the requirements of ICEA S-75-381 Par. 3.2.1 and Table 3-3. The jacket has a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

9. OUTSIDE DIAMETER   Dimensions shall be 1.175"x2.990". Tolerance shall meet the requirements of ICEA S-75-381 Par. 3.22.2.

10. SURFACE LEGEND   Shall be embossed in the jacket showing "2KV 3/C 2/D Type SHG MSHA".

11. TESTS   Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Type SHD-GC
5,000 Volts

Applications:
Heavy duty high voltage portable power cable for use in
circuits not exceeding the rated voltage. These cables are
used for heavy mobile equipment such as drag
lines, shovels, dredges, drills, other off track equipment,
and for power feeders in underground mines.
Recommended maximum continuous conductor tem-
peratures is 90°C.

Cable carries "MSHA" marking indicating acceptance
as flame resistant by the Pennsylvania Department of
Environmental Resources and the Mine Safety and
Health Administration.

Mining Cable meets or exceeds ICEA Standards
S-68-516 & S-75-381.

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<th>Power Conductors</th>
<th>Grounding Conductor</th>
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<th>1560</th>
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<td>Minimum No. of</td>
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<td>Approx.</td>
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<td>Thickness</td>
<td>Wires per</td>
<td>Thickness</td>
<td>Diameter</td>
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<td>Milts</td>
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<td>lbs. per</td>
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<td>7x37</td>
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<td>532</td>
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</tr>
</tbody>
</table>

(1) Ground Check- 8 AWG (minimum 133 strand 7x19) ground check conductor on 6 AWG through 4/0 AWG cable.

6AWG (minimum 133 strand 7x19) ground check conductor on 250 MCM and larger cable.

2) Jacket- Black is standard. Colored jackets available upon request. Thermoplastic polyurethane (TPU) also available.

Conductors
Flexible tinned copper
Strand Shield
Semi-conducting layer
Insulation
90°C Ethylene-Propylene rubber (EPR)
Insulation Shielding
Color coded non-conducting tape under tinned copper and color coded nylon braid.
Ground Check Conductor
Flexible tinned copper with yellow insulation (1)
Ground Wires
Flexible tinned copper
Jacket
Reinforced CPE with permanent surface marking (2).

(3) Diameters- Subject to plus 8% minus 5% tolerance.

(4) Alternate strand constructions for power conductors: 1/0 AWG through 4/0 AWG 259 wire 37x7 4/0 AWG through 500 MCM 427 wire 61x7

(5) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover

1-800-945-5542
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Three Conductor Type SHD-GC

SPECIFICATIONS

1. **SCOPE** This specification describes 3 conductor round type SHD-GC shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. These cables are intended for use as power feeders on AC surface equipment such as drag lines, shovels, drills and in underground mines as portable power feeders, power to boring machines, longwall mining equipment, etc.

2. **STANDARDS**
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-172
   - ASTM B-33

3. **CONDUCTORS** Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. **CONDUCTOR SHIELDING** Conducting layer over the conductor meeting the requirements of Par 3.14 of ICEA S-75-381.

5. **INSULATION** The insulation shall be a ethylene-propylene rubber (EPR) extruded insulation. The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. **CIRCUIT IDENTIFICATION AND SHIELDING** The shielding system shall consist of a tinned copper/nylon braid applied over a lapped color-coded non-conducting tape on each conductor. The nylon in the shielding braid, is colored black, white, and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.1 can be furnished to order.

7. **GROUNDING CONDUCTORS** The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-24 of ICEA S-75-381 for the corresponding power conductor sizes.

8. **GROUND CHECK CONDUCTOR** The ground check conductor shall be as given in Table 3-21 of ICEA S-75-381 for the corresponding power conductor sizes, except that we shall use #5AWG in lieu of 8AWG minimum on 250MCM and larger. A minimum of 133 strands of annealed copper shall be used. The conductor shall have a yellow polypropylene insulation. Larger than standard size ground check conductors can be furnished when desired and/or necessary due to operating conditions.

9. **ASSEMBLY CORE** Standard Stock construction. Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a bare tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core. A synthetic binder and a single faced rubber filled binder tape will be applied overall, and that it will adhere to the underside of the outer jacket. When used on longwall shearsers the following core assembly is recommended: Sizes 4/0AWG and smaller. Three conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors, a bare tinned copper grounding conductor in each of the other two valleys and a synthetic binder overall. Filling will be integral with the first layer of the jacket with this construction.

10. **JACKET** A reinforced thermosetting jacket shall be extruded over the assembly in accordance with Table 3-21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE black or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Table 3-3 and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. **OUTSIDE DIAMETER** Shall be in accordance with ICEA S-75-381 Table 3-21, and tolerance in accordance with ICEA S-75-381 Par. 3.22.2.

12. **SURFACE LEGEND** Shall be embossed in the jacket showing 5KV 3/C (size) Type SHD-GC MSHA. Additional information can be furnished on the surface legend to special order.

13. **TESTS** Cable shall be tested in accordance with applicable ICEA requirements.

1-800-945-5542
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Type SHD-PCG Longwall Cables
5,000 Volts

Applications:
Heavy duty portable power cable designed for use to
power longwall shearer, where three shielded power
conductors, three unshielded control conductors, and a
grounding conductor are required. Recommended max-
imum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the
Mine Safety and Health Administration and the
Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-
516 & S-75-381.

Conductors
Flexible tinned copper
Strand Shield
Semi-conducting layer
Insulation
90°C Ethylene-Propylene
rubber (EPR)
Ground Wire
Flexible tinned copper
Control Group 3 Conductors
Flexible tinned copper,
ethylene propylene rubber insu-
lation color coded black, white,
red and overall a
thermosetting jacket.
Insulation Shielding
Color coded non-conducting
tape under tinned copper and
color coded nylon braid.
Jacket
Reinforced CPE with
permanent surface marking.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Control Conductors</th>
<th>Nominal O.D. in. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Conductor AWG</td>
<td>No. of Wires per Conductor</td>
<td>Size AWG</td>
<td>No. of Wires</td>
<td>Size AWG</td>
<td>No. of Wires per Conductor</td>
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<tr>
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</table>

(1) Diameters- Subject to plus or minus 3% tolerance

(2) Ampacity- Based on 90°C conductor temperature.
For other ratings under various conditions, see portable power
cable ampacities table Inside Back Cover.
Type SHD-PCG Longwall Cables
SPECIFICATIONS

1. **SCOPE**  This specification describes a type SHD-PCG longwall cable containing three shielded power conductors, a three conductor nonshielded control group and one central grounding conductor. It is intended for use on longwall mining equipment at a maximum continuous conductor temperature of 90°C.

2. **STANDARDS**
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-172
   - ASTM B-33

3. **CONDUCTORS**  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. **CONDUCTOR SHIELDING**  Extruded semi-conducting thermoset material.

5. **INSULATION**  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   
   The average thickness of the insulation wall over the power conductors shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. **CIRCUIT IDENTIFICATION AND SHIELDING**  The shielding system shall consist of a tinned copper/nylon braid applied over a lapped color-coded non-conducting tape on each conductor. The nylon in the shielding braid is colored black, white and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2.

7. **GROUNDING CONDUCTOR**  The grounding conductor shall be annealed tin coated copper of not less than the size shown in Table 7.2-12 of ICEA for the corresponding power conductor sizes.

8. **CONTROL GROUP**  The control group shall consist of 3 flexible 133 wire 7x19 strand tinned copper conductors, with .045" ethylene propylene rubber insulation, color coded black, white and red. The 3 insulated control conductors shall be cabled, and overall, a thermosetting integral fill jacket to a diameter compatible with the shielded power conductors.

9. **ASSEMBLY CORE**  Three shielded power conductors and one 3 conductor control group shall be cabled around a single grounding conductor with the control group between the red and black shielded power conductors and a synthetic binder to hold the core assembly together.

10. **JACKET**  A reinforced two layer thermosetting jacket providing an integral fill shall be extruded over the assembly in accordance with Table 3-23 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Par. 3.21 and Table 3-3 and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sun light and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. **OUTSIDE DIAMETER**  Shall be in accordance with the dimensions shown on the front of this sheet. (Note ICEA S-75-381 Par. 3.22.2 allows +8% -5% tolerance.)

12. **SURFACE LEGEND**  Shall be embossed in the jacket showing 5KV (size) Type SHD-PCG Longwall MSHA.
   
   Additional information can be furnished on the surface legend to special order.

13. **TESTS**  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type SHD-GC
8,000 Volts

Applications:
Heavy duty high voltage portable power cable for use in circuits not exceeding the rated voltage. These cables are used for heavy mobile equipment such as drag lines, shovels, dredges, drills, other off-track equipment, and for power feeders in underground mines. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>No. of Wires per Conductor (4)</th>
<th>Insulation Thickness Mils</th>
<th>Grounding Conductor</th>
<th>Minimum No. of Wires per Conductor</th>
<th>Jacket Thickness Mils</th>
<th>Nominal Diameter In. (3)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (5) 40° C Ambient Temp.</th>
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</thead>
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<td>150</td>
<td>4/0</td>
<td>532 19x28</td>
<td>295</td>
<td>3.56</td>
<td>10700</td>
<td>536</td>
</tr>
</tbody>
</table>

(1) Ground Check - 8 AWG (minimum 133 strand 7x19) ground check conductor on 4 AWG through 4/0 AWG cable. 6 AWG (minimum 133 strand 7x19) ground check conductor on 250 MCM and larger cable.
(2) Jacket - Black is standard. Colored jackets available on request. Thermoplastic polyurethane (TPU) also available.
(3) Diameters - Subject to plus 8% minus 5% tolerance.
(4) Alternate strand constructions for power conductors:
   1/0 AWG through 4/0 AWG 259 wire 37x7
   4/0 AWG through 500 MCM 427 wire 61x7
(5) Ampacity - Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table inside back cover.

1-800-945-5542
Three Conductor Type SHD-GC
SPECIFICATIONS

1. SCOPE This specification describes 3 conductor round type SHD-GC shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. These cables are intended for use as power feeders on AC surface equipment such as drag lines, shovels, drills and in underground mines as portable power feeders.

2. STANDARDS
ICEA S-68-516/NEMA W6-56
ICEA S-75-381/NEMA WC-58
ASTM B-172
ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. CONDUCTOR SHIELDING Semi-conducting layer over the conductor, meeting requirements of Par. 3.14 of ICEA S-75-381.

5. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. CIRCUIT IDENTIFICATION AND SHIELDING The shielding system shall consist of a tinned copper/nylon braid applied over a lapped semi-conducting tape on each conductor. The nylon in the shielding braid, is colored black, white, and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.1. can be furnished to order.

7. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-24 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR The ground check conductor shall be as given in Table 3-21 of ICEA S-75-381 for the corresponding power conductor sizes except that we shall use 6 AWG in lieu of 8 AWG minimum on 250 MCM and larger. A minimum of 133 strands of annealed copper shall be used. The conductor shall have yellow polypropylene insulation. Larger than standard size ground check conductors can be furnished when desired and/or necessary due to operating conditions.

9. ASSEMBLY CORE Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core. A synthetic binder and a single faced rubber filled binder tape will be applied overall, so that it will adhere to the underside of the outer jacket.

10. JACKET A reinforced thermosetting jacket shall be extruded over the assembly in accordance with Table 3-21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-21, and tolerance in accordance with ICEA S-75-381 Par. 3.22.2.

12. SURFACE LEGEND Shall be embossed in the jacket showing 8KV 3/C (size) Type SHD-GC MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS
Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type SHD-GC
15,000 Volts

Applications:
Heavy duty high voltage portable power cable for use in circuits not exceeding the rated voltage. These cables are used for heavy mobile equipment such as drag lines, shovels, dredges, drills, other off-track equipment, and for power feeders in underground mines. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size AWG/MCM</td>
<td>No. of Wires per Conductor</td>
</tr>
<tr>
<td>2</td>
<td>259  7X37</td>
</tr>
<tr>
<td>1</td>
<td>259  7X37</td>
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<tr>
<td>1/0</td>
<td>266  19X14</td>
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<tr>
<td>2/0</td>
<td>342  19X18</td>
</tr>
<tr>
<td>4/0</td>
<td>532  19X28</td>
</tr>
</tbody>
</table>

(1) Jacket- Black is standard. Colored jackets available on request. Thermoplastic polyurethane (TPU) also available.

(2) Diameters- Subject to plus 8% minus 5% tolerance.

(3) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table inside back cover.

(4) Alternate strand constructions for power conductors:
1/0 AWG through 4/0 AWG 259 wire 37x7
4/0 AWG 427 wire 61x7
Three Conductor Type SHD-GC
SPECIFICATIONS

1. SCOPE This specification describes 3 conductor round type SHD-GC shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. These cables are intended for use as power feeders on AC surface equipment such as drag lines, shovels, drills and in underground mines as portable power feeders.

2. STANDARDS
ICEA S-68-516/NEMA WC-8
ICEA S-75-381/NEMA WC-58
ASTM B-172
ASTM B-33

3. CONDUCTORS Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. CONDUCTOR SHIELDING Extruded semi-conducting thermoset material, meeting requirements of Par. 3.14 of ICEA S-75-381.

5. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. CIRCUIT IDENTIFICATION AND SHIELDING The shielding system shall consist of a tinned copper/nylon braid applied over a lapped semi-conducting tape on each conductor. The nylon in the shielding braid is colored black, white and red for easy identification. The shielding braid shall provide a 60% minimum coverage with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.1. can be furnished to order.

7. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-24 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR The ground check conductor shall be as given in Table 3-21 of ICEA S-75-381 for the corresponding power conductor sizes. A minimum of 133 strands of annealed copper shall be used. The conductor shall have a yellow polypropylene insulation. Larger than standard size ground check conductors can be furnished when desired and/or necessary due to operating conditions.

9. ASSEMBLY CORE Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a bare tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core. A synthetic binder and single faced rubber filled binder tape will be applied overall, so that it will adhere to the underside of the outer jacket.

10. JACKET A reinforced thermosetting jacket shall be extruded over the assembly in accordance with Table 3-21 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE. All jackets meet the requirements of ICEA S-75-381 Table 3-3, and have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 3-21, and tolerance in accordance with ICEA S-75-381 Par. 3.22.2.

12. SURFACE LEGEND Shall be embossed in the jacket showing 15KV 3/C (size) Type SHD-GC MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type SHD-GC
25,000 Volts

Applications:
Heavy duty high voltage portable power cable for use in circuits not exceeding the rated voltage. These cables are used for heavy mobile equipment such as drag lines, shovels, dredges, drills, other off-track equipment. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources. Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Wires per Conductor</td>
<td>Insulation Thickness Mils</td>
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<tr>
<td>1</td>
<td>259 7x37</td>
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<td>260</td>
</tr>
<tr>
<td>4/0</td>
<td>259 37x7</td>
<td>260</td>
</tr>
</tbody>
</table>

(1) Jacket- Black is standard. Colored jackets available on request. **Thermoplastic polyurethane (TPU)** also available.

(2) Diameters- Subject to plus 8% minus 5% tolerance.

(3) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

1-800-945-5542
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Three Conductor Type SHD-GC
SPECIFICATIONS

1. SCOPE  This specification describes 3 conductor round type SHD-GC shielded power cable with ethylene-propylene rubber insulation for use at a maximum continuous conductor temperature of 90°C. These cables are intended for use as power feeders on AC surface equipment such as drag lines and shovels.

2. STANDARDS
   ICEA S-68-516/NEMA WC-8
   ICEA S-75-381/NEMA WC-58
   ASTM B-172
   ASTM B-33

3. CONDUCTORS  Annealed tin coated rope stranded conductors in accordance with ICEA and ASTM.

4. CONDUCTOR SHIELDING  Extruded semi-conducting thermoset material, meeting requirements of Par. 3.14 of ICEA S-75-381.

5. INSULATION  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 3-21 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. CIRCUIT IDENTIFICATION AND SHIELDING  The shielding system shall consist of a tinned copper/nylon braid applied over a lapped semi-conducting tape which is over an extruded insulation shield on each conductor. The nylon in the shielding braid is colored black, white and red for easy identification. The shielding braid shall provide a 60% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.2. A full tinned copper braid shield with 84% minimum coverage in accordance with ICEA S-75-381 Par. 3.19.1.1 can be furnished to order. The semi-conducting layer meets both ICEA S-75-381 Appendix E and AEIC requirements for strippability.

7. GROUNDING CONDUCTORS  The grounding conductors shall be annealed tin coated copper of not less than the size and number of wires in Table 3-24 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR  The ground check conductor shall be as given in Table 3-21 of ICEA S-75-381 for the corresponding power conductor sizes. A minimum of 133 strands of annealed copper shall be used. The conductor shall have a yellow polypropylene insulation. Larger than standard size ground check conductors can be furnished when desired and/or necessary due to operating conditions.

9. ASSEMBLY CORE  Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Table 3-5 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys, with cured rubber fillers as required to make an essentially round core. A synthetic binder and a single faced rubber filled binder tape will be applied overall, so that it will adhere to the underside of the outer jacket.

10. JACKET  A reinforced thermosetting jacket shall be extruded over the assembly in accordance with Table 3-21 of ICEA S-75-381, Table 3-3, and have a smooth dense surface that is highly resistant to chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER  Shall be in accordance with ICEA S-75-381 Table 3-21, and tolerance in accordance with ICEA S-75-381 Par. 3.22.2.

12. SURFACE LEGEND  Shall be embossed in the jacket showing 25KV 3/C (size) Type SHD-GC MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type MP-GC Mine Power Feeder
CPE Jacket, 5,000 Volts, 100% or 133% Level, (Grounded or Ungrounded)

Applications:
Connections between units of mine distribution systems. For use up to 5,000 volts when installed in duct, conduit or open air and for direct burial in wet and dry locations. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Jacket Thickness Mil</th>
<th>Nominal Diameter In.</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (3) 40°C Ambient Temp.</th>
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</thead>
<tbody>
<tr>
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<td>90</td>
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<td>1670</td>
</tr>
<tr>
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<td>90</td>
<td>4</td>
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<td>1.45</td>
<td>1670</td>
</tr>
<tr>
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<td>90</td>
<td>3</td>
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<td>1.45</td>
<td>1670</td>
</tr>
<tr>
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<td>37</td>
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<td>2/0</td>
<td>140</td>
<td>2.35</td>
<td>5940</td>
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<tr>
<td>500</td>
<td>37</td>
<td>90</td>
<td>4/0</td>
<td>140</td>
<td>2.64</td>
<td>8160</td>
</tr>
</tbody>
</table>

(1) Jacket- Black is standard. Colored jackets available on request

(2) Diameters- Subject to plus 8% minus 5% tolerance.

(3) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

(4) Cured rubber fillers are standard.

1-800-945-5542
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Three Conductor
Type MP-GC Mine Power Feeder
SPECIFICATIONS

1. SCOPE  This specification covers type MP-GC copper tape shielded mine power feeder cable with a ground check, rated at 5000 volts 100% and 133% insulation levels. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 5000 volts.

2. STANDARDS
   ICEA S-65-51B/NEMA WC-8
   ICEA S-75-381/NEMA WC-58
   ASTM B-8
   ASTM B-33

3. CONDUCTORS  Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. CONDUCTOR SHIELDING  Extruded semi-conducting thermoset material, in accordance with Par. 3.14 of ICEA S-75-381.

5. INSULATION  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 4-2 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. SHIELDING AND CIRCUIT IDENTIFICATION  Semi-conductive tape applied helically and lapped over a semi-conductive coating. Color of print identifying the tape as 'semiconducting' also indicates phase identification, and a .005" annealed copper tape applied helically and lapped. An alternate Extruded Insulation Shielding system is available. It consists of an extrusion of a semi-conducting thermoset material directly over the insulation and overall a .005" annealed copper tape is applied helically and lapped. Phase identification is provided by a color coded marker tape under the copper tape. This shielding system provides radial stress distribution that is symmetrical and corona free. The conducting layer meets both ICEA S-75-381 Par. 4.5, and AEIC requirements for strippability and corona.

7. GROUNDING CONDUCTORS  The grounding conductors shall be annealed tin coated Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR  The ground check conductor shall be as given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. ASSEMBLY  Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Par. 4.7 of ICEA S-75-381. The ground check conductor shall be laid in the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields. Synthetic rope fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped. (Cured rubber fillers can be furnished when specified).

10. JACKET  A thermosetting jacket shall be extruded over the assembly to the outside diameters shown in Table 4-2 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Par. 4.8 and Table 3-3. They have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER  Shall be in accordance with ICEA S-75-381 Table 4-2 and tolerances shall meet the requirement of ICEA S-75-381 Par. 4.9.

12. SURFACE LEGEND  Shall be embossed in the jacket showing 5KV (size) MP-GC sunlight resistant MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Type MP-GC
Mine Power Feeder
CPE Jacket, 8,000 Volts, 100% Level, (Grounded)

Applications:
Connections between units of mine distribution systems. For use up to 8,000 volts when installed in duct conduit or open air and for direct burial in wet and dry locations. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Ampacity (3) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size AWG/MCM</td>
<td>No. of Wires per Conductor</td>
<td>Insulation Thickness Milis</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>115</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
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<td>115</td>
</tr>
<tr>
<td>500</td>
<td>37</td>
<td>115</td>
</tr>
</tbody>
</table>

(1) Jacket- Black is standard. Colored jackets available on request.
(2) Diameters- Subject to plus 8% minus 5% tolerance.
(3) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampcacies table inside Back Cover
(4) Cured rubber fillers are standard.
Three Conductor
Type MP-GC Mine Power Feeder

SPECIFICATIONS

1. SCOPE This specification covers type MP-GC copper tape shielded mine power feeder cable with a ground check, rated at 8,000 volts 100% insulation level. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 8,000 volts.

2. STANDARDS
   ICEA S-68-518/NEMA WC-8
   ICEA S-75-381/NEMA WC-58
   ASTM B-8      ASTM B-33

3. CONDUCTORS Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. CONDUCTOR SHIELDING Extruded semi-conducting thermoset material, in accordance with Par. 3.14 of ICEA S-75-381.

5. INSULATION The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

   The average thickness of the insulation wall over the conductor shall be as specified in Table 4-3 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. SHIELDING AND CIRCUIT IDENTIFICATION Semi-conductive tape applied helically and lapped over a semi-conductive coating. Color of print identifying the tape as "semiconducting" also indicates phase identification, and a .005" annealed copper tape applied helically and lapped. An alternate Extruded Insulation Shielding system is available. It consists of an extrusion of a semi-conducting thermoset material directly over the insulation and overall a .005" annealed copper tape is applied helically and lapped. Phase identification is provided by a color coded marker tape under the copper tape. This shielding system provides radial stress distribution that is symmetrical and corona free. The conducting layer meets both ICEA S-75-381 Par. 4.5, and AEIC requirements for strippability and corona.

7. GROUNDING CONDUCTORS The grounding conductors shall be annealed tin coated Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR The ground check conductor shall be as given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. ASSEMBLY Three power conductors shall be cable together with a left-hand lay meeting the requirements of Par.4.7 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields. Synthetic rope fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped. (Cured rubber fillers can be furnished when specified).

10. JACKET A thermosetting jacket shall be extruded over the assembly to the outside diameters shown in Table 4-3 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Par. 4.8 and Table 3-3. They have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 4-3 and tolerances shall meet the requirement of ICEA S-75-381 Par. 4.9.

12. SURFACE LEGEND Shall be embossed in the jacket showing 8KV (size) grounded MP-GC sunlight resistant MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS Cable shall be tested in accordance with applicable ICEA requirements.

36

1-800-945-5542
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Three Conductor Type MP-GC Mine Power Feeder
CPE Jacket, 15,000 Volts, 100% Level, (Grounded)

Applications:
Connections between units of mine distribution systems. For use up to 15,000 volts when installed in duct, conduit or open air and for direct burial in wet and dry locations. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
<th>Jacket Thickness Mils</th>
<th>Nominal Diameter In.</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (3) 40°C Ambient Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>175</td>
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<td>7</td>
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<td>1.88</td>
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</table>

(1) Jacket- Black is standard. Colored jackets available on request.

(2) Diameters- Subject to plus 8% minus 5% tolerance.

(3) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

(4) Cured rubber fillers are standard.
Three Conductor
Type MP-GC Mine Power Feeder
SPECIFICATIONS

1. **SCOPE**  This specification covers type MP-GC copper tape shielded mine power feeder cable with a ground check rated at 15,000 volts 100% insulation level. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 15,000 volts.

2. **STANDARDS**
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-8
   - ASTM B-33

3. **CONDUCTORS**  Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. **CONDUCTOR SHIELDING**  Extruded semi-conducting thermoset material. In accordance with Par. 3.14 of ICEA S-75-381.

5. **INSULATION**  The insulation shall be ethylene-propylene rubber (EPR) extruded insulation.

   The average thickness of the insulation wall over the conductor shall be as specified in Table 4-4 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. **SHIELDING AND CIRCUIT IDENTIFICATION**  Semi-conductive tape applied helically and lapped over a semi-conductive coating. Color of print identifying the tape as "semiconducting" also indicates phase identification, and a .005" annealed copper tape applied helically and lapped. An alternate Extruded Insulation Shielding system is available. It consists of an extrusion of a semi-conducting thermoset material directly over the insulation and overall a .005" annealed copper tape is applied helically and lapped. Phase identification is provided by a color coded marker tape under the copper tape. This shielding system provides radial stress distribution that is symmetrical and corona free. The conducting layer meets both ICEA S-75-381 Par. 4.5, and AEIC requirements for strippability and corona.

7. **GROUNDING CONDUCTORS**  The grounding conductors shall be annealed tin coated Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. **GROUND CHECK CONDUCTOR**  The ground check conductor shall be given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. **ASSEMBLY**  Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Par. 4.7 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a tinned copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields. Synthetic rope fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped. (Cured rubber fillers can be furnished when specified).

10. **JACKET**  A thermosetting jacket shall be extruded over the assembly to the outside diameters shown in Table 4-4 of ICEA S-75-381. The standard jacket for all sizes is extra-heavy-duty black CPE or colors can be provided. All jackets meet the requirements of ICEA S-75-381 Par. 4.8 and Table 3-3. They have a smooth dense surface that is highly resistant to cutting, abrasion, chemicals, sunlight and flame. It has excellent resistance to heat, moisture and the oils commonly used in mining applications.

11. **OUTSIDE DIAMETER**  Shall be in accordance with ICEA S-75-381 Table 4-4 and tolerances shall meet the requirements of ICEA S-75-381 Par. 4.9.

12. **SURFACE LEGEND**  Shall be embossed in the jacket showing 15KV (size) grounded MP-GC sunlight resistant MSHA.

   Additional information can be furnished on the surface legend to special order.

13. **TESTS**  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor
Type MP-GC
Mine Power Feeder
PVC Jacket, 5,000 Volts, 100% or
133% Level, (Grounded or Ungrounded)

Applications:
Connections between units of mine distribution
systems. For use up to 5,000 volts when installed in
duct, conduit or open air and for direct burial in wet and
dry locations. Recommended maximum continuous
conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by
the Mine Safety and Health Administration and the
Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards
S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Mils</th>
<th>Grounding Conductor</th>
<th>Number of Wires per Conductor</th>
<th>Jacket Thickness Mils</th>
<th>Nominal Diameter In. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
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</thead>
<tbody>
<tr>
<td>4</td>
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</tbody>
</table>

(1) Diameters- Subject to plus 8% minus 5% tolerance.

(2) Ampacity- Based on continuous duty at 90°C con-
ductor temperature. For other ampacity ratings under
various conditions, see portable power cable ampaci-
ties table Inside Back Cover.

(3) Cured rubber fillers are standard.
Three Conductor
Type MP-GC Mine Power Feeder
SPECIFICATIONS

1. **SCOPE**  This specification covers Type MP-GC copper tape shielded mine power feeder cable with a ground check, rated at 5000 volts 100 and 133% insulation levels. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 5000 volts.

2. **STANDARDS**
   - ICEA S-68-516/NEMA WC-8
   - ICEA S-75-381/NEMA WC-58
   - ASTM B-8
   - ASTM B-33

3. **CONDUCTORS**  Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. **CONDUCTOR SHIELDING**  Extruded semi-conducting thermoset material in accordance with Par. 3.14 of ICEA S-75-381.

5. **INSULATION**  The insulation shall be Cross-linked polyethylene (XLP) extruded insulation.

   The average thickness of insulation wall over the conductor shall be as specified in Table 4-2 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. **SHIELDING AND CIRCUIT IDENTIFICATION**  Semi-conductive tape applied helically and lapped over a semi-conductive coating. Color of print identifying the tape as ‘semiconducting’ also indicates phase identification, and a .005” bare annealed copper tape applied helically and lapped.

7. **GROUNDING CONDUCTORS**  The grounding conductors shall be annealed Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. **GROUND CHECK CONDUCTOR**  The ground check conductor shall be as given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. **ASSEMBLY**  Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Par. 4.7 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields, suitable fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped.

10. **JACKET**  A thermoplastic jacket shall be extruded over the assembly to the outside diameters shown in Table 4-2 of ICEA S-75-381. The standard jacket color for all sizes is black polyvinyl chloride (PVC), in accordance with ICEA S-75-381 Table 4-7. Colors can be provided. All jackets meet the requirements of ICEA S-75-381 Par.4.8. The PVC compounds used are highly resistant to chemicals, sunlight, flame, heat, moisture and the oils commonly used in mining applications.

11. **OUTSIDE DIAMETER**  Shall be in accordance with ICEA S-75-381 Table 4-2 and tolerances shall meet the requirements of ICEA S-75-381 Par. 4.9.

12. **SURFACE LEGEND**  Shall be a permanent indent marking in the jacket showing 5KV (size) MP-GC sunlight resistant MSHA. Additional information can be furnished on the surface legend to special order.

13. **TESTS**  Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type MP-GC Mine Power Feeder
PVC Jacket, 8,000 Volts, 100% Level, (Grounded)

Applications:
Connections between units of mine distribution systems. For use up to 8,000 volts when installed in duct, conduit or open air and for direct burial in wet and dry locations. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>Power Conductors</th>
<th>Grounding Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Wires per Conductor</td>
<td>Insulation Thickness Mils</td>
<td>Size AWG</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
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<tr>
<td>2</td>
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<tr>
<td>350</td>
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</tbody>
</table>

(1) Diameters- Subject to plus 8% minus 5% tolerance.

(2) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

(3) Cured rubber fillers are standard.

1-800-945-5542

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Three Conductor
Type MP-GC Mine Power Feeder
SPECIFICATIONS

1. SCOPE This specification covers type MP-GC copper tape shielded mine power feeder cable with a ground check, rated at 8,000 volts 100% insulation level. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 8,000 volts.

2. STANDARDS
ICEA S-68-516/NEMA WC-8
ICEA S-75-381/NEMA WC-58
ASTM B-8
ASTM B-33

3. CONDUCTORS Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. CONDUCTOR SHielding Extruded semi-conducting thermostet material in accordance with Par. 3.14 of ICEA S-75-381.

5. INSULATION The insulation shall be Cross-linked polyethylene (XLP) extruded insulation.

The average thickness of the insulation wall over the conductor shall be as specified in Table 4.3 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. SHIELDING AND CIRCUIT IDENTIFICATION Semi-conductive tape applied helically and lapped over a semi-conductive coating. Color of print identifying the tape as 'semiconducting' also indicates phase identification, and a .005" bare annealed copper tape applied helically and lapped.

7. GROUNDING CONDUCTORS The grounding conductors shall be annealed Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. GROUND CHECK CONDUCTOR The ground check conductor shall be given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. ASSEMBLY Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Par. 4.7 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields, suitable fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped.

10. JACKET A thermoplastic jacket shall be extruded over the assembly to the outside diameters shown in Table 4-3 of ICEA S-75-381. The standard jacket color for all sizes is black polyvinyl chloride (PVC), in accordance with ICEA S-75-381 Table 4-7. Colors can be provided. All jackets meet the requirements for ICEA S-75-381 Par. 4.8. The PVC compounds used are highly resistant to chemicals, sunlight, flame, heat, moisture and the oils commonly used in mining applications.

11. OUTSIDE DIAMETER Shall be in accordance with ICEA S-75-381 Table 4.3 and tolerances shall meet the requirements of ICEA S-75-381 Par. 4.9.

12. SURFACE LEGEND Shall be a permanent indent marking in the jacket showing 8KV (size) grounded MP-GC sunlight resistant MSHA. Additional information can be furnished on the surface legend to special order.

13. TESTS Cable shall be tested in accordance with applicable ICEA requirements.
Three Conductor Type MP-GC Mine Power Feeder

PVC Jacket, 15,000 Volts, 100% Level, (Grounded)

Applications:
Connections between units of mine distribution systems. For use up to 15,000 volts when installed in duct, conduit or open air and for direct burial in wet and dry locations. Recommended maximum continuous conductor temperature is 90°C.

Cable carries "MSHA" marking indicating listing by the Mine Safety and Health Administration and the Pennsylvania Department of Environmental Resources.

Mining Cable meets or exceeds ICEA Standards S-68-516 & S-75-381.

<table>
<thead>
<tr>
<th>Size AWG/MCM</th>
<th>No. of Wires per Conductor</th>
<th>Insulation Thickness Milis</th>
<th>Size AWG</th>
<th>Number of Wires per Conductor</th>
<th>Jacket Thickness Milis</th>
<th>Nominal Diameter In. (1)</th>
<th>Approx. Weight lbs. per 1,000 ft.</th>
<th>Ampacity (2) 40°C Ambient Temp.</th>
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(1) Diameters- Subject to plus 8% minus 5% tolerance.

(2) Ampacity- Based on continuous duty at 90°C conductor temperature. For other ampacity ratings under various conditions, see portable power cable ampacities table Inside Back Cover.

(3) Cured rubber fillers are standard.
Three Conductor
Type MP-GC Mine Power Feeder
SPECIFICATIONS

1. **SCOPE**
   This specification covers type MP-GC copper tape shielded mine power feeder cable with a ground check, rated at 15,000 volts 100% insulation level. Maximum continuous conductor temperature 90°C (194°F). These cables are for use as connections between units of mine distribution systems at nominal AC voltages up to 15,000 volts.

2. **STANDARDS**
   ICEA S-68-516/NEMA WC-8  ICEA S-75-381/NEMA WC-58  ASTM B-8  ASTM B-33

3. **CONDUCTORS**
   Class B stranded annealed un-coated copper in accordance with ICEA and ASTM.

4. **CONDUCTOR SHIELDING**
   Extruded semi-conducting thermoset material in accordance with Par. 3.14 of ICEA S-75-381.

5. **INSULATION**
   The insulation shall be Cross-linked polyethylene (XLP) extruded insulation.
   The average thickness of the insulation wall over the conductor shall be as specified in Table 4-4 of ICEA S-75-381. The minimum thickness of insulation shall not be less than 90% of the specified average value.

6. **SHIELDING AND CIRCUIT IDENTIFICATION**
   Semi-conductive tape applied helically and lapped over a semi-conductive coating.
   Color of print identifying the tape as "semiconducting" also indicates phase identification, and a .005" bare annealed copper tape applied helically and lapped.

7. **GROUNDING CONDUCTORS**
   The grounding conductors shall be annealed Class B copper not less than the size shown in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes.

8. **GROUND CHECK CONDUCTOR**
   The ground check conductor shall be given in Table 4-1 of ICEA S-75-381 for the corresponding power conductor sizes, and consist of 7 strands of annealed copper with yellow polypropylene insulation.

9. **ASSEMBLY**
   Three power conductors shall be cabled together with a left-hand lay meeting the requirements of Par. 4.7 of ICEA S-75-381. The ground check conductor shall be laid in the valley between the black and white power conductors and a copper grounding conductor in each of the other two valleys in continuous contact with the metallic shields, suitable fillers to make an essentially round core and overall, a single faced rubber filled binder tape is applied overlapped.

10. **JACKET**
    A thermoplastic jacket shall be extruded over the assembly to the outside diameters shown in Table 4-4 of ICEA S-75-381. The standard jacket color for all sizes is black polyvinyl chloride (PVC), in accordance with ICEA S-75-381 Table 4-7. Colors can be provided. All jackets meet the requirements for ICEA S-75-381 Par.4.8. The PVC compounds used are highly resistant to chemicals, sunlight, flame, heat, moisture and the oils commonly used in mining applications.

11. **OUTSIDE DIAMETER**
    Shall be in accordance with ICEA S-75-381 Table 4-4 and tolerances shall meet the requirements of ICEA S-75-381 Par. 4.9.

12. **SURFACE LEGEND**
    Shall be a permanent indent marking in the jacket showing 15KV (size) grounded MP-GC sunlight resistant MSHA. Additional information can be furnished on the surface legend to special order.

13. **TESTS**
    Cable shall be tested in accordance with applicable ICEA requirements.

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90° C. Ampacities

For portable cables based on continuous conductor temperature of 90°C (194°F) at an ambient temperature of 40°C.

<table>
<thead>
<tr>
<th>Size AWG MCM</th>
<th>Single Conductor</th>
<th>Two Conductor Round and Flat</th>
<th>Three Conductor Round</th>
<th>Four Conductor</th>
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<tbody>
<tr>
<td></td>
<td>0-2,000 Volts Unshielded</td>
<td>2.001-8,000 Volts* Shielded</td>
<td>8,001-15,000 Volts* Shielded</td>
<td>15,001-25,000 Volts* Shielded</td>
</tr>
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<td>8</td>
<td>83</td>
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<td>—</td>
</tr>
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<td>6</td>
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</tr>
</tbody>
</table>

(1) Tables reproduced from standards publication ICEA S-68-516, NEMA WC-8.

*These ampacities are based on single isolated cable in air operated with open-circuited shield.

Correction Factors
For ampacities for various ambient temperatures above or below 40°C.

<table>
<thead>
<tr>
<th>Ambient Temp Degrees C</th>
<th>Correction Factors 90°C</th>
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<tr>
<td>10</td>
<td>1.26</td>
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<tr>
<td>20</td>
<td>1.18</td>
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<td>30</td>
<td>1.10</td>
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<tr>
<td>40</td>
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<td>50</td>
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Reel Correction Factors
For use with ampacities when one or more layers of cable are wound on a reel. (1)

<table>
<thead>
<tr>
<th>Number of Layers</th>
<th>Multiplying Correction Factors</th>
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<tbody>
<tr>
<td>1</td>
<td>0.85</td>
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<tr>
<td>2</td>
<td>0.65</td>
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<tr>
<td>3</td>
<td>0.45</td>
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<tr>
<td>4</td>
<td>0.35</td>
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</table>

(1) Tables reproduced from Standards publication ICEA S-68-516, NEMA WC-8.

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<table>
<thead>
<tr>
<th>Commercial/Residential</th>
<th>Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coax Cable</td>
<td>SOOW, SJOW</td>
</tr>
<tr>
<td>Thermostat Wire And Telephone Wire</td>
<td>VNTC, FREP/CPE TRAY CABLE</td>
</tr>
<tr>
<td>Cat 3 &amp; 5e Cable</td>
<td>W, G, G-GC</td>
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<tr>
<td>Fire Alarm / Security Cable</td>
<td>DLO Cable</td>
</tr>
<tr>
<td>Copper Clad Ground Rods</td>
<td>SIS</td>
</tr>
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<td>MC Cable / Specialty MC</td>
<td>Instrumentation Cable</td>
</tr>
<tr>
<td>Flexible Conduits Liquid Tight, Non Metallic, Aluminum</td>
<td>High Temp Cable</td>
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<tr>
<td>Bare Copper</td>
<td>Electronic Cables</td>
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<td>Tinned Copper</td>
<td>5 and 15 KV Cable</td>
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<tr>
<td>Airport Lighting Cable</td>
<td>Interlocked Armor</td>
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<td>Central Office Power Cable</td>
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<td>20/10 Control Cable REA Approved Ground Rods</td>
<td>Aluminum Clad Steel Wire Aluminum Tie Wire</td>
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</tbody>
</table>
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