



# XLE-200

## Thin Wall

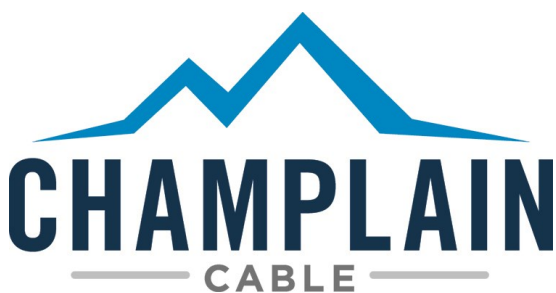
### ISO Battery Cable

## ISO-6722-1, Class F, Thin Wall, 600V / 1000V

- Highly Engineered EXRAD XLE-200 Irradiation Crosslinked Fluoroelastomer
- Withstands Thermal Excursions to 275°C +
- Flexible for Tight Spaces and Routing
- Designed for the Most Demanding Environments
- Smaller and much tougher than Silicone alternatives
- Highly fluid resistant



| Product Number | Std. Conductors<br>(Bare Copper) | Nominal<br>Conductor OD |      | Nom. Insulation<br>Thickness |      | Nom. Finished<br>OD |      | Min. Static<br>Bend Radius |     | Finished<br>Weight<br>(Kg/KM) | Conductor<br>Resistance<br>Ω per KM<br>at 20°C |
|----------------|----------------------------------|-------------------------|------|------------------------------|------|---------------------|------|----------------------------|-----|-------------------------------|--|
|                |                                  | mm.                     | in.  | mm.                          | in.  | mm.                 | in.  | mm.                        | in. |                               |  |
| <b>600V</b>    |                                  |                         |      |                              |      |                     |      |                            |     |                               |  |
| EXRAD-200TW-5  | 5.0mm <sup>2</sup> (245/.15)     | 2.87                    | .113 | 0.57                         | .022 | 4.01                | .158 | 20                         | 0.8 | 47                            | 3.94   |
| EXRAD-200TW-6  | 6.0mm <sup>2</sup> (322/.15)     | 3.10                    | .122 | 0.57                         | .022 | 4.24                | .167 | 20                         | 0.8 | 53                            | 3.01   |
| EXRAD-200TW-8  | 8.0mm <sup>2</sup> (238/.20)     | 3.88                    | .153 | 0.57                         | .022 | 5.02                | .198 | 24                         | 1.0 | 83                            | 2.38   |
| EXRAD-200TW-10 | 10mm <sup>2</sup> (315/.20)      | 4.39                    | .172 | 0.63                         | .025 | 5.65                | .222 | 28                         | 1.1 | 134                           | 1.78   |
| EXRAD-200TW-12 | 12mm <sup>2</sup> (380/.20)      | 4.83                    | .190 | 0.65                         | .026 | 6.13                | .241 | 30                         | 1.2 | 155                           | 1.47   |
| EXRAD-200TW-16 | 16mm <sup>2</sup> (511/.20)      | 5.50                    | .217 | 0.65                         | .026 | 6.80                | .267 | 34                         | 1.4 | 197                           | 1.13   |
| EXRAD-200TW-20 | 20mm <sup>2</sup> (610/.20)      | 6.16                    | .243 | 0.65                         | .026 | 7.46                | .294 | 37                         | 1.5 | 219                           | 0.91   |
| EXRAD-200TW-25 | 25mm <sup>2</sup> (798/.20)      | 7.00                    | .276 | 0.65                         | .026 | 8.30                | .326 | 42                         | 1.6 | 243                           | 0.72   |
| <b>1000V</b>   |                                  |                         |      |                              |      |                     |      |                            |     |                               |  |
| EXRAD-200TW-35 | 35mm <sup>2</sup> (1083/.20)     | 8.09                    | .319 | 0.91                         | .036 | 9.90                | .390 | 59                         | 2.3 | 358                           | 0.52   |
| EXRAD-200TW-40 | 40mm <sup>2</sup> (1221/.20)     | 8.89                    | .349 | 0.83                         | .032 | 10.55               | .415 | 63                         | 2.5 | 415                           | 0.47   |
| EXRAD-200TW-50 | 50mm <sup>2</sup> (1615/.20)     | 9.77                    | .384 | 1.07                         | .043 | 11.90               | .457 | 71                         | 2.9 | 611                           | 0.36   |
| EXRAD-200TW-70 | 70mm <sup>2</sup> (1406/.25)     | 11.60                   | .456 | 1.25                         | .049 | 14.10               | .555 | 85                         | 3.4 | 716                           | 0.26   |
| EXRAD-200TW-95 | 95mm <sup>2</sup> (1938/.25)     | 13.51                   | .532 | 1.45                         | .057 | 16.40               | .646 | 99                         | 3.9 | 1178                          | 0.19   |





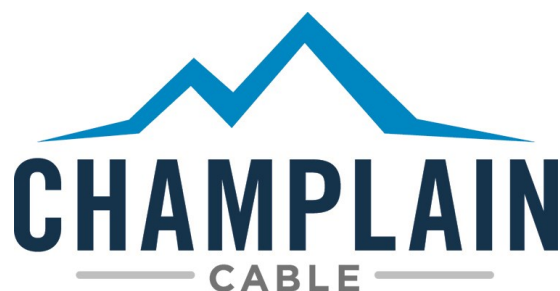
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### ISO Battery Cable

| Section  | Description                      | Requirement  | Typical Results (25mm <sup>2</sup> Sample) |      |
|----------|----------------------------------|--|--|------|
| 5.1      | Outside Cable Diameter           | 8.70 max.  | 8.61mm                                     | Pass |
| 5.2      | Insulation Thickness             | 0.52mm min.  | 0.78mm                                     | Pass |
| 5.3      | Conductor Diameter               | 7.2mm max.   | 6.93mm                                     | Pass |
| 5.4      | Conductor Resistance             | 0.46 mΩ/m @20°C max.   | 0.45 mΩ/m                                  | Pass |
| 5.5      | Withstand Voltage                | 600V 5kV for 5 minutes   | no dielectric breakdown                    | Pass |
| 5.6      | Insulation Faults                | Sparktest @ 12.5kV   | no faults                                  | Pass |
| 5.7      | Insulation Volume Resistivity    | 10 <sup>9</sup> Ω /mm min.   | 8.52 10 <sup>15</sup> Ω/mm                 | Pass |
| 5.8      | Pressure at High Temperature     | '0.8N @180°C no dielectric breakdown   | no breakdown                               | Pass |
| 5.9      | Strip Force / Adhesion           | Per customer agreement   | NA   | NA   |
| 5.10     | Low Temperature Winding          | 3 turns 2.5kg - 40°C no dielectric breakdown                                       | No dielectric breakdown, no                | Pass |
| 5.11     | Impact                           | 300gm @-15°C no breakdown  | no breakdown,                              | Pass |
| 5.12.4.1 | Sandpaper Abrasion               | NA   | NA   | Pass |
| 5.12.4.2 | Scrape Abrasion                  | NA   | NA   | Pass |
| 5.13     | Long-Term Heat Aging             | 200°C 3000 hours   | no breakdown, no cracks                    | Pass |
| 5.15     | Thermal Overload                 | 250°C 6 hours  | no breakdown, no cracks,                   | Pass |
| 5.16     | Shrinkage by heat                | 2mm max. 150°C   | no shrinkage,                              | Pass |
| 5.17     | Fluid Compatibility              | Gasoline 15% max.  | 1.2%                                       | Pass |
|          |                                  | Diesel Fuel 15% max.   | 0.3%                                       | Pass |
|          |                                  | Engine Oil 15% max.  | 0.4%                                       | Pass |
|          |                                  | Ethanol 15% max.   | 0.0%                                       | Pass |
|          |                                  | Power Steering 30% max   | 0.2%                                       | Pass |
|          |                                  | Automatic Transmission 25% max   | 0.6%                                       | Pass |
|          |                                  | Engine Coolant 15% max   | 0.2%                                       | Pass |
|          |                                  | Battery Acid no breakdown  | no breakdown,                              | Pass |
| 5.19     | Ozone Resistance                 | 45°C 85% Relative Humidity 70 hours, Ozone 50 +/- 5 pphm 1kV 1 min. (no breakdown) | no breakdown,                              | Pass |
| 5.20     | Resistance to hot water          | not less than 10 <sup>-9</sup> Ω-mm  | 5.31X 10 <sup>-14</sup> Ω-mm               | Pass |
| 5.21     | Temperature and Humidity Cycling | 40 - 8 hours cycles -40°C and 125°C 80 - 100% relative humidity                    | no dielectric breakdown, no cracking,      | Pass |
| 5.22     | Resistance to Flame              | 70 sec. max. 50mm unburned   | 1.8 sec. after burn                        | Pass |

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