



# SYNTHETIC ACRYLIC RESIN FOR FABRIC COATING

## TOA ACRON XF-1399

TOA Resin Co., Ltd.

### (1) Introduction

TOA ACRON XF-1399 is one kind of synthetic acrylic resin developed for fabric finishing. For XF-1399, it is usually used on the applications of top coating and very hard hand feeling.

As XF-1399 used as top coating, it doesn't produce any stickiness; and with excellent weather resistance as well as other TOA ACRON products.

If fabric coated with XF-1399 alone, it can produce very hard hand feeling. XF-1399 can also mix with other TOA ACRON product to get most suitable hand feeling.

### (2) Form of TOA ACRON XF-1399

Appearance:	White block like
Main ingredient:	copolymer of reactive type acrylic monomer
Viscosity:	40,000±8,000 cps/20°C (28% toluene solution)

### (3) Usage of TOA ACRON XF-1399

(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-1399	25.5 parts	Dissolve XF-1399 thoroughly and cool down room temperature. Viscosity: 18,000~28,000 cps/20°C
Toluene	74.5 parts	
Total	100 parts	

(ii) Solution for coating:

Solution above	100 parts	It should be diluted by toluene, add crosslinking agent isocyanate
Crosslinking agent	2~3 parts	

Toluene	within measure	(NCO%=7.5%) into it.
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(b) Fabric: Nylon Taffeta (75d, #210)

(c) Coating method: Knife coat

(d) Coating quantity: 5.5 g/m<sup>2</sup>

(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	1,420 mmH <sub>2</sub> O
Washing three times	1,150 mmH <sub>2</sub> O
Dry cleaning	1,200 mmH <sub>2</sub> O
Adhesion to fabric	excellent
Touch feeling	excellent

(C) Film Properties of XF-1399:

Tensile resistance strength	85 Kg/cm <sup>2</sup>
Elongation percent	460%
Brittle point at low temperature	+20°C
100% Modulus	27 Kg/cm <sup>2</sup>

Gehmon freezing point