

# WEIDMANN

## QUALITY CERTIFICATE # 178

Description of goods

TRANSFORMER BOARD LD (GRADE B)

Date of manufacture 04.2023

Date of shipment \_\_\_\_\_

|   |                   |                              |
|---|-------------------|------------------------------|
| Lot №                                     | 150               |                              |
| Thickness, mm                             | 1,0               |                              |
| <b>Technical data: GOST 4194-88</b>       |                   |                              |
| <b>Index</b>                              | <b>Unit</b>       | <b>Average data on a lot</b> |
| 1 Thickness                               | mm                | 1,03                         |
| 2 Apparent density                        | g/cm <sup>3</sup> | 1,13                         |
| 3 Tensile strength                        | MPa               | 123                          |
| - in machine direction                    |                   |                              |
| - in cross machine direction              |                   | 90                           |
| 4 Oil absorption                          | %                 | 15                           |
| 5 Ash content                             | %                 | 0,2                          |
| 6 Shrinkage                               | %                 | 0,5                          |
| - in machine direction                    |                   |                              |
| - in cross direction                      |                   |                              |
| - thickness                               |                   | 2,6                          |
| 7 Compressibility                         | %                 | 8,4                          |
| 8 Electric strength in oil                | kV/mm             | 61                           |
| 9 Moisture content                        | %                 | 6,2                          |
| 10 Conductivity of aqueous extract (1:50) | μS/cm             | 7                            |
| Conductivity of aqueous extract (1:20)    |                   | 15                           |

The quality of the product meets the requirements GOST 4194-88

Products manufactured under controlled conditions established ISM certified (ISO 9001, ISO 14001, ISO 45001) Certification # 4410019320266, # 4410419320266, # 4412619320266.

**Olha  
Yakymenko**

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# WEIDMANN

## QUALITY CERTIFICATE # 302

Description of goods

TRANSFORMER BOARD LD (GRADE B)

Date of manufacture 06.2023

Date of shipment \_\_\_\_\_

|   |                   |                              |
|---|-------------------|------------------------------|
| Lot №                                     | 267               |                              |
| Thickness, mm                             | 1,5               |                              |
| <b>Technical data: GOST 4194-88</b>       |                   |                              |
| <b>Index</b>                              | <b>Unit</b>       | <b>Average data on a lot</b> |
| 1 Thickness                               | mm                | 1,51                         |
| 2 Apparent density                        | g/cm <sup>3</sup> | 1,13                         |
| 3 Tensile strength                        | MPa               | 108                          |
| - in machine direction                    |                   |                              |
| - in cross machine direction              |                   | 80                           |
| 4 Oil absorption                          | %                 | 15                           |
| 5 Ash content                             | %                 | 0,2                          |
| 6 Shrinkage                               | %                 | 0,6                          |
| - in machine direction                    |                   |                              |
| - in cross direction                      |                   |                              |
| - thickness                               |                   | 3,6                          |
| 7 Compressibility                         | %                 | 6,1                          |
| 8 Electric strength in oil                | kV/mm             | 54                           |
| 9 Moisture content                        | %                 | 5,5                          |
| 10 Conductivity of aqueous extract (1:50) | μS/cm             | 12                           |
| Conductivity of aqueous extract (1:20)    |                   | 24                           |

The quality of the product meets the requirements GOST 4194-88

Products manufactured under controlled conditions established ISM certified (ISO 9001, ISO 14001, ISO 45001) Certification # 4410019320266, # 4410419320266, # 4412619320266.

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# WEIDMANN

## QUALITY CERTIFICATE # 299

Description of goods

TRANSFORMER BOARD LD (GRADE B)

Date of manufacture 05.2023

Date of shipment \_\_\_\_\_

|   |                   |                              |
|---|-------------------|------------------------------|
| Lot №                                     | 266               |                              |
| Thickness, mm                             | 2,0               |                              |
| <b>Technical data: GOST 4194-88</b>       |                   |                              |
| <b>Index</b>                              | <b>Unit</b>       | <b>Average data on a lot</b> |
| 1 Thickness                               | mm                | 1,97                         |
| 2 Apparent density                        | g/cm <sup>3</sup> | 1,13                         |
| 3 Tensile strength                        | MPa               | 117                          |
| - in machine direction                    |                   |                              |
| - in cross machine direction              |                   | 88                           |
| 4 Oil absorption                          | %                 | 17                           |
| 5 Ash content                             | %                 | 0,2                          |
| 6 Shrinkage                               | %                 | 0,3                          |
| - in machine direction                    |                   |                              |
| - in cross direction                      |                   |                              |
| - thickness                               |                   | 2,4                          |
| 7 Compressibility                         | %                 | 5,3                          |
| 8 Electric strength in oil                | kV/mm             | 51                           |
| 9 Moisture content                        | %                 | 4,3                          |
| 10 Conductivity of aqueous extract (1:50) | μS/cm             | 13                           |
| Conductivity of aqueous extract (1:20)    |                   | 33                           |

The quality of the product meets the requirements GOST 4194-88

Products manufactured under controlled conditions established ISM certified (ISO 9001, ISO 14001, ISO 45001) Certification # 4410019320266, # 4410419320266, # 4412619320266.

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# WEIDMANN

## QUALITY CERTIFICATE # 25

Description of goods

Cable paper K – 120

Date of manufacture 02.2023

Date of shipment

| Lot №  |           | 27                    |
|--|-----------|-----------------------|
| Technical data:                                    |           |                       |
| Index  | Norm      | Average data on a lot |
| 1 Thickness, mkm                                   | 120±7     | 118                   |
| 2 Apparent density, g/cm <sup>3</sup>              | 0,78±0,05 | 0,83                  |
| 3 Tensile force, N, minimum                        |           |                       |
| - in machine direction                             | 128       | 179                   |
| - in cross direction                               | 59        | 86                    |
| 4 Elongation at break, %, minimum                  |           |                       |
| - in machine direction                             | 2,0       | 3,3                   |
| - in cross direction                               | 4,5       | 6,4                   |
| 5 Air permeability, cm <sup>3</sup> /min, maximum  | 40        | 20                    |
| 6 Ash, %, maximum                                  | 1,0       | 0,3                   |
| 7 Conductivity of aqueous extract, mkS/cm, maximum |           |                       |
| - 1:50   | 60        | 16                    |
| - 1:20   | 120       | 40                    |
| 8 pH of aqueous extract, pH units                  | 7,0 - 9,0 | 7,0                   |
| 9 Moisture content, %, maximum                     | 8         | 4                     |

Products manufactured under controlled conditions established ISM certified (ISO 9001, ISO 14001, ISO 45001) Certification # 4410019320266, # 4410419320266, # 4412619320266.

|                     |  |
|---------------------|--|
| Laboratory engineer | <b>Lida Kyrychenko</b><br>Digitally signed by: Lida Kyrychenko<br>DN: CN = Lida Kyrychenko email = lida.kyrychenko@weidmann-group.com OU = _WICOR, Users, UKRML_WMPPM<br>Date: 2023.03.02 13:35:07 +02'00' |
|---------------------|--|

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