



# FLEXIBLE AND SOFT HOLD HAIR STYLING

Consumers want flexible and soft hold delivered by hair styling products. SilForm\* HyFlex emulsion is a multi-functional ingredient for hair care products such as mousses, styling creams, gels or sprays that can help formulators address the latest trends in hair care.

SilForm HyFlex emulsion is a silicone-organic hybrid, film forming emulsion that upon drying leaves an elastic film with enhanced mechanical properties to provide flexible, natural and soft hold to the hair. SilForm HyFlex has excellent mechanical strength and elasticity and its film properties make it possible to formulate hair styling products that delivers natural hold and curl definition with a unique soft feel

## Key Features & Typical Benefits

### Film properties

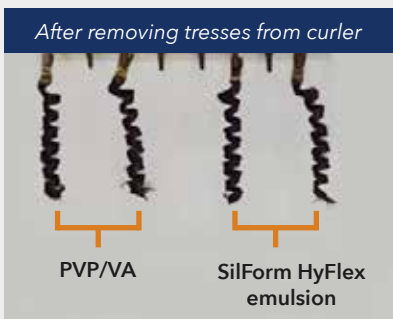
- Mechanical strength
- Elastic/flexible
- Water resistant
- Adhesion to hair
- Gloss

### Application Benefits

- Flexible and natural hold
- Soft feel
- Compatible with most anionic and nonionic ingredients typically found in pump sprays, hair gels and mousses
- Curl memory and curl definition

## Film Elasticity for Unique Hair Texture

SilForm HyFlex emulsion can provide film elasticity for unique hair texture.



## Curl Memory



**Method** - To study curl memory, 15 mg of SilForm HyFlex emulsion was applied to dark brown hair tress (1.5 gm, 25 cm). Hair tresses were mounted on curler and allowed to air dry for 12 hours. Hair tresses were then removed from curler and inserted in climatic chamber (90% RH and 25 °C). Pictures of tresses before and after 5 hours in climatic chamber were recorded to study the curl retention. The tresses were then combed 10 times after removing them from climatic chamber to study the curl the memory. Performance of SilForm HyFlex was compared with PVP/VA, a water soluble polymer.

As illustrated in pictures SilForm HyFlex can provide soft hold and excellent curl memory even after exposing hair to high humidity for extended time.

Note: Test results. Actual results may vary.

\*SilForm is a trademark of Momentive Performance Materials Inc.

## Curl Definition

SilForm HyFlex emulsion can help to achieve long-lasting curl definition when used in styling applications like spray.

### Aqua Spray for Curl Definition

#### Method:

The hair tresses (bleached wavy hair, 5 g, 20 cm) were washed for 1 minute with 10% SLES solution and then rinsed for 1 minute. The water was squeezed out. The aqua spray was applied (~ 0.5 g) to tresses.



#### Test 1



Note: Test results. Actual results may vary.

The hair tresses were air dried for 12 hours. The hair tresses were put in the climatic chamber (90% HR, 25°C).

#### Test 2



Note: Test results. Actual results may vary.

The tresses were applied onto a hair curler. The hair tresses were air dried for 12 hours. The hair tresses were put in the climatic chamber (90% HR, 25°C).

As illustrated in pictures for both the tests, even after subjecting hair tresses to 90% RH for 1 hour, well-defined curl was observed as compared to formulation without SilForm HyFlex emulsion. Thus providing, enhanced curl definition benefits to hair care formulations.

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