



SYNTHETIC ACRYLIC RESIN FOR FABRIC COATING TOA ACRON SA-310

TOA Resin Co., Ltd.

(1) Introduction

TOA ACRON SA-310, which is synthetic acrylic resin with very high conversion, is newly developed by TOA company. Cloth coated with TOA ACRON SA-310 can produce higher water pressure resistance. Because of introducing special functional group in SA-310, it is best suited for fabric coating and enhances the features of any fabric.

(2) Features of TOA ACRON SA-310

- (A) Since introducing reactive sites into TOA ACRON SA-310, 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-310 produces excellent consistency that is best-suited for coating system and enhances working efficiency.
- (D) Such cloth coated with TOA ACRON SA-310 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-310

- Appearance: white or light yellow sponge like
- Purity: above 99.5%
- Viscosity: 26.5% toluene solution (20°C) = 30,000±5,000 cps
(R.V.F. type viscometer)

(4)Usage of TOA ACRON SA-310

(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-310	26.5 parts
Toluene	73.5 parts
Total	100 parts

Dissolve SA-310 thoroughly and cool down the temperature if with any heating.
Viscosity: 26,000~34,000 cps/20°C

(ii)Solution for coating:

Solution above	100 parts
Crosslinking agent	2~3 parts
Toluene	within measure

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

(b) Fabric: Nylon Taffeta (70d, #210)

(c) Coating method: Knife coat

(d) Coating quantity: 7.2 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	1,270 mmH ₂ O
Washing three times	1,050 mmH ₂ O
Dry cleaning	1,100 mmH ₂ O
Adhesion to fabric	excellent
Touch feeling	excellent

(C)Film Properties of SA-310:

Tensile resistance strength	63 Kg/cm ²
Elongation percent	680%
Brittle point at low temperature	-30°C
Swelling percent in solvent	370%

Gehmon freezing point
Swell in trichloroethylene