

()

pilling (Abrasion and Pilling Resistance)

polymer

가 가 . [35]

Simpson [27] Polyacrylate

pilling .

가

.

(density)

Watt[15] 가 polyacrylonitrile 10%

가 polymer가 가

. Watt polymer

polymer polypeptide

가 .

(Thermal Stability)

Watt[31] polymer 가

.

poly(sodium acrylate) 가 ,

10 , 가 divinylbenzene

, disulfide

.

, , (Moisture Regain, Sorption and Swelling)
 가 80% polymer
 . graft
 .[4,7,31] graft
 polymer
 . polyacrylonitrile graft Regain
 가 .[31] polyacrylamide
 poly(acrylic acid) 가 가
 .[7] Amstrong Stannett[7] polystyrene
 graft
 .
 Watt[31] graft polyacrylonitrile (formic acid)
 .
 (Felting Shrinkage)
 polymer
 polymer
 .[21,27]
 Simpson[27] polyacrylate
 ,
 . 가 peroxydisulfate-THPC
 polyacrylate
 가 .(Table)
 polymer

Table . Area shrinkage and smoothness ratings
for wools containing internally deposited polymers^a

Monomer grafted	Polymer uptake, %	Area shrinkage, %	Fabric smoothness, ratings
		8.7	1.7
Acrylamide	12.6	12.5	2.0
Acrylic acid	13.5	15.1	2.8
Acrylonitrile	6.4	7.3	2.3
Methyl acrylate	15.8	6.3	2.0

a. Wash conditions-five 15-min washes at 140 followed by tumble-drying

b. Comparison with AATCC 3-dimensional reference standards.

(Soiling)

Wolfram[35] polyacrylonitrile

가 . Simpson[27]

polymer graft , acrylate

polymer 가

Setting(Chemical Setting)

polyacrylate 1% metabisulfite

set retentio value가 .[27] Setting

polymer

Wolfram[36]

Setting

Bunte polymer

. Bunte

disulfide

Bunte

polymer

가

. Bunte

polymer

graft

Setting, flat Setting,

가

setting

Wool – polymer-SSO₃⁻ + Wool – SH

Wool – polymer-SH

→ Wool–polymer–S–S–Wool + HSO₃⁼

Wool – polymer–S–S–polymer–Wool

(Dyeing Properties)

가

polymer가

polymer

peroxydisulfate-THPC

Polyacrlate

methacrylate graft

(exhaustion rate)

polymer 가

가

acrylate

Acid Blue 43 45 60

pH 3.3,

100:1

. Acid Blue 43 mono-sulfonate

Acid 45 disulfonate

monomer graft
 . , acrylamide > butyl acrylate >
 acrylonitrile > > acrylic acid > methyl acrylate.

percent (Table)

polymer

가

polymer

graft

polymer가

polymer

가

Table . Percentage of procion red dye reacted with grafted wools^a.

Monomer grafted ^b	Dye reacted at pH 4.1, %	Dye reacted at pH 8.4 %
-	3.0	3.0
Methyl acrylate	59.7	65.1
Acrylamide	65.3	62.1
Acrylic acid	26.1	46.2
Acrylonitrile	73.5	-
Butyl acrylate	26.0	53.8
Methacrylic acid	63.3	53.4
Methacrylamide	48.3	65.9
Methacrylonitrile	44.4	62.2

Watt[30]

polymer

graft

가

polymer

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가

,

. Wolfram[35]

polymer

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polymer

(stiffnss)

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가

,

setting

.

polymer

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