

## ISONOM<sup>®</sup> NMN 0881

### Composition:

ISONOM<sup>®</sup> NMN 0881 consists of PET film, covered on both sides with calendered Nomex<sup>1</sup>.

### Properties:

ISONOM<sup>®</sup> NMN 0881 is a combined flexible material of thermal classification 155° C (F) with excellent mechanical properties like high tensile strength and high edge tear resistance combined with high electrical strength.

ISONOM<sup>®</sup> NMN 0881 has a smooth surface which allows a trouble free manufacture of low voltage motors where coil shooting machines are used.

### Applications:

ISONOM<sup>®</sup> NMN 0881 is mainly used as a slot liner, slot closure and phase insulation in the production of low voltage motors. Besides this ISONOM<sup>®</sup> NMN 0881 is used as interlayer insulation in transformers and other electrical machines and appliances.

### Formats:

Sheets: on request  
Rolls: untrimmed approx. 920 mm  
Tapes: from 10 mm width upwards

### Storability:

ISONOM<sup>®</sup> NMN 0881 can be stored unlimited under normal conditions (20° C, 50% r. h.).

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<sup>1</sup> NOMEX is a registered trademark of DU PONT

## Technical Data

| <b>ISONOM® NMN 0881</b>         |                    |                  |                |                |                |                |                |
|---------------------------------|--------------------|------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Properties</b>               | <b>Test method</b> | <b>Unit</b>      | <b>Value</b>   | <b>Value</b>   | <b>Value</b>   | <b>Value</b>   | <b>Value</b>   |
| Nominal thickness               |                    | mm               | 0.13           | 0.15           | 0.17           | 0.20           | 0.22           |
| Tolerance                       | IEC 626            | mm               | ± 0.01         | ± 0.02         | ± 0.02         | ± 0.02         | ± 0.02         |
| Total substance                 | IEC 626            | g/m <sup>2</sup> | 144            | 162            | 182            | 217            | 252            |
| Nomex                           |                    | µm               | 50             | 50             | 50             | 50             | 50             |
| PET-film                        |                    | µm               | 23             | 36             | 50             | 75             | 100            |
| Nomex                           |                    | µm               | 50             | 50             | 50             | 50             | 50             |
| Breakdown voltage               | IEC 626            | kV               | ≥ 7            | ≥ 7            | ≥ 9            | ≥ 11           | ≥ 12           |
| Breakdown voltage after folding | IEC 626            | kV               | ≥ 7            | ≥ 7            | ≥ 9            | ≥ 10           | ≥ 11           |
| Tensile strength MD<br>TD       | IEC 626            | N/10mm<br>N/10mm | ≥ 160<br>≥ 100 | ≥ 150<br>≥ 110 | ≥ 170<br>≥ 140 | ≥ 200<br>≥ 170 | ≥ 220<br>≥ 200 |
| Elongation MD<br>TD             | IEC 626            | %<br>%           | ≥ 15<br>≥ 20   | ≥ 20<br>≥ 20   | ≥ 15<br>≥ 20   | ≥ 20<br>≥ 20   | ≥ 20<br>≥ 20   |
| Thermal classification          | IEC 216<br>UL 1446 | °C               | 155<br>180     |                |                |                |                |

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| ISONOM® NMN 0881                |                    |                  |                |                 |                |                |                |  |
|---------------------------------|--------------------|------------------|----------------|-----------------|----------------|----------------|----------------|--|
| Properties                      | Test method        | Unit             | Value          | Value           | Value          | Value          | Value          |  |
| Nominal thickness               |                    | mm               | 0.24           | 0.30            | 0.36           | 0.42           | 0.48           |  |
| Tolerance                       | IEC 626            | mm               | + 0.03         | + 0.03<br>-0.01 | ± 0.03         | ± 0.03         | ± 0.03         |  |
| Total substance                 | IEC 626            | g/m <sup>2</sup> | 287            | 377             | 462            | 532            | 602            |  |
| Nomex                           |                    | µm               | 50             | 50              | 50             | 50             | 50             |  |
| PET-film                        |                    | µm               | 125            | 190             | 250            | 300            | 350            |  |
| Nomex                           |                    | µm               | 50             | 50              | 50             | 50             | 50             |  |
| Breakdown voltage               | IEC 626            | kV               | ≥ 14           | ≥ 19            | ≥ 23           | ≥ 22           | ≥ 28           |  |
| Breakdown voltage after folding | IEC 626            | kV               | ≥ 12           | ≥ 15            | ≥ 18           | ≥ 20           | ≥ 22           |  |
| Tensile strength MD<br>TD       | IEC 626            | N/10mm<br>N/10mm | ≥ 220<br>≥ 200 | ≥ 280<br>≥ 260  | ≥ 340<br>≥ 300 | ≥ 380<br>≥ 320 | ≥ 410<br>≥ 370 |  |
| Elongation MD<br>TD             | IEC 626            | %<br>%           | ≥ 20<br>≥ 25   |                 |                |                |                |  |
| Thermal classification          | IEC 216<br>UL 1446 | °C               | 155<br>180     |                 |                |                |                |  |

## ISONOM<sup>®</sup> NMN 8 0883

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|---------------------------------|--------------------|------------------|------------------|----------------|------------------|------------------|----------------|----------------|
| Properties                      | Test method        | Unit             | Value            | Value          | Value            | Value            | Value          |                |
| Nominal thickness               |                    | mm               | 0.19             | 0.20           | 0.22             | 0.24             | 0.26           |                |
| Tolerance                       | IEC 626            | mm               | ± 0.02           | ± 0.02         | + 0.03<br>- 0.01 | + 0.03<br>- 0.01 | ± 0.03         |                |
| Total substance                 | IEC 626            | g/m <sup>2</sup> | 194              | 212            | 232              | 267              | 302            |                |
| Nomex                           |                    | µm               | 80               | 80             | 80               | 80               | 80             |                |
| PET-film                        |                    | µm               | 23               | 36             | 50               | 75               | 100            |                |
| Nomex                           |                    | µm               | 80               | 80             | 80               | 80               | 80             |                |
| Breakdown voltage               | IEC 626            | kV               | ≥ 7              | ≥ 8            | ≥ 9              | ≥ 12             | ≥ 13           |                |
| Breakdown voltage after folding | IEC 626            | kV               | ≥ 7              | ≥ 8            | ≥ 9              | ≥ 10             | ≥ 13           |                |
| Tensile strength                | MD<br>TD           | IEC 626          | N/10mm<br>N/10mm | ≥ 160<br>≥ 100 | ≥ 180<br>≥ 140   | ≥ 200<br>≥ 180   | ≥ 250<br>≥ 230 | ≥ 280<br>≥ 260 |
| Elongation                      | MD<br>TD           | IEC 626          | %<br>%           | ≥ 20<br>≥ 20   |                  |                  |                |                |
| Thermal classification          | IEC 216<br>UL 1446 | °C               | 155<br>180       |                |                  |                  |                |                |

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|---------------------------------|--------------------|------------------|------------------|----------------|----------------|----------------|----------------|----------------|
| Properties                      | Test-method        | Unit             | Value            | Value          | Value          | Value          | Value          |                |
| Nominal thickness               |                    | mm               | 0.30             | 0.36           | 0.42           | 0.48           | 0.53           |                |
| Tolerance                       | IEC 626            | mm               | ± 0.02           | ± 0.02         | ± 0.03         | ± 0.03         | ± 0.05         |                |
| Total substance                 | IEC 626            | g/m <sup>2</sup> | 337              | 427            | 512            | 582            | 652            |                |
| Nomex                           |                    | µm               | 80               | 80             | 80             | 80             | 80             |                |
| PET-film                        |                    | µm               | 125              | 190            | 250            | 300            | 350            |                |
| Nomex                           |                    | µm               | 80               | 80             | 80             | 80             | 80             |                |
| Breakdown voltage               | IEC 626            | kV               | ≥ 15             | ≥ 20           | ≥ 23           | ≥ 25           | ≥ 28           |                |
| Breakdown voltage after folding | IEC 626            | kV               | ≥ 14             | ≥ 16           | ≥ 19           | ≥ 20           | ≥ 22           |                |
| Tensile strength                | MD<br>TD           | IEC 626          | N/10mm<br>N/10mm | ≥ 300<br>≥ 280 | ≥ 380<br>≥ 340 | ≥ 380<br>≥ 340 | ≥ 450<br>≥ 420 | ≥ 450<br>≥ 420 |
| Elongation                      | MD<br>TD           | IEC 626          | %<br>%           | ≥ 20<br>≥ 20   | ≥ 20<br>≥ 25   |                |                |                |
| Thermal classification          | IEC 216<br>UL 1446 | °C               | 155<br>180       |                |                |                |                |                |