

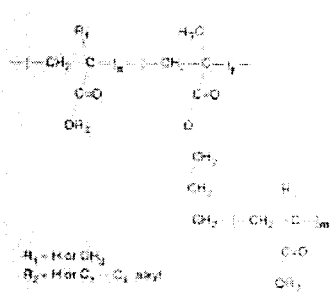
FIXATE™ G-100 POLYMER—A New Standard for Fixative

INTRODUCTION

With Fixate™ G-100 polymer, a whole new world of styling product possibilities awaits you. Fixate™ G-100 polymer satisfies the demand for high performance products that offer significant consumer-perceptible benefits, while meeting the formulator's needs for cost control and manufacturing efficiency.

The unique features of Fixate™ G-100 polymer include:

- A highly branched, cross-linked polymer structure with distinct hydrophilic and hydrophobic domains
- Easy to use, aqueous solution readily disperses in water or alcohol
- Pre-neutralized to pH 6.0 with AMP 95™
- Good efficacy at low use levels
- Unique flow and leveling on hair
- Excellent film strength and clarity
- Non-yellowing
- Compatibility with Carbopol® polymers, other natural or synthetic, rheology modifiers, and many commonly used styling product additives



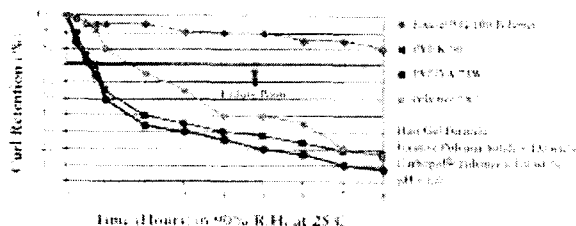
Key Benefits Contributed by Fixate™ G-100 polymer:

- >8 Hours High Humidity Curl Retention
- Excellent Curl Snap and Curl Memory
- Healthy-looking Natural Shine
- Superior Style Creation and Hold
- Virtually No Flaking or Dusting
- Easy Removal from Hair
- Appealing Product Aesthetics
- Formulating Versatility from Soft, Touchable Hold to a Firm, Crisp Finish

ENHANCED HUMIDITY RESISTANCE

Fixate™ G-100 polymer contributes enhanced humidity resistance properties to formulations. Compared to traditional fixative polymers, which "fall out" in less than an hour under test conditions, Fixate™ G-100 polymer holds its style for more than 8 hours. This allows for the creation of products with superior duration of hold, as well as strong resistance to frizzing.

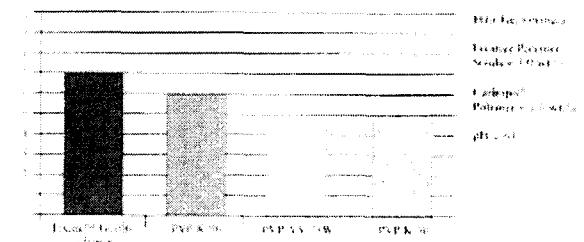
Percent curl retention is measured as a function of time. As shown below, tresses treated with Fixate™ G-100 polymer exhibit dramatically greater curl retention than other polymers tested. With Fixate™ G-100 polymer, curl retention still exceeded 70% at the end of 8 hours of 90% relative humidity.



EXCELLENT CURL SNAP

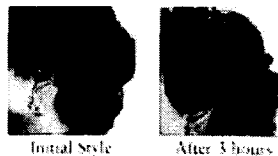
The ability of curled tresses to sprang back after comb-through is measured as an indication of "curl snap" or curl resilience. Curls styled with Fixate™ G-100 polymer show improved bounce and responsiveness.

As shown below, tresses curled with Fixate™ G-100 polymer retained more curl after comb-through than other polymers tested.



LONG-LASTING STYLE

Fixate™ G-100 polymer provides styles that last. Salon testing compared the performance of Fixate™ G-100 polymer to PVPVA using half head tests. Styles created with Fixate™ G-100 polymer show better initial style and style retention after 3 hours, even with 25% less fixative polymer.



The styles at left depict initial styling and style after 3 hours with a prototype gel formula containing 1% total solids of Fixate™ G-100 polymer and 0.75% Carbopol polymer.

The styles at right depict initial styling and style after 3 hours with a prototype gel formula containing 4% total solids of PVPVA™ 9W and 0.3% Carbopol polymer.

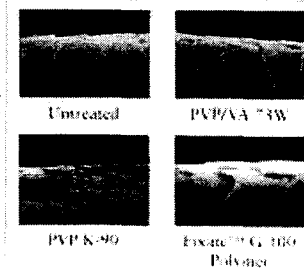


Carbopol is a registered trademark of The Dow Chemical Company.

UNIQUE FLOW AND LEVELING ON HAIR

Compared to traditional styling polymers, Fixate™ G-100 polymer exhibits better flow over the hair, enabling improved distribution through hair for superior style creation, appearance and shine. This contributes to volumizing and promotes adhesion for noticeably reduced flaking. The flexible, hydrophobic block in Fixate™ G-100 polymer enhances restylability and thermal styling properties.

Flow Leveling on Hair—Comparison



Scanning electron microscopy (SEM) illustrates polymer flow over hair. While other polymers tend to bead rather than flow on hair, resulting in poor hold, unevenness, and flaking, Fixate™ G-100 polymer forms a smooth, continuous film for improved adhesion and cohesion.

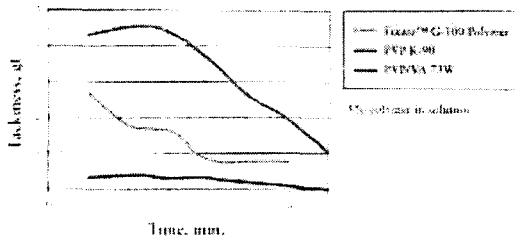
Scanning electron microscopy

ative Performance

fixate™
polymers

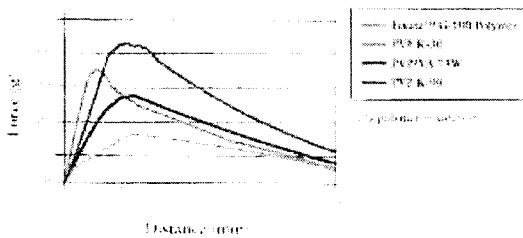
Wet Tack

Fixate™ G-100 polymer provides just enough wet tack to give consumers the sensory signal expected during styling. Once dry, hair feels silky and healthy, not raspy or rough. Fixate™ G-100 polymer is less hygroscopic and picks up less moisture and dust from the air, so hair feels cleaner longer.



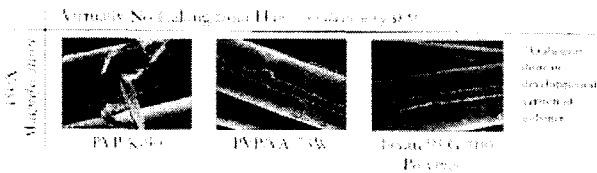
FIXATIVE STRENGTH AND CRISPNESS

Fixate™ G-100 polymer provides a crisp feel and high initial strength. Styles can withstand more stress from movement, wind or touch.



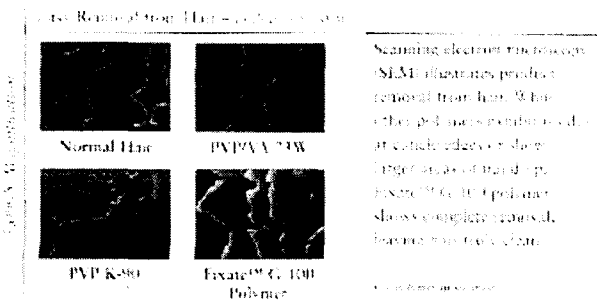
Anti-Static, No Flaking

Even in a low humidity environment, some fixative polymers exhibit flaking which can cause visible flaking from the hair, leaving residue on the hair and on shoulders. Fixate™ G-100 polymer exhibits strong bonding and a high resistance to flaking.



Easy Removal From Hair

The hydrophilic block in Fixate™ G-100 polymer enables product to be easily removed from hair through normal shampooing.



FORMULATING VERSATILITY

A wide range of formulations are possible with Fixate™ G-100 polymer, from foaming stylers to glazes, lotions, mousses, gels, creams, and waxes; from frizz control to smoothing/straightening, from long-lasting curls to texture definition. Create the finish you desire, from soft, roughable hold to a firm, crisp feel.

Fixate™ G-100 polymer provides superior product aesthetics and puts styling versatility at your fingertips, yet it is efficient, easy to use, and enables simplified processing.

Recommended Use Level	0.5% - 5.0% solids (1.0-1.5% as supplied. Adjust according to product requirements)
Recommended pH	5.8-6.5
Neutralization	No further neutralization required
Rheology Modifiers	Carbopol® polymers (940, 980, F11, 301), Ulrez 210 or other natural or synthetic rheology control agents
Carbopol® Polymer Use Level	< 1.0%. Adjust level as needed to achieve desired viscosity

For more information, visit www.noveon.com or call 1-800-368-5622.

Appearance	Transparent Liquid
Viscosity (mPa·s) as supplied	> 1,500
Total Solids, %	25
Clarity (% solids in water), %	> 85
pH, as supplied	6.0

formulation concepts with processing procedures and supplier references are available upon request.

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