



SYNTHETIC ACRYLIC RESIN FOR FABRIC COATING ***TOA ACRON XF-4224***

TOA Resin Co., Ltd.

(1)Introduction

TOA ACRON XF-4224, which is synthetic acrylic resin with very high conversion, is newly developed by TOA company. Cloth coated with TOA ACRON XF-4224 can produce higher water pressure resistance. Because of introducing special functional group in XF-4224, it is best suited for fabric coating and enhances the features of any fabric. XF-4224 is modified from SA-310 which has less tackness and better water pressure resistance.

(2)Features of TOA ACRON XF-4224

- (A) Since introducing reactive sites into TOA ACRON XF-4224, 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 XF-4224 produces excellent consistency that is best-suited for coating system and enhances working efficiency.
- (D) Such cloth coated with TOA ACRON XF-4224 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 XF-4224

Appearance: white or light yellow sponge like
Purity: above 99.5%
Viscosity: 30% toluene solution (20°C) = 40,000±6,000 cps
(R.V.F. type viscometer)

(4) Usage of TOA ACRON XF-4224

(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:

XF-4224	30.0 parts
Toluene	70.0 parts
Total	100.0 parts

Dissolve XF-4224 thoroughly and cool down the temperature if with any heating.
Viscosity: 30,000~50,000 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 (75d, #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	1,430 mmH ₂ O
Washing three times	1,170 mmH ₂ O
Dry cleaning	1,300 mmH ₂ O
Adhesion to fabric	excellent
Touch feeling	excellent

(C) Film Properties of XF-4224:

Tensile resistance strength	65 Kg/cm ²
Elongation percent	650%
Brittle point at low temperature	-28°C

Gehmon freezing point