

| PROPERTY  | Target |       |      |      |       |       |      | Tolerance | ASTM test method |
|---|--------|-------|------|------|-------|-------|------|-----------|------------------|
|   | N220   | N326  | N330 | N339 | N375  | N550  | N660 |           |                  |
| 1. Iodine adsorption number, g/kg                                     | 121    | 82    | 82   | 90   | 90    | 43    | 36   | ± 5       | D 1510           |
| 2. Oil absorption number, cm <sup>3</sup> /100g                       | 114    | 72    | 102  | 120  | 114   | 121   | 90   | ± 5       | D 2414           |
| 3. CTAB surface area, m <sup>2</sup> /g                               | 111    | 83    | 82   | 93   | 96    | 41    | 36   | ± 5       | D 3765           |
| 4. Sieve residue 45 μm (No. 325), %                                   |        |       |      |      |       |       |      | ≤ 0.05    | D 1514           |
| 5. Sieve residue 500 μm (No. 35), %                                   |        |       |      |      |       |       |      | ≤ 0.001   | D 1514           |
| 6. Heating loss, %  |        |       |      |      |       |       |      | ≤ 1.0     | D 1509           |
| 7. Ash content, %   |        |       |      |      |       |       |      | ≤ 0.75    | D 1506           |
| 8. Pour density, kg/m <sup>3</sup>                                    | 355    | 455   | 380  | 345  | 345   | 360   | 440  | ± 25      | D 1513           |
| 9. Fines content, %   |        |       |      |      |       |       |      | ≤ 7.0     | D 1508           |
| 10. pH value  |        |       |      |      |       |       |      | 7 + 10    | D 1512           |
| 11. Sulfur content, %   |        |       |      |      |       |       |      | ≤ 1.1     | D 1619           |
| 12. Individual pellet hardness (average of 20), g                     | 25+40  | 20+40 |      |      | 15+45 | 20+40 |      |           | D 5230           |
| 13. Individual pellet hardness (max of 20), g                         |        |       |      |      |       |       |      | ≤ 60      | D 5230           |
| 14. Toluene discoloration, %, min                                     | 90     | 85    | 85   | 75   | 75    | 80    | 75   |           | D 1618           |
| 15. BET surface area (NSA), m <sup>2</sup> /g                         | 114    | 78    | 78   | 91   | 93    | 40    | 35   | ± 5       | D 6556           |
| 16. External surface area (STSA), m <sup>2</sup> /g                   | 106    | 76    | 75   | 88   | 91    | 39    | 34   | ± 5       | D 6556           |
| 17. Tint strength   | 116    | 111   | 104  | 111  | 114   | -     | -    | ± 5       | D 3265           |
| 18. Oil absorption number of compressed sample, cm <sup>3</sup> /100g | 98     | 68    | 88   | 99   | 96    | 85    | 74   | ± 5       | D 3493           |
| 19. Reception temperature, °C   |        |       |      |      |       |       |      | < 100     |                  |