

## ROUGH Coldwhite Datasheet

|                            |                |                    |                                           |      |      |      |      |      |
|----------------------------|----------------|--------------------|-------------------------------------------|------|------|------|------|------|
| Grammage                   | ISO 536        | gsm                | 90                                        | 100  | 120  | 150  | 240  | 300  |
| Thickness                  | ISO 534        | µm                 | 117                                       | 130  | 150  | 195  | 302  | 377  |
| Bulk                       | ISO 534        | cm <sup>3</sup> /g | 1,3                                       | 1,3  | 1,25 | 1,3  | 1,25 | 1,25 |
| Roughness Bendtsen         | ISO 8791-2     | ml/min             | 350                                       | 350  | 350  | 350  | 350  | 350  |
| Smoothness Bekk            | ISO 5627       | s                  |                                           |      |      |      |      |      |
| Brightness                 | ISO 2471 (D65) | %                  | 109                                       | 109  | 109  | 109  | 109  | 109  |
| Opacity                    | ISO 2471       | %                  | 93.5                                      | 94.5 | 96.5 | 97.5 | 100  | 100  |
| Whiteness                  | ISO 11475      | %                  | 157                                       | 157  | 157  | 157  | 157  | 157  |
| Indigo                     |                |                    | certified                                 |      |      |      |      |      |
| Additional print processes |                |                    | Toner, Riso, Letterpress (300gsm), Offset |      |      |      |      |      |
| Suitable for preprint      |                |                    | yes                                       | yes  | yes  | yes  |      |      |

## Tolerances ±

|                    |                |                    |     |     |     |     |     |     |
|--------------------|----------------|--------------------|-----|-----|-----|-----|-----|-----|
| Grammage           | ISO 536        | gsm                | 3   | 3   | 4   | 4   | 7   | 8   |
| Thickness          | ISO 534        | µm                 | 3   | 3   | 3   | 5   | 2   | 8   |
| Bulk               | ISO 534        | cm <sup>3</sup> /g |     |     |     |     |     |     |
| Roughness Bendtsen | ISO 8791-2     | ml/min             | 100 | 100 | 100 | 100 | 100 | 100 |
| Smoothness Bekk    | ISO 5627       | s                  |     |     |     |     |     |     |
| Brightness         | ISO 2471 (D65) | %                  | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Opacity            | ISO 2471       | %                  | 1   | 1   | 1   | 1   |     |     |
| Whiteness          | ISO 11475      | %                  | 3   | 3   | 3   | 3   | 3   | 3   |

## Certificate

FSC Mix: SGSCH-COC-009212

## GREEN RESPONSIBILITY

Production: acid free  
61% renewable energies  
vegan

## ROUGH White Datasheet

|                            |                |        |                                           |      |           |                       |       |     |           |
|----------------------------|----------------|--------|-------------------------------------------|------|-----------|-----------------------|-------|-----|-----------|
| Grammage                   | ISO 536        | gsm    | 90                                        | 100  | 120       | 150                   | 160   | 240 | 300       |
| Thickness                  | ISO 534        | µm     | 125                                       | 138  | 168       | 209                   | 208   | 328 | 423       |
| Bulk                       | ISO 534        | cm3/g  | 1.4                                       | 1.4  | 1.4       | 1.4                   | 1,3   | 1.4 | 1.4       |
| Roughness Bendtsen         | ISO 8791-2     | ml/min | 300                                       | 300  | 300       | 300                   | 300   | 300 | 300       |
| Smoothness Bekk            | ISO 5627       | s      |                                           |      |           |                       |       |     |           |
| Brightness                 | ISO 2471 (D65) | %      | 110                                       | 110  | 110       | 110                   | 96,5  | 110 | 110       |
| Opacity                    | ISO 2471       | %      | 90                                        | 91.5 | 94.5      | 96.5                  | 97    | 99  | 100       |
| Whiteness                  | ISO 11475      | %      | 148                                       | 148  | 148       | 148                   | 137,4 | 148 | 148       |
| Indigo                     |                |        | possible if 'digital'                     |      | certified | possible if 'digital' |       |     | certified |
| Additional print processes |                |        | Toner, Riso, Letterpress (300gsm), Offset |      |           |                       |       |     |           |
| Suitable for preprint      |                |        | yes                                       | yes  | yes       | yes                   | yes   |     |           |

## Tolerances ±

|                    |                |                    |     |     |     |     |    |     |     |
|--------------------|----------------|--------------------|-----|-----|-----|-----|----|-----|-----|
| Grammage           | ISO 536        | gsm                | 3   | 4   | 4   | 4   | 4  | 5   | 8   |
| Thickness          | ISO 534        | µm                 | 3   | 4   | 4   | 4   | 2  | 7   | 8   |
| Bulk               | ISO 534        | cm <sup>3</sup> /g |     |     |     |     |    |     |     |
| Roughness Bendtsen | ISO 8791-2     | ml/min             | 50  | 50  | 50  | 50  | 50 | 50  | 50  |
| Smoothness Bekk    | ISO 5627       | s                  |     |     |     |     |    |     |     |
| Brightness         | ISO 2471 (D65) | %                  | 1.5 | 1.5 | 1.5 | 1.5 | 3  | 1.5 | 1.5 |
| Opacity            | ISO 2471       | %                  | 1   | 1   | 1   | 1   | 1  | 1   |     |
| Whiteness          | ISO 11475      | %                  | 3   | 3   | 3   | 3   | 2  | 3   | 3   |

## Certificate

FSC Mix: SGSCH-COC-009212

## GREEN RESPONSIBILITY

Production: acid free  
61% renewable energies  
vegan

## ROUGH Warmwhite Datasheet

|                            |                |                    |                                                        |      |      |      |      |      |
|----------------------------|----------------|--------------------|--------------------------------------------------------|------|------|------|------|------|
| Grammage                   | ISO 536        | gsm                | 90                                                     | 100  | 120  | 150  | 240  | 300  |
| Thickness                  | ISO 534        | µm                 | 117                                                    | 128  | 153  | 202  | 290  | 388  |
| Bulk                       | ISO 534        | cm <sup>3</sup> /g | 1,3                                                    | 1,3  | 1,3  | 1,3  | 1,2  | 1,3  |
| Roughness Bendtsen         | ISO 8791-2     | ml/min             | 200                                                    | 200  | 200  | 200  | 200  | 180  |
| Smoothness Bekk            | ISO 5627       | s                  |                                                        |      |      |      |      |      |
| Brightness                 | ISO 2471 (D65) | %                  | 89,5                                                   | 89,5 | 89,5 | 89,5 | 89,5 | 89,5 |
| Opacity                    | ISO 2471       | %                  | 87                                                     | 88,5 | 91   | 93   | 96,5 | 97,5 |
| Whiteness                  | ISO 11475      | %                  | 77,8                                                   | 77,8 | 77,8 | 77,8 | 77,8 | 77,8 |
| Indigo                     |                |                    | possible                                               |      |      |      |      |      |
| Additional print processes |                |                    | Toner, Riso (bis 240gsm), Letterpress (300gsm), Offset |      |      |      |      |      |
| Suitable for preprint      |                |                    | yes                                                    | yes  | yes  | yes  |      |      |

## Tolerances ±

|                    |                |                    |     |    |     |    |    |    |
|--------------------|----------------|--------------------|-----|----|-----|----|----|----|
| Grammage           | ISO 536        | gsm                | 3,5 | 4  | 4,5 | 5  | 5  | 10 |
| Thickness          | ISO 534        | µm                 | 4   | 4  | 5   | 5  | 7  | 10 |
| Bulk               | ISO 534        | cm <sup>3</sup> /g |     |    |     |    |    |    |
| Roughness Bendtsen | ISO 8791-2     | ml/min             | 50  | 50 | 50  | 50 | 50 | 50 |
| Smoothness Bekk    | ISO 5627       | s                  |     |    |     |    |    |    |
| Brightness         | ISO 2471 (D65) | %                  | 2   | 2  | 2   | 2  | 2  | 2  |
| Opacity            | ISO 2471       | %                  | 1   | 1  | 1   | 1  | 1  | 1  |
| Whiteness          | ISO 11475      | %                  | 2   | 2  | 2   | 2  | 2  | 2  |

## Certificate

FSC Mix: SGSCH-COC-009212

## GREEN RESPONSIBILITY

Production: acid free  
61% renewable energies  
vegan