

# DAKAP CR

Rectangular conductor of copper, wrapped with corona resistant PI-film, class 240

**Product name:**

Dakap CR

**Specifications:**

Internal Dahrén or customer specification

**UL approval:**

Not approved

**Class: 240**

Temperature index  $\geq 240^{\circ}\text{C}$

Heat shock:  $\geq 260^{\circ}\text{C}$

**Insulation:**

Corona resistant Polyimide-film

**Properties:**

- Outstanding thermal resistance
- Excellent resistance to humidity
- Very good resistance to partial discharges

**Field of application:**

- Traction motors
- Large industrial motors
- Generators

**Standard packaging:**

K500, VM630

**Shelf life:**

5 years, under normal ambient conditions

**Conductor material**

EN 1977 - ETP1 CW003 A

EN 1977 - ETP CW004A

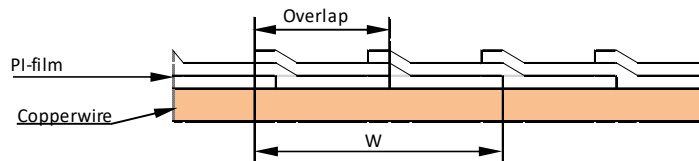
ASTM B49 - ETP C11000/C11040

Conductor corner radius

| Nominal thickness of conductor (mm) |                     | Corner radius (mm)    | Tolerance |
|-------------------------------------|---------------------|-----------------------|-----------|
| Over                                | Up to and including |                       |           |
| -                                   | 1,00                | 0,5 nominal thickness | +/- 25%   |
| 1,00                                | 1,60                | 0,50                  | +/- 25%   |
| 1,60                                | 2,24                | 0,65                  | +/- 25%   |
| 2,24                                | 3,55                | 0,80                  | +/- 25%   |
| 3,55                                | -                   | 1,00                  | +/- 25%   |

Conductor tolerances

| Nominal width or thickness of the conductor (mm) |                     | Tolerance +/- (mm) |
|--|---------------------|--------------------|
| Over   | Up to and including |                    |
| -  | 3,15                | 0,030              |
| 3,15   | 6,30                | 0,050              |
| 6,30   | 12,50               | 0,070              |
| 12,50  | -                   | 0,100              |



**Standard insulation:**

| Designation   | PI-film          | Overlap | Width   | Increase (doublesided) |
|---------------|------------------|---------|---------|------------------------|
| Dakap 7050 CR | 1 Polyimide-film | 50%     | 11,1 mm | 0,15 ± 0,03 mm         |
| Dakap 7053 CR | 1 Polyimide-film | 53%     | 11,1 mm | 0,23 ± 0,03 mm         |
| Dakap 7031 CR | 1 Polyimide-film | 67%     | 11,1 mm | 0,23 ± 0,03 mm         |
| Dakap 7075 CR | 1 Polyimide-film | 75%     | 11,1 mm | 0,30 ± 0,03 mm         |

Certified according to ISO 9001, IATF 16949, ISO 14001

# DAKAP CR

Rectangular conductor of copper, wrapped with corona resistant PI-film, class 240

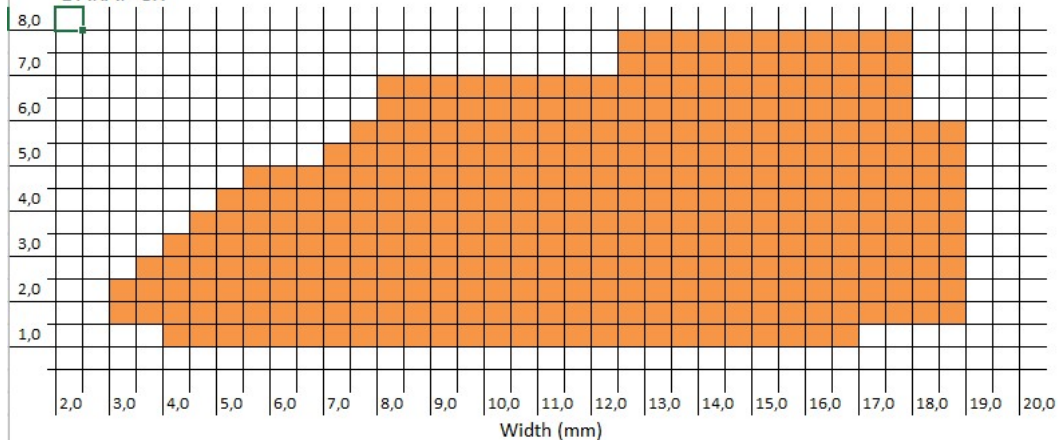
## Properties for DAKAP CR

| Main characteristics          | Test method                   | Interval                              | Acceptance criteria                    |
|-------------------------------|-------------------------------|---------------------------------------|--|
| <b>Thermal properties</b>     |                               |                                       |  |
| Heat shock                    | IEC 60851 - 6.3 <sup>1)</sup> | $1,00 \leq t \leq 7,00$               | $\geq 260^{\circ}\text{C}$             |
| Temperature index             | IEC 60172                     | -                                     | $\geq 240^{\circ}\text{C}^{2)}$        |
| <b>Electrical properties</b>  |                               |                                       |  |
| Conductor resistance          | IEC 60851 - 5.3               | <sup>4)</sup>                         | $0,01724 \Omega\text{mm}^2/\text{m}$   |
| Conductivity                  | 1/R                           | <sup>4)</sup>                         | $> 58 \text{ m}/(\Omega\text{mm}^2)$   |
| Breakdown voltage             | IEC 60851 - 5.4 <sup>3)</sup> | All sizes                             | $> 5,0 \text{ kV}$                     |
| <b>Mechanical properties</b>  |                               |                                       |  |
| Elongation                    | IEC 60851-3.3                 | $1,00 \leq t \leq 2,50$<br>$t > 2,50$ | $\geq 30\%$<br>$\geq 32\%$             |
| Springback angle              | IEC 60851-3.4                 | All sizes                             | $\leq 5^{\circ}$                       |
| Flexibility                   | IEC 60851-3.5                 | $2 \leq w \leq 8 \text{ mm}$          | 2 x width                              |
| - Bending edgewise            |                               | $8 < w \leq 16 \text{ mm}$            | 4 x width                              |
| - Bending flatwise            |                               | $w > 16 \text{ mm}$                   | 6 x width                              |
| Adherence<br>-Cut and stretch | IEC 60851-3.5                 | All sizes                             | 2 x thickness                          |
|                               |                               |                                       | 20% stretch, Loss of adhesion max. 1mm |

1. Performed on straight piece
2. According to supplier certificate
3. Bent according to flexibility test
4. Dependence of dimension is expressed by the unit

## Dimension range

### DAKAP CR



The technical data included is up to date at the time of printing.

Dahrén reserves the right to make any amendments deemed necessary. Rev. 4, st