

# PT. INDAH KIAT PULP & PAPER Tbk.

## Specification of WoodFree Paper

February 15, 2023

### Physical Properties

| No | Description                | UNIT  | Test Reference  | Basis Weight ( gsm ) |         |         |         |         |         |         |          |          |          |
|----|----------------------------|-------|-----------------|----------------------|---------|---------|---------|---------|---------|---------|----------|----------|----------|
|    |                            |       |                 | 60                   | 68      | 70      | 75      | 78      | 80      | 90      | 100      | 110      | 120      |
| 1  | Basis Weight               | gr/m2 | ISO 536:2019    | 60 + 4%              | 68 + 4% | 70 + 4% | 75 + 4% | 78 + 4% | 80 + 4% | 90 + 4% | 100 + 4% | 110 + 4% | 120 + 4% |
| 2  | Thickness                  | µm    | ISO 534:2011    | 78 ± 4               | 88 ± 4  | 91 ± 4  | 98 ± 4  | 101 ± 4 | 104 ± 4 | 117 ± 4 | 128 ± 4  | 145 ± 4  | 158 ± 4  |
| 3  | Moisture Content           | %     | ISO 287:2017    | 5.0 - 5.5            |         |         |         |         |         |         |          |          |          |
| 4  | Opacity                    | %     | ISO 2471:2008   | ≥ 86.0               | ≥ 90.0  |         |         |         |         |         |          |          |          |
| 5  | Smoothness Bekk            | W     | ISO 5627:1995   | 15.0 - 35.0          |         |         |         |         |         |         |          |          |          |
|    |                            | F     |                 | 15.0 - 35.0          |         |         |         |         |         |         |          |          |          |
| 6  | Stiffness Bending<br>(15°) | MD    | ISO 2493-1:2010 | ≥ 0.12               | ≥ 0.20  | ≥ 0.22  | ≥ 0.26  | ≥ 0.30  | ≥ 0.32  | ≥ 0.40  | ≥ 0.50   | ≥ 0.70   | ≥ 0.80   |
|    |                            | CD    |                 | ≥ 0.06               | ≥ 0.09  | ≥ 0.11  | ≥ 0.13  | ≥ 0.16  | ≥ 0.16  | ≥ 0.20  | ≥ 0.25   | ≥ 0.35   | ≥ 0.40   |

### Optical Properties

| No | Description   | UNIT | Test Reference | Grade Color           |
|----|---------------|------|----------------|-----------------------|
| 1  | Brightness    | %    | ISO 2470:2016  | Bluish White          |
| 2  | CIE Whiteness | %    | ISO 11475:2017 | 95.0 ± 1<br>160.0 ± 3 |

 TESTING CONDITION ( ISO 187:1990 )  
 TEMPERATURE 23 ± 1 °C  
 RELATIVE HUMIDITY 50 ± 2 %

 QUALITY CONTROL HEAD  
 ANDI WIBOWO