## ΕΛSTΜΛΝ

# Eastman AQ<sup>™</sup> 48 ultra polymer formulating tips

for clear 55% VOC<sup>1</sup> hair spray

## Dispersing

- Eastman AQ<sup>™</sup> 48 dispersion at elevated temperature:
  - Disperse in water at 40° to 50°C at a maximum concentration of about 30 wt %. Disperse with rapid stirring to prevent pellets from sticking together. The time to disperse is about 10 to 15 minutes depending on the concentration of Eastman AQ<sup>™</sup> 48.
  - Minimize the length of time that the aqueous dispersion is held at elevated temperature.
  - If using an Eastman AQ<sup>™</sup> 48 aqueous concentrate over several days, store the concentrate in the refrigerator.
- Eastman AQ<sup>™</sup> 48 dispersion at room temperature:
  - Disperse in 2:1 to 1:1 water:alcohol mixture at room temperature at a maximum concentration of about 10 wt %. Disperse with rapid stirring to prevent pellets from sticking together. The time to disperse is about 25 to 30 minutes in 2:1 water:alcohol and about 35 to 40 minutes in 1:1 water:alcohol.

<sup>1</sup>Volatile Organic Compound

### Concentration

• Use 5% or less Eastman AQ<sup>™</sup> 48 in the hair spray formula. In a pump hair spray with 5% Eastman AQ<sup>™</sup> 48, use 55% alcohol or less. A little less can provide better hair spray clarity.

## Formulation pH and order-of-addition

- When using an acidic co-resin that requires neutralization, neutralize to pH <7.8 (75% neutralization for Balance<sup>™</sup> 47 polymer).
- When using an acidic co-resin that requires neutralization, add the amine or other neutralizing agent to the Eastman AQ<sup>™</sup> 48 dispersion after all of the alcohol has been added; or use a 2-part procedure as given in Eastman Publication CB-104. The 2-part procedure requires two vessels, but is faster than a 1-part procedure.



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