

表 2-2 纤维素系聚合物重复单元结构及主要性质<sup>[1]</sup>

| 序号 | 重复单元结构*  | 酯或醚含量, %               | 黏度, 泊     |
|----|--|------------------------|-----------|
| 1  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{2.19}(\text{OCOCH}_3)_{9.81}$                                 | 乙酰基, 39.8              | 6.8-14.8  |
| 2  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{2.78}(\text{OCOCH}_3)_{9.22}$                                 | 乙酰基, 38.3              | 132-208   |
| 3  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{2.35}(\text{OCOCH}_3)_{9.65}$                                 | 乙酰基, 39.4              | 147-197   |
| 4  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})(\text{OCOCH}_3)_{11}$  | —                      | —         |
| 5  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{0.8}(\text{OCOCH}_3)_{8.25}(\text{OCOC}_2\text{H}_5)_{2.05}$  | 乙酰基, 30.6<br>丙酰基, 14.5 | —         |
| 6  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{0.39}(\text{OCOCH}_3)_{11.61}$                                | 丙酰基, 51.0              | 0.8       |
| 7  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{1.0}(\text{OCOCH}_3)_{8.15}(\text{OCOC}_3\text{H}_7)_{2.85}$  | 乙酰基, 29.5<br>丁酰基, 17   | 5.6-9.4   |
| 8  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{1.0}(\text{OCOCH}_3)_{8.15}(\text{OCOC}_3\text{H}_7)_{2.85}$  | 乙酰基, 29.5,<br>丁酰基, 17  | 115-188   |
| 9  | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{1.50}(\text{OCOCH}_3)_{3.85}(\text{OCOC}_3\text{H}_7)_{6.65}$ | 乙酰基, 13.0<br>丁酰基, 37.0 | 3.8-13.1  |
| 10 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{0.58}(\text{OCOCH}_3)_{1.95}(\text{OCOC}_3\text{H}_7)_{9.47}$ | 乙酰基, 6<br>丁酰基, 48      | 15.0-22.5 |
| 11 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OCOC}_9\text{H}_{19})_{12}$   | —                      | —         |
| 12 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{9.95}(\text{OCOC}_6\text{H}_5)_{2.05}$                        | 苯甲酰基, 25.0             | —         |
| 13 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{3.06}(\text{OC}_2\text{H}_5)_{8.94}$                          | 乙氧基, 44.8              | 0.45      |
| 14 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{1.64}(\text{OC}_2\text{H}_5)_{10.36}$                         | 乙氧基, 49.7              | 0.10      |
| 15 | $(\text{CH}_2)_4(\text{CH})_{20}(\text{O})_8(\text{OH})_{12}$  | —                      | —         |

\*.四个脱水葡萄糖单元作为一个重复单元, 官能团数是平均值。