

Pellicer is...

- Pellicer is a gemini amphiphilic compound which has two hydrophilic tails and 3 hydrophilic groups, deriving from natural fatty acids and amino acids.
- Pellicer L-30's source materials are all plant derived. Any source materials derive from petroleum or animals are not contained. (*Pellicer LB-10 contains Butylene Glycol whose source material is petroleum derived.)
- Repairs damaged skin by permeating into stratum corneum and improves barrier function of skin through the similar function with Ceramide.
- Penetrates into hair interior portion and improves strength, thickness, water content of damaged hair and gives resilience and smoothness.
- Expresses emulsification and dispersion function at very low concentration. Compared to nonionic surfactants, excels in texture and decreases emulsifying cost.
- Gels various kind of oil by the method of D-phase emulsification. Enables it to formulate make up remover or massage oil which are tender to skin.

Hair care function of Pellicer

Penetrates into hair interior portion and repairs damage from inside.

-Penetrates into hair interior portion and repairs damage.

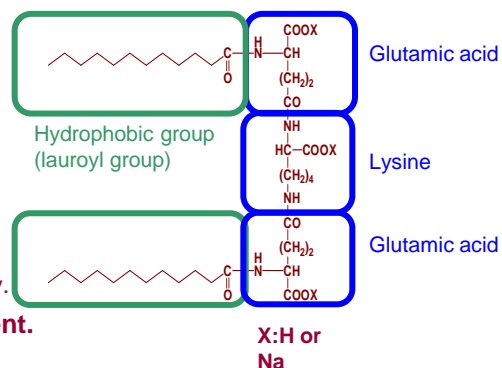
- Penetrates into deep portion of hair fiber even with a short treatment time; 1min., and repairs hair damage from inside.
- Recovers hair strength, thickness, and water content.
- Penetrates into hair fiber when Pellicer is added to rinse-off formulations like shampoo and conditioner.

-Brings excellent texture like smoothness and hair-gathering feeling.

- Brings moisture-feeling, smoothness-feeling and hair gathering feeling on next day.

-Reinforces waving ability, by being added to pre-perming treatment agent.

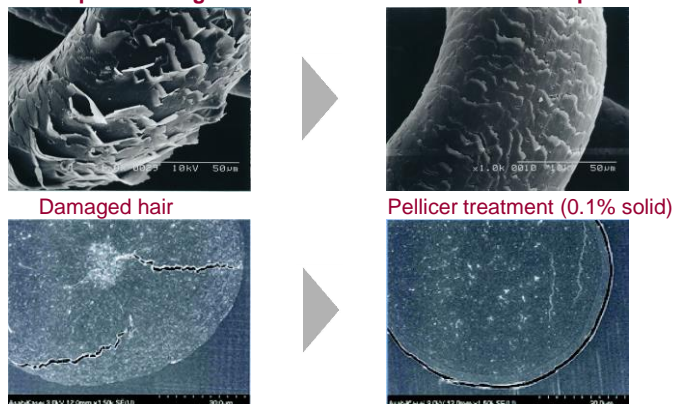
-Scalp care effect can be expected because Pellicer repairs skin damage as well.



Chemical structure of Pellicer

Damage repair effect

Pellicer repairs damage on hair surface and in hair interior portion.



Pellicer treatment condition:

Immerse damaged hair fiber in Pellicer solution (0.1% solid) for 1min, then leave the hair fiber to dry at room temp. for 1 day, after towel dry.

Application examples

- Shampoo, conditioner, and other sort of in-bath products.
- Treatment, styling, and other sort of out-bath products
- Pre/post agent for curling / coloring agent

Recommended use level

- Pellicer LB-10: 1.0%
- Pellicer L-30: 0.3%
- (Solid base concentration: 0.1%)

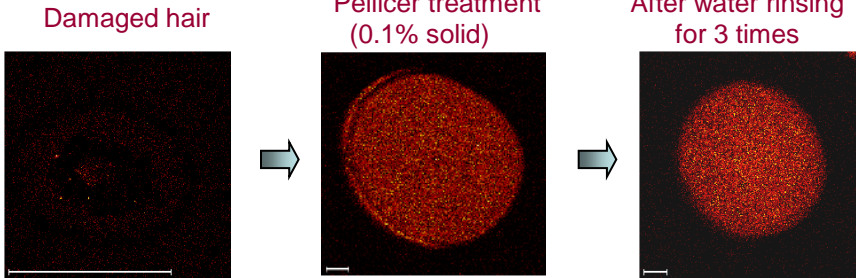
Grade lineup

Trade name	Pellicer LB-10	Pellicer L-30
INCI Name* (Concentration %)	Sodium Dilauramidoglutamide Lysine (10%) Butylene Glycol (10%) Water (80%)	Sodium Dilauramidoglutamide Lysine (29%) Water (71%)
Packing	18kg/Can	1kg/Can, 18kg/Can

*INCI NAME of Pellicer LB-10 is under application as of July 15, 2010.

Permeability into hair

Pellicer can penetrate into deep portion of hair fiber even with a short treatment time; 1min., and remains in interior portion of hair fiber after water rinsing.

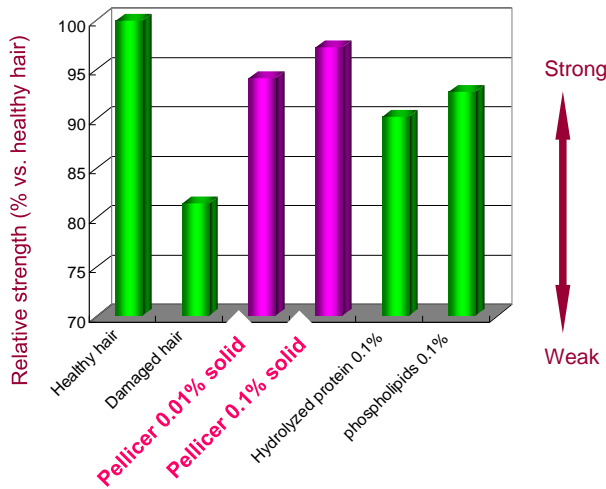


Test method:

Immerse damaged hair fiber in Pellicer solution (0.1% solid) for 1min, then rinse it in 40C water for 2 min for 3 times. Cross section of hair fiber was observed by TOF-SIMS method to confirm penetration of Pellicer.

Break strength recovery

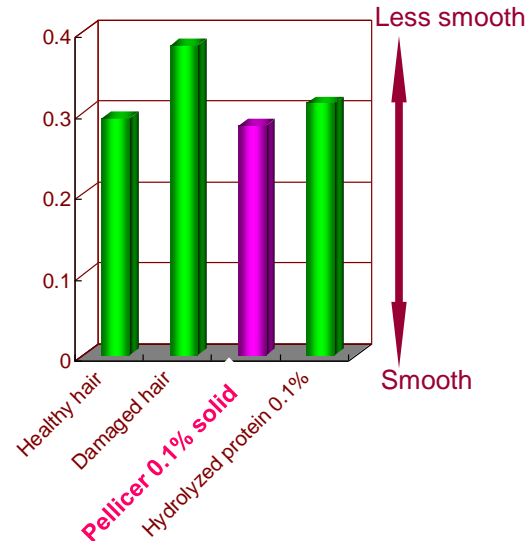
Pellicer improves break strength of damaged hair at very low concentration as Pellicer L-30 0.03% (0.01% solid). Pellicer is superior to hydrolyzed protein and phospholipid.



Test method: Damaged hair immersed 1 min in solution and dried; all hair tested for tensile strength at break.

Smoothness recovery

Pellicer has high smoothness recovery effect. Pellicer is superior to hydrolyzed protein.

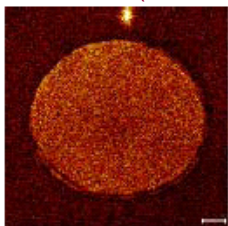


Test method: Damaged hair immersed 1 min in solution and dried; all hair tested for smoothness on Kato Tech KES-SE.

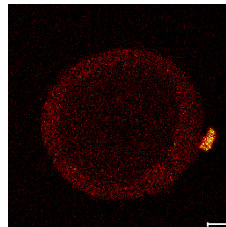
Permeability into hair in rinse off application

Penetration of Pellicer into hair fiber can be confirmed when hair fiber is treated with Pellicer (0.1% solid) added TEA Laureth Sulfate and rinsed with warm water. Pellicer's hair damage repair effect can be obtained in rinse off products like shampoo/conditioner.

Pellicer(0.1% solid) + TEA Laureth Sulfate (20% solid)



TEA Laureth Sulfate (20% solid)



Test method: Damaged hair immersed in mixed solution of Pellicer (0.1% solid) and TEA laureth sulfate (20% solid) for 1 min, and then rinsed in 40°C water for 2 min.