

The EINECS number for potassium sorbate is 246-376-1. The PubChem Compound ID (CID) for potassium sorbate includes 23676745 and 24184641.

19 Specific References

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20 General References

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21 Author

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22 Date of Revision

4 May 2017.

Povidone

1 Nonproprietary Names

BP: Povidone

JP: Povidone

PhEur: Povidone

USP–NF: Povidone

2 Synonyms

E1201; *Kollidon*; *Plasdone*; poly[1-(2-oxo-1-pyrrolidinyl)ethylene]; polyvidone; polyvinylpyrrolidone; povidonum; *Povipharm*; PVP; 1-vinyl-2-pyrrolidinone polymer.

3 Chemical Name and CAS Registry Number

1-Ethenyl-2-pyrrolidinone homopolymer [9003-39-8]

4 Empirical Formula and Molecular Weight

(C₆H₉NO)_n 2 500–3 000 000

The USP 40–NF 35 S1 describes povidone as a synthetic polymer consisting essentially of linear 1-vinyl-2-pyrrolidinone groups, the differing degree of polymerization of which results in polymers of various molecular weights. It is characterized by its viscosity in aqueous solution, relative to that of water, expressed as a *K*-value, in the range 10–120. The *K*-value is calculated using Fikentscher's equation:⁽¹⁾

$$\log z = c \left[\frac{75k^2}{1 + 1.5kc} \right] + k$$

where *z* is the relative viscosity of the solution of concentration *c* (in % w/v), and *k* is the *K*-value × 10⁻³.

Alternatively, the *K*-value may be determined from the following equation:

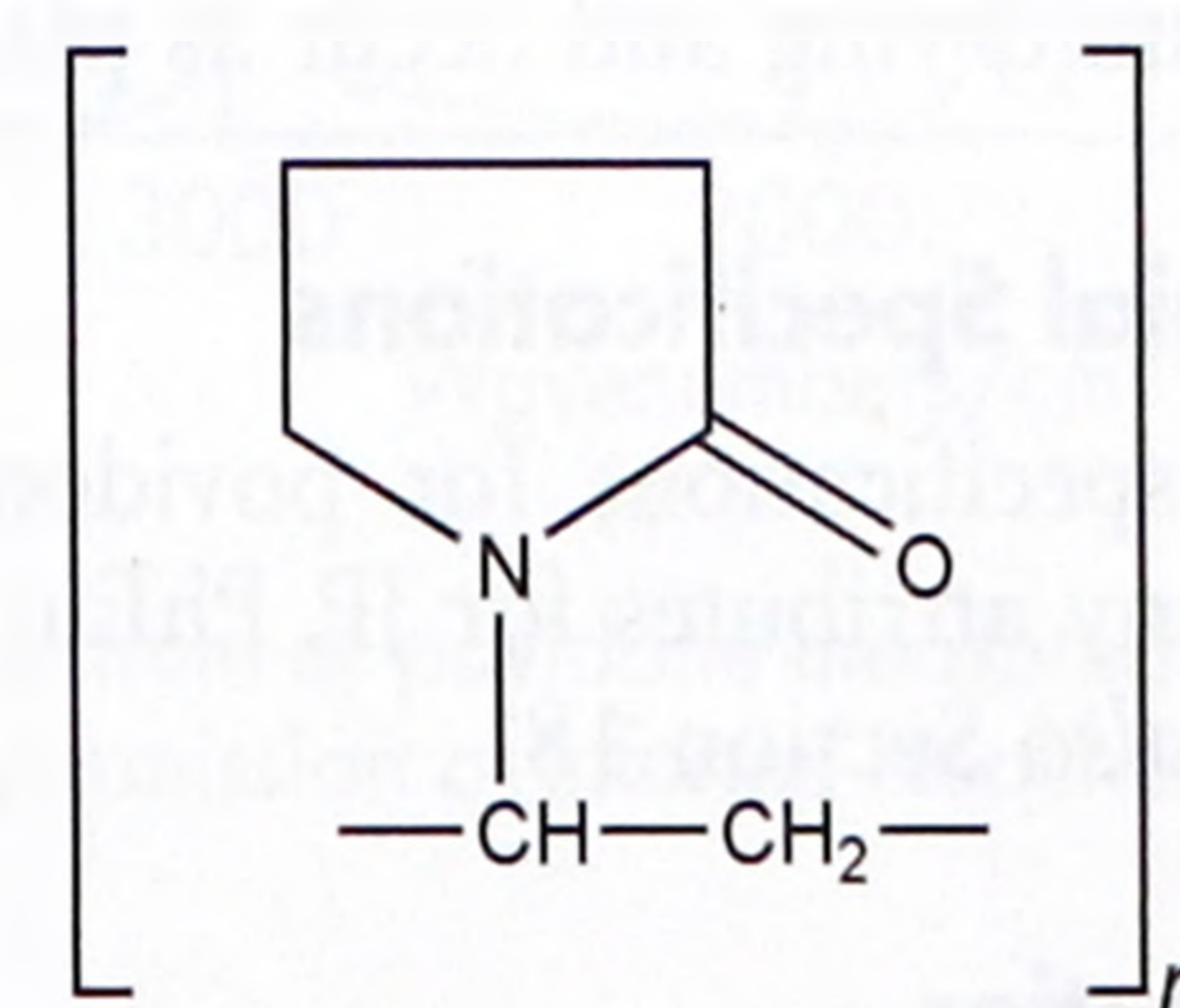
$$K\text{-value} = \sqrt{\frac{300c \log z (c + 1.5c \log z)^2 + 1.5}{0.15c + 0.003c^2}}$$

where *z* is the relative viscosity of the solution of concentration *c* (in % w/v).

Approximate molecular weights for different povidone grades are shown in Table I.

See also Section 8.

5 Structural Formula



6 Functional Category

Coating agent; film-forming agent; solubilizing agent; suspending agent; tablet and capsule binder; tablet and capsule disintegrant.

7 Applications in Pharmaceutical Formulation or Technology

Although povidone is used in a variety of pharmaceutical formulations, it is primarily used in solid-dosage forms. In tableting,