

THIS SHEET HAS BEEN
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**NOVOLAK RESINS OF LOWERED HYDROXYL CONTENT
AND HIGH CONTRAST HIGH THERMAL STABILITY
POSITIVE PHOTORESISTS PREPARED THEREFROM**

ABSTRACT OF THE DISCLOSURE

Novolak resins are provided which are the condensation product of (a) a phenol, phenol derivative, or mixtures thereof, and (b) a mixture of formaldehyde or a formaldehyde precursor and (1) a monohydroxy aromatic aldehyde and wherein at least a portion of the hydroxyl groups thereof are esterified or (2) a mixture of at least one monohydroxy aromatic aldehyde and at least one non-hydroxylic aromatic aldehyde; the novolak resins having a hydroxyl number of from about 120 to about 180 grams of resin per equivalent of hydroxyl. The novolak resins are especially useful in positive photoresist formulations and have enhanced photospeed and film loss characteristics as well as improved thermal stability.

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