SPECIFICATION

Natural rubber insulated chloroprene rubber sheathed cable for holder
WRNCT

MITSUBOSHI CO., LTD.
1. Scope

This Specification covers quality level of WRNCT mainly to be used on the secondary side for holder of arc welders.

2. Construction and materials

(Construction)

Conductor

Separator

Insulation

Sheath

2.1 Conductor

A stranded wire is composed of the annealed copper wire specified in JIS C 3102 or the tinned annealed copper wire specified in JIS C 3152.

2.2 Separator

A suitable separator is applied on the conductor.

2.3 Insulation

Natural rubber compound

The average thickness of the insulation is not less than 90% of the value in Attached Tables. The minimum thickness of the insulation is not less than 80% of the value in Attached Tables.

2.4 Sheath

Chloroprene rubber compound

The average thickness of sheath is not less than 90% of the value in Attached Tables. The minimum thickness of sheath is not less than 80% of the value in Attached Tables.
3. Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Characteristics</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>The surface be smooth and there is not a flaw in case of use.</td>
<td>JIS C 3005 4.1</td>
</tr>
<tr>
<td>Construction</td>
<td>It depends on the Attached Table with structure and size.</td>
<td>JIS C 3005 4.3</td>
</tr>
<tr>
<td>Conductor resistance</td>
<td>Not more than the value in Attached Table.</td>
<td>JIS C 3005 4.4</td>
</tr>
<tr>
<td>Dielectric withstand voltage (in water)</td>
<td>Capable of withstanding 1500V for 1 min.</td>
<td>JIS C 3005 4.6 a)</td>
</tr>
</tbody>
</table>

- **Insulation**
  - Tensile strength: Not less than 6 Mpa
  - Elongation: Not less than 250%

- **Sheath**
  - Tensile strength: Not less than 13 Mpa
  - Elongation: Not less than 300%

- **Insulation**
  - Tensile strength: Not less than 50% of the value before heating
  - Elongation

- **Sheath**
  - Tensile strength: Not less than 65% of the value before heating
  - Elongation

- **Sheath**
  - Tensile strength: Not less than 60% of the value before oil-immersion
  - Elongation

- **Flame retardance**
  - To disappear naturally within 60 seconds

※1) The quality characteristic to enforce inspection regularly with an in-house standard.
※2) For the test piece less than 1 mm in thickness, not less than 50%.

4. Marking on cable

The following information is continuously marked on cable.

① The symbol of the cable
② Nominal sectional area
③ Manufacture's name or abbreviation

Example: WRNCT 22 mm²

.mituboshi wrnct 22 mm²

5. Length and packaging

According to the Attached Table.

6. Marking on package

The following information is marked on package.

① The symbol of the cable and nominal sectional area
② Length
③ Year of manufacture or lot No.
④ Manufacture's name
### Attached Table: Construction, Size, Weight, and Electric Characteristic

<table>
<thead>
<tr>
<th>Size (㎟²)</th>
<th>Conductors</th>
<th>Insulation</th>
<th>Sheath</th>
<th>Overall diameter (approx.) (㎜)</th>
<th>Approx. mass (㎏/㎞)</th>
<th>Conductor resistance 20℃ (Ω/㎞)</th>
<th>Standard Unit length and packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>7/99/0.16</td>
<td>5.3</td>
<td>0.8</td>
<td>7.0</td>
<td>10.2</td>
<td>230</td>
<td>1.35</td>
</tr>
<tr>
<td>22</td>
<td>7/7/22/0.16</td>
<td>6.6</td>
<td>0.8</td>
<td>8.4</td>
<td>11.6</td>
<td>310</td>
<td>0.896</td>
</tr>
<tr>
<td>30</td>
<td>7/7/30/0.16</td>
<td>7.7</td>
<td>0.8</td>
<td>9.5</td>
<td>12.9</td>
<td>405</td>
<td>0.657</td>
</tr>
<tr>
<td>38</td>
<td>7/7/38/0.16</td>
<td>8.7</td>
<td>0.8</td>
<td>10.5</td>
<td>14.1</td>
<td>495</td>
<td>0.519</td>
</tr>
<tr>
<td>50</td>
<td>7/7/50/0.16</td>
<td>10.0</td>
<td>0.8</td>
<td>11.8</td>
<td>15.8</td>
<td>635</td>
<td>0.394</td>
</tr>
<tr>
<td>60</td>
<td>7/7/60/0.16</td>
<td>10.9</td>
<td>0.8</td>
<td>12.7</td>
<td>16.7</td>
<td>740</td>
<td>0.328</td>
</tr>
<tr>
<td>80</td>
<td>12/7/50/0.16</td>
<td>13.1</td>
<td>1.0</td>
<td>15.3</td>
<td>19.9</td>
<td>1,050</td>
<td>0.230</td>
</tr>
<tr>
<td>100</td>
<td>12/7/60/0.16</td>
<td>14.3</td>
<td>1.0</td>
<td>16.5</td>
<td>21.3</td>
<td>1,235</td>
<td>0.192</td>
</tr>
</tbody>
</table>

※) Upper section: (A) annealed copper wire  
Lower section: (TA) tinned annealed copper wire