

, , (5)

6. 가

.
 , , ,
 , 가
 , 100
 .
 ,
 , ,
 , 가 가
 가 .

가.

1)

, PVA, Acryl
 , 가 ,
 , ()
 가 . α - amylase
 , $(\text{NH}_4)_2\text{S}_2\text{O}_5$, NH_4HSO_3 , KHSO_3
 , (NaBrO_2) , (H_2O_2)
 , PVA .

2)

가
.
,
.
Anion Nonion 가 .
 , 省資源, 省 perchloroethylene, Trichloro ethane
Anion, Nonion 가
.

3)

,
(NaClO), (NaClO₂),
[Ca(oCl)₂ · CaCl₂ · 2H₂O] (H₂O₂)
, cellulose .
Hydrosulfite(Na₂S₂O₄), (Na₂SO₃)
,
가
Thio ,
.
가 가
Hydrosulfite .

1)

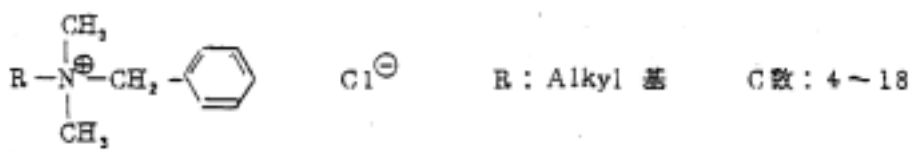
Cation acryl CDP , ,
nylon

2가 가 .

가 .

가

Cation acryl Cation 가



R Alkyl 가 acryl

R가 Buthyl

Alkyl



pyridine ,

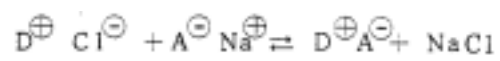
， Anion 가

R — SO₃Na (R : Alkyl)

R — OSO₃Na

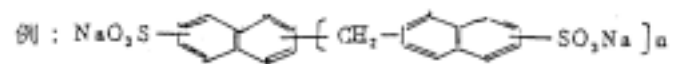
가 가

Cation acryl Anion 가



D : Cation 染料

A : Anion 性界面活性劑

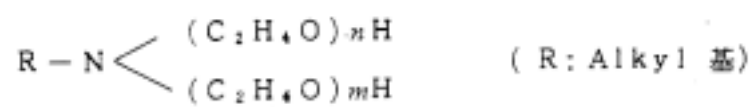


D[⊕] A[⊖] 가

Anion Nonion 가

， nylon

Cation , Nonion 가

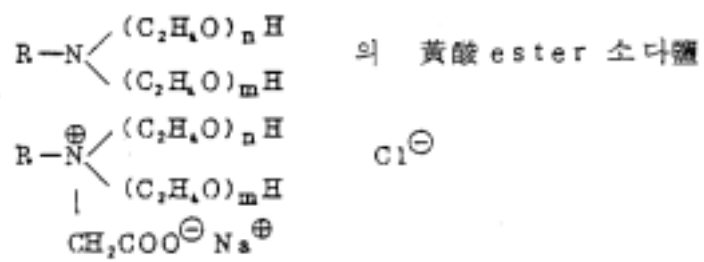


가 ,

, Sulfon 1 : 2

(shittery)

.



2)

cellulose , ,

, 가

가 .

(Na₂SO₄, NaCl)

cellulose .

(Na₂CO₃, NaHCO₃, Na₃PO₄, NaOH)

cellulose

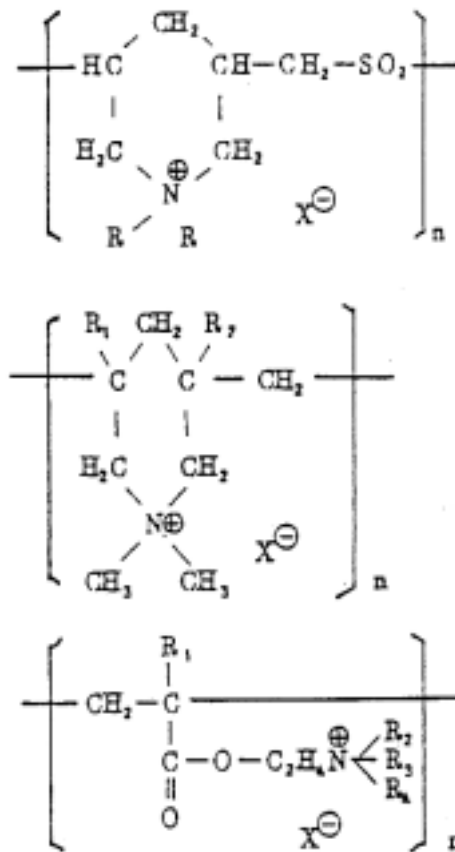
.

[Vinylsulfon]

D - SO₂CH₂CH₂OSO₃Na+NaOH → D-SO₂CH = CH₂+Na₂SO₄+H₂O

D - SO₂CH = CH₂+HO-cell → D-SO₂CH₂CH₂Ocell

4 Ammonium polymer, Polycation .



3)

Naphthalene sulfon Formaline

Ligninsulfon Anion 가

가 가 가 가

가 가 .

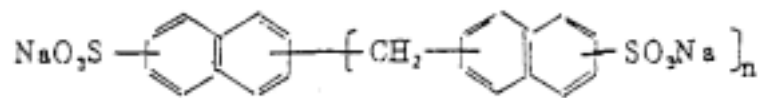
90 (strike)

, (90~130) 1

가

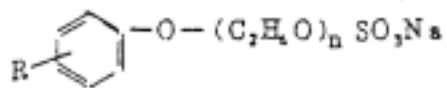
Anion

: Naphthalene sulfon Formaline



Anion/Nonion

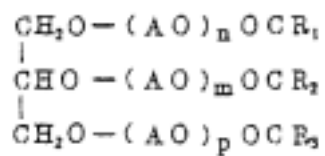
: Phenol Ethylene oxide 가 ester



R : 芳香環을 含有할

Nonion

: 多價 alcohol Alkylene oxide 가 ester



AO: Alkylene oxide

<

< 14>

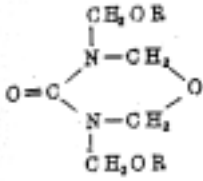
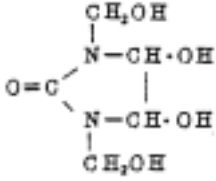
	低溫分散性	高溫分散性	可溶化能	起 泡 性
Anion	◎	◎	△	×
Anion/Nonion	◎	◎	○	×
Nonion	◎	○	◎	◎

Anion/Nonion

, Nonion

< 15> , 가

타입	樹脂名・構造	長 點	短 點
一般縮合型	Methylol 尿素 $\begin{array}{c} \text{NH}-\text{CH}_2\text{OH} \\ \\ \text{O}=\text{C} \\ \\ \text{NH}-\text{CH}_2\text{OH} \end{array}$	1. 加工하기 쉽다. 2. 強度 / 防皺性해 려스 良好 3. 廉價	1. 製品安定性不 2. 耐鹽素性不良 3. 耐久性떨어짐
	Methylol melamine $\begin{array}{c} \text{NH}-\text{CH}_2\text{OR} \\ \\ \text{C} \\ / \quad \backslash \\ \text{N} \quad \text{N} \\ \quad \\ \text{BOH}_2\text{CHN}-\text{C} \quad \text{C}-\text{NH}-\text{CH}_2\text{OH} \\ \backslash \quad / \\ \text{N} \quad \text{N} \end{array}$	1. 加工하기 쉽다. 2. 安定性 良好 3. 機械的效果良好 4. 끈적거리는 觸感	1. 防皺效果若干떨어짐 2. 汚染의, 四汚染이 크다. 3. 鹽素處理에 의한 黃酸
	Methylol ethylene 尿素 $\begin{array}{c} \text{CH}_2\text{OH} \\ \\ \text{N}-\text{CH}_2 \\ \\ \text{O}=\text{C} \\ \\ \text{N}-\text{CH}_2 \\ \\ \text{CH}_2\text{OH} \end{array}$	1. 安定性良好 2. 防皺, 防縮性良好 3. 加工하기 쉽다. 4. 觸感이 柔軟	1. 染色布의 耐 堅牢度低下가 크다. 2. 洗濯後의 耐鹽素性 不良

타입	樹脂名・構造	長 點	短 點
纖維素反應型	Methylol uron 	1. 安定性良好 2. 耐鹽素性良好 3. 效果의 耐久性良好	1. 染色布의 耐光 堅牢度低下 크다. 2. 加工하기 어렵다. 3. 強度배런스 變 어렵
	Methylol glyoxal urein 	1. 安定性良好 2. 防皺, 防縮性良好 3. 染色布의 耐光 堅牢度良好 4. 耐久性良好 (耐加水分解性良好)	1. 加工하기 어렵다. 2. 強度배런스 變 어렵

. 가

1) , 가

1925 Di-methylol 가 ,

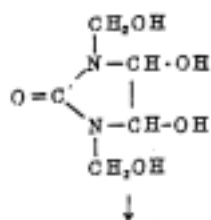
, ,

가 . < 15> .

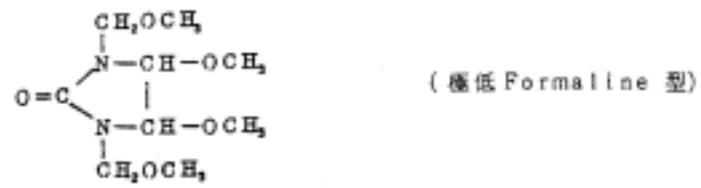
가 Methylol glyoxal urein,

Glyoxal 1972 OH methyl

ether 가 .

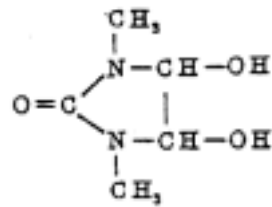


(一般型)



non formaline 가

Glyoxal amide



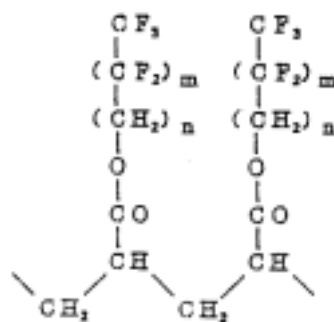
2) 가

1953 Du Pont Teflon 3M

가 acryl

가 가

가



< 16> Coating

樹脂코팅	Acryl ester R	Urethane R	Urethane R (濕)	天然코팅	鹽化 Vinyl	Chloro-plene	Hypalon	Nylon (濕)
Coat	○			◎	◎		○	
柔軟性	◎		(◎)					
透明度	◎					○變	○	
接着性	○	◎				○		
熔融可能	○				○			○
Dry cleaning 可能		◎						○
彈性回復		○	○	○				○
燃性					◎	○	○	
耐熱性	○			○			○	
耐光性	◎						◎	
耐候性	◎					◎	◎	
耐寒性	×	◎	◎	◎		○	△	
耐摩耗性	○	◎	△	○			◎	◎
耐油性		○					○	
主用途	傘地 Tent 輕雨衣	Ski-wear 衣料	합성가죽 interior	고무코팅	PVC Leather Tarpaulin 壁材	防寒비옷 難燃性 Sheet	屋外用코팅 耐藥性 防鹽服	신발 깔개류

3) 가

(), (), Nitro cellulose(擬革), (oil cloth)

< 16>

.

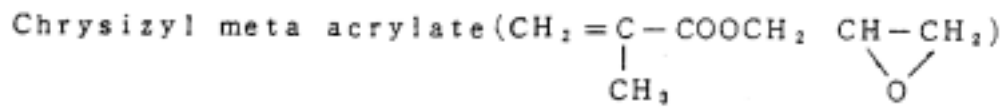
acryl ester Urethane 가 가 가

, ,

. Acryl ester $\text{CH}_2 = \text{CHCOOR} (\text{R} = \text{CH}_3 \sim \text{C}_8\text{H}_{17})$

acryl (CH_2CHCOOH), Meta acryl $\left(\begin{array}{c} \text{CH}_2\text{C}-\text{COOH} \\ | \\ \text{CH}_3 \end{array} \right)$, Acryl

amide($\text{CH}_2 = \text{CHCONH}_2$),

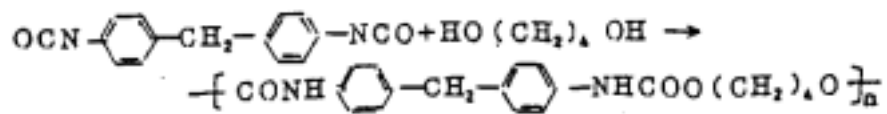


가 .

Acryl ester 가 가 , , , ,
 , Perchloroethylene 가 .

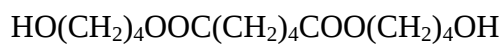
Urethane Isocyanate

.



Di-iso cyanate MDI, TDI, HDI, IPDI , di-alcohol Ethylene
 glycol, di-ethylene glycol, Buthanthiol, Hexnthiol

Thiol .



Urethane , dry cleaning

가 가

4) 가

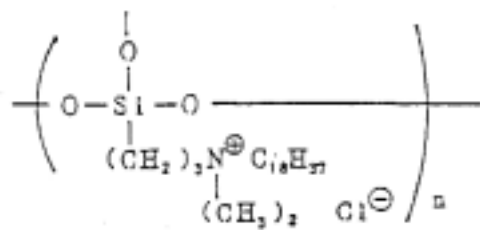
가 1900 가

1955 가 , 2

가 , , 가
 . 가 가 ,
 . 가
 .

Biosil

3-Tri-methoxy-siryl-propyl-di-methyl-octadecyl-ammonium-chloride



Sanitized

5-chloro-2(2,4-dichloro-phenoxy)-phenol

Sanclear

BCA : α -Bromocynamo-aldehyde

747 : 2-[3,5-di-methyl-pyrazolyl(1)]-6-hydroxy-4-phenyl pyrimidine

Sandarlon

/Polyarylnitril