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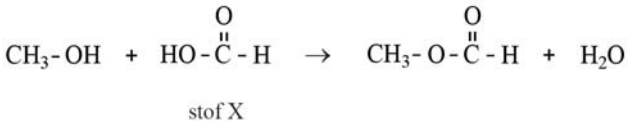
Epoxypropaan

7 propeen + H_2O_2 → 1,2-epoxypropaan + H_2O

$-0.18 \times 10^5 + 1{,}88 \times 10^5 + X - 2{,}86 \times 10^5 = -2{,}09 \times 10^5$

vormingswarmte 1,2-epoxypropaan = X = $-0{,}93 \times 10^5$ J mol^{-1}

8



9 Methanol kan (via methanal) omgezet worden in methaanzuur. Het methanol reageert dan als reductor. Waterstofperoxide reageert hier dan als oxidator.

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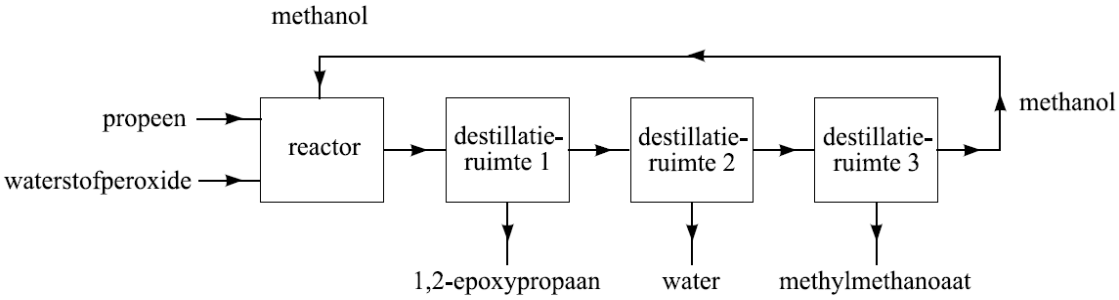

11
- $5{,}0 \times 10^3$ ton = $5{,}0 \times 10^9$ g epoxypropaan dat is : $5{,}0 \times 10^9 / 58{,}08 = 8{,}61 \times 10^7$ mol e.p.
- voor $8{,}61 \times 10^7$ mol e.p. was nodig : $8{,}61 \times 10^7$ mol waterstofperoxide
  $8{,}61 \times 10^7$ mol waterstofperoxide = 90 % van de totale hoeveelheid waterstofperoxide
  10% = $8{,}61 \times 10^7 / 9{,}0 = 9{,}56 \times 10^6$ mol waterstofperoxide
- $9{,}56 \times 10^6$ mol waterstofperoxide reageert met $9{,}56 \times 10^6$ mol methanol
- dat is : $9{,}56 \times 10^6 \times 32{,}04 = 3{,}06 \times 10^8$ g methanol = $3{,}1 \times 10^2$ ton methanol