

## AquaSol® 9000 Hydrolyzed Polymaleic Anhydride (HPMA)

CAS NO.: 26099-09-2 Structural Formula:

$$* \left[ \begin{array}{c|c} H & H & H & H \\ \hline \\ C & C & \\ \hline \\ COOH & COOH \\ \end{array} \right]_{n} \left[ \begin{array}{c|c} H & H & H \\ \hline \\ C & C \\ \hline \\ \end{array} \right]_{m}$$

## **Physico-Chemical Properties:**

Appearance	Clear, Colorless to pale yellow aqueous solution
Solid content	50.0% min
Bromine value mg/g	50.0 max
PH(1% water solution)	2.0-3.0
Density (20°C) g/cm³	1.22-1.25

## **General Information**

HPMA is a low molecular weight polymeride, with average molecular weight 400-800. No toxicity, soluble in water, high chemical and thermal stability, decomposed temperature above  $330^{\circ}$ C. HPMA has obvious threshold effect under high temperature ( $350^{\circ}$ C) and high pH (8.3) level, suitable to be used in alkaline water system or built with agents. It has good scale inhibition against carbonate and phosphate scales under temperature  $300^{\circ}$ C with effective time as long as 100 hours. Due to its good scale inhibition and high temperature tolerance properties,

HPMA is widely used in desalination plant of flash vaporization equipment, low pressure boiler, steam locomotive, crude oil evaporation, petroleum pipeline, and industrial circulating cool water systems. In addition, HPMA has good corrosion inhibition effect when used together with zinc salt. HPMA can also used as additives for cement.

## **Safety Protection**

Acidity, Avoid contact with eye and skin, once contacted, flush with water.

