



SYNTHETIC ACRYLIC RESIN FOR FABRIC COATING ***TOA ACRON SA-110S***

TOA Resin Co., Ltd.

(1) Introduction

TOA ACRON SA-110S, which is synthetic acrylic resin with very high conversion, is newly developed by TOA company. Cloth coated with TOA ACRON SA-110S can produce higher water pressure resistance. Because of introducing special functional group in SA-110S, it is best-suited for fabric coating and enhances the features of any fabric.

(2) Features of TOA ACRON SA-110S

- (A) Since introducing reactive sites into TOA ACRON SA-110S, it provides a distinguished film and improved water pressure resistance and solvent resistance.
- (B) It has splendid adhesion to nylon or polyester fabric as compared with ordinary type acrylic elastomer.
- (C) Dissolved TOA ACRON SA-110S produces excellent consistency that is best-suited for coating system and enhances working efficiency.
- (D) Such cloth coated with TOA ACRON SA-110S has no stickiness, and is hardly subjected to change in feeling by touch. Its resistance to weather is very satisfactory too.

(3) Form of TOA ACRON SA-110S

Appearance: white or light yellow sponge like
Purity: above 99.5%
Viscosity: 18% toluene solution (20°C) = 24,000±5,000 cps
(R.V.F. type viscometer)

(4) Usage of TOA ACRON SA-110S

- (A) Formulating solution:
 - (a) It usually uses toluene or ethyl acetate as solvent for formulating solution.
 - (b) Heating makes dissolving fast, but should avoid temperature above 60°C.

(B) Examples of coating processes:

(a) Recipe for coating solution:

(i) Solution:

SA-110S	18.0 parts
Toluene	82.0 parts
Total	100.0 parts

Dissolve SA-110S thoroughly and cool down the temperature if with any heating.
Viscosity: 19,000~29,000 cps/20°C

(ii) Solution for coating:

Solution above	100 parts
Crosslinking agent	1~3 parts
Toluene	within measure

It should be diluted by toluene, add crosslinking agent isocyanate (NCO%=7.5%) into it.

(b) Fabric: Nylon Taffeta (75d, #210)

(c) Coating method: Knife coat

(d) Coating quantity: 4.1 g/m²

(e) Processing method: After coating, drying 1 min by 80°C ~ 130°C gradual temperature. Wait at least 12 hrs for further or other processes, for example, dipping process.

(f) Result of physical property testing:

Water proofing pressure test	
Normal condition	820 mmH ₂ O
Washing three times	510 mmH ₂ O
Dry cleaning	690 mmH ₂ O
Adhesion to fabric	excellent
Touch feeling	excellent

(C) Film Properties of SA-110S:

Tensile resistance strength	58 Kg/cm ²
Elongation percent	730%
Brittle point at low temperature	-43°C

Gehmon freezing point