

Appended Table 1

The draft of Table 1 (Base materials)

Polymer Group	substance name
Group 1	polymer composed of formaldehyde as the main monomer
	polymer mainly composed of sulfide bonds
	polymer mainly composed of ether bonds
	polymer mainly composed of siloxane bonds
	polymer composed of fluorine-substituted ethylenes as the main monomer
	polymer mainly composed of imide bonds
	polymer mainly composed of carbonate bonds
	cross-linking polymer of epoxy compound
	cross-linked polymer mainly composed of ester bonds
Group 2	polymer composed of conjugated diene hydrocarbon as the main monomer
	polymer composed of alkenes as the main monomer
	polymer composed of aromatic hydrocarbons as the main monomer
Group 3	hydrolysates of polymer composed of vinyl acetate as the main monomer
	polymer mainly composed of urethane bonds
	polymer mainly composed of amide bonds (including polymer composed of aziridine or 2-ethyl-2-oxazoline as the main monomer)
	polymer mainly composed of ester bonds
	polymer composed of acrylic acids as the main monomer
	glucose homopolymer or chemically modified cellulose
	polymer with adsorptive and/or ion exchange ability (excluding those correspond to Polymer Group 1, 2 and 4)
Group 4	polymer composed of chlorine-substituted ethylene as the main monomer
Group 5	polymer used for coating that involves chemical reaction during film formation
<p>Notes:</p> <p>Substances are classified as polymer group 1 to 5 as below.</p> <ul style="list-style-type: none"> <li>• Polymer group 1 consists of polymers with high heat resistance (index: melting point, glass transition temperature, ball pressure temperature are 150°C or more) (excluding</li> </ul>	

Group 2 and 4).

- Polymer group 2 consists of polymers with hydrocarbon as the main monomer (excluding Group 4).

- Polymer group 3 consists of polymers with low heat resistance (index: melting point, glass transition temperature, ball pressure temperature are less than 150°C) (excluding Group 2 and 4).

- Polymer group 4 consists of polymers with chlorine-substituted ethylene as the main monomer.

- Polymer group 5 consists of polymers only used for coating that involves chemical reaction during film formation.

\* Combinations of monomers comprising above substances are indicated in Attachment. The Attachment will be specified as Notice.

## Attachment of Table 1

## Combination of monomers

• "Classification No." means numbers assigned for convenience to organize the Positive List, based on the information obtained during the comment period (April to July 2022).

• The classification No. will not be used at the promulgation of the new Positive List.

**polymer composed of formaldehyde as the main monomer**

• Polymer composed of following one or more essential monomers.

• Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	
1,3,5-trioxane	
formaldehyde	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acetophenone	
ethyleneglycol and/or oxirane	• Not more than 6% in the polymer components (except when used as components of the polymer corresponding to serial No. 1667 in Table 2). • Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
diglycidyl ether of ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
xylene	
3-chloro-1-propene	
1,3-dioxacycloheptane	Not more than 6% in the polymer components.
1,3-dioxolane	Not more than 6% in the polymer components.
cyclohexanone	
ar-(allyloxy)benzenedimethanol	
ar-(allyloxy)benzenetrimethanol	
2-naphthalene sulfonic acid (including sodium salt)	
urea	
4-nonylphenol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
(allyloxy)benzyl alcohol	
phenol	
butanol	
diglycidyl ether of 1,4-butanediol	Not more than 6% in the polymer components.
benzguanamine	
4-methylbenzenesulfonamide	
melamine	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
methylated	

**polymer mainly composed of sulfide bonds**

- Polymer composed of following one or more essential monomers and following one or more optional substances.
- Can be used with any of the following optional chemical treatments as required.

	Requirements
<b>essential monomer</b>	
sulfur	
sodium sulfide	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
1,4-dichlorobenzene	
1,4-diiodobenzene	
1,2,4-trichlorobenzene	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
oxidative cross-linked	Can be applied only for sodium sulfide/1,4-dichlorobenzene copolymer.

**polymer mainly composed of ether bonds**

- Polymer composed of ether bonds of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
4,4'-dichlorodiphenylsulfone	
4,4'-dihydroxydiphenylsulfone	
4,4'-dihydroxybenzophenone	
4,4'-difluorobenzophenone	
2,6-dimethylphenol	
2,3,6-trimethylphenol	
bisphenol A	
hydroquinone	
4,4'-biphenol	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
fumaric acid	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
chloromethylated	Can be applied only for 4,4'-dichlorodiphenylsulfone / 4,4'-dihydroxydiphenylsulfone copolymer.
oxidized	
sulfonated (including sodium salt)	Can be applied only for 4,4'-dichlorodiphenylsulfone / 4,4'-dihydroxydiphenylsulfone copolymer.

**polymer mainly composed of siloxane bonds**

- Polymer composed of siloxane bonds of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
[N-2-(aminoethyl)-3-aminopropyl]dimethoxymethylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
(3-aminopropyl)diethoxymethylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
octamethylcyclotetrasiloxane	
chlorotrimethylsilane	
chlorovinyl dimethylsilane	
dichlorodiethylsilane	
diethoxydiphenylsilane	
diethoxydimethylsilane	
dichlorodiphenylsilane	
dichlorodimethylsilane	
dichloro(3,3,4,4,5,5,6,6-nonafluorohexyl)methylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
dichlorovinylmethylsilane	
dichloromethylphenylsilane	
dichloromethylsilane	
dichloro(3,3,3-trifluoropropyl)methylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
dimethoxydiphenylsilane	
dimethylchlorosilane	
dimethoxydimethylsilane	
decamethylcyclopentasiloxane	
dodecamethylcyclohexasiloxane	
triethoxyphenylsilane	
triethoxymethylsilane	
trichlorophenylsilane	
trichloropropylsilane	
trichloromethylsilane	
trihydroxypropylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
(3,3,3-trifluoropropyl)diethoxymethylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
(3,3,3-trifluoropropyl)dimethoxymethylsilane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2,4,6-trimethyl-2,4,6-tris(3,3,3-trifluoropropyl)cyclotrisiloxane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
vinyltrimethoxysilane	
phenyltrimethoxysilane	
hexamethylcyclotrisiloxane	
hexamethyldisiloxane	
water	Can be applied only for polymerized reaction of silane compounds.
methyltrimethoxysilane	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acrylic acid	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-hydroxyethyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
allyl alcohol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
alkyl alcohol (C=1-4)	
1-alkene (C=6, 8, 12, 14, 16)	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
isophthalic acid (including methyl ester, chloride)	

monoallyl ether of ethyleneglycol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ethyleneglycol and/or oxirane	
caprolactone	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
1,2-epoxy-4-vinylcyclohexane	
silicic acid, sodium salt	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
acetic acid	
1,4-dihydroxy-2-butyne	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
styrene	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
tetraethoxysilane	
terephthalic acid (including methyl ester, chloride)	
3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-1-octene	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
trimethylolethane	
trimethylolpropane	
silicon dioxide	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
propylene	
propyleneglycol and/or 2-methyloxirane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
hexamethylene diisocyanate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
$\gamma$ - $\omega$ -perfluoro alcohol (C=8-14)	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
maleic acid (including maleic anhydride)	
allyl methacrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
3-(dimethoxymethylsilyl)propyl methacrylate	
$\alpha$ -methylstyrene	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-methoxy-4-propenylphenol	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
hydrolyzed	
3-(2-hydroxyethoxy)propylated	
butylated	
methylated	

**polymer composed of fluorine-substituted ethylenes as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
chlorotrifluoroethylene	
tetrafluoroethylene	
vinylidene fluoride	
vinyl fluoride	
hexafluoropropylene	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
ethylene	
2,3,3,4,4,5,5,5-octafluoro-1-pentene	
trifluorovinyl ether of tetrafluoro-2-hydroxyethanesulfonic acid	
trifluorovinyl trifluoromethyl ether	
trifluorovinyl heptafluoropropyl ether	
3,3,4,4,5,5,6,6,6-nonafluoro-1-hexene	
trifluorovinyl pentafluoroethyl ether	
3,3,4,4,4-pentafluorobutene	
itaconic anhydride	
5-norbornene-2,3-dicarboxylic anhydride	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
hydrolyzed	Can be applied only for tetrafluoroethylene / trifluorovinyl ether of tetrafluoro-2-hydroxyethanesulfonic acid copolymer.
neutralized	Can be applied only for tetrafluoroethylene / trifluorovinyl ether of tetrafluoro-2-hydroxyethanesulfonic acid copolymer.



**polymer mainly composed of imide bonds**

- Polymer composed of imide bonds of following one or more amines, or following one or more amines and one or more acid anhydrides.
- Can be used with any of the following optional substances as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
<b>amine</b>	
isophorone diisocyanate	
4,4'-diaminodiphenyl ether	
4,4'-diaminodiphenylsulfone	
4,4'-diphenylmethane diisocyanate	
4,4'-bis(3-aminophenoxy)biphenyl	
bis[4-(allylbicyclo[2.2.1]-5-heptene-2,3-dicarboxyimido)phenyl]methane	
1,3-phenylenediamine	
4,4'-methylenedianiline	
<b>acid anhydride</b>	
diether of bisphenol A with 4-hydroxyphthalic anhydride	
3-(and/or 4-)chlorophthalic anhydride	
trimellitic anhydride (including chloride)	
pyromellitic dianhydride	
phthalic anhydride	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
4-cumylphenol	
1,4-cyclohexanedicarboxylic acid (including methyl ester)	
bisphenol A	
1,4-phenylenediamine	

**polymer mainly composed of carbonate bonds**

- Polymer composed of carbonate bonds of following one or more essential monomers.
- Can be used with any of the following optional substances as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
carbonyl chloride and/or diphenyl carbonate	
bisphenol A	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
isophthalic acid (including methyl ester, chloride)	
4-cumylphenol	
1,3-dihydroxybenzene	
sebacic acid	
terephthalic acid (including methyl ester, chloride)	
1,1,1-tris(4-hydroxyphenyl)ethane	
1,1-bis(4-hydroxy-3-methylphenyl)cyclohexane	
N-phenyl-3,3-bis(4-hydroxyphenyl)phthalimide	
4-tert-butylphenol	

### cross-linking polymer of epoxy compound

- Cross-linking polymer of following one or more glycidylated essential monomers.
- Can be used with any of the following, essential monomers, optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	
4-aminoanisole	
alkyl alcohol (C=9-16)	
ethyleneglycol and/or oxirane	Condensate (EO≥4): Less than 50% in the polymer components.
xylenediamine	
glycerol	
diethylenetriamine	
diallyl ether of 1,4-cyclohexanedimethanol	
4,4'-dihydroxy-3,3',5,5'-tetramethyldiphenylmethane	
fatty acid (branch saturated C=10)	
dimethylamine	
hydrogenated bisphenol A	
triethylenetetramine	
trimethylolpropane	
dimerized fatty acid (unsaturated C=18)	
neopentylglycol	
1,3-bis(aminomethyl)cyclohexane	
bisphenol A	
bisphenol B	
bisphenol F	
phenol	
butanol	
1,4-butanediol	
4-sec-(and/or 4-tert-)butylphenol	
propyleneglycol and/or 2-methyloxirane	
1,6-hexanediol	
formaldehyde	
methylphenol	
<b>optional substance (including reaction products with essential monomers or epichlorohydrin)</b>	<b>Molecular weight of the part composed only of the following substances (excluding reaction products with essential monomers or epichlorohydrin): Less than 1,000.</b>
acrylic acid	
ethyl acrylate	
butyl acrylate	
methyl acrylate	
acrylonitrile	
adipic acid	
aziridine	
acetylsalicylic acid	
azelaic acid	
aniline	
N-(2-aminoethyl)-piperazine	
2-aminopropylated propyleneglycol (including condensate)	Condensate (PO≥4): Less than 50% in the polymer components.

2-amino-2-methyl-1-propanol	
alkylphenol (C=9)	
benzoic acid	
ammonia (including ammonium hydroxide)	
triglycidyl isocyanurate	
1-isobutyl-2-methylimidazole	
isophoronediamine	
ethanol	
2-ethylhexanoic acid	
2-ethyl-4-methylimidazole	
(ethylamine)trifluoroboron	
ethylene	
ethylenediamine	
oleylamine	
N-oleyl-1,3-diaminopropane	
caprolactam	
caprolactone	
N-(tallow-alkyl)-1,3-propanediamine	
glycidyl 3-(trimethoxysilyl)propyl ether	
glycidyl 2-methylphenyl ether	
salicylic acid	
1-cyanoethyl-2-ethyl-4-(and/or 5-)methylimidazole	
N-cyano-guanidine	
2-(diethylamino)ethanol	
diethyltoluenediamine	
N,N-diethyl-1,3-propanediamine	
4,4'-dicyclohexylmethane diisocyanate	
diphenylamine	
N,N-diphenyl-urea	
N,N-dibenzyl-ethylenediamine	
fatty acid (unsaturated C=18)	
2-(dimethylamino)-2-methyl-1-propanol	
dimethylcyclohexane- $\omega$ , $\omega'$ -diisocyanate	
2,6-dimethylphenol	
N,N-dimethyl-1,3-propanediamine	
styrene	
sebacic acid	
sodium polysulfide	
tetraethylenepentamine	
N,N,N',N'-tetrakis(2-hydroxypropyl)adipamide	
animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	
triethanolamine	
triethylamine	
triethylenediamine	
1,2,3-trichloropropane	
2,4,6-tris(dimethylamino)methyl]phenol	
2,2,4-(and/or 2,4,4-)trimethylhexamethylenediamine	
(mono- and/or di-)allyl ether of trimethylolpropane	
N-[3-(trimethoxysilyl)propyl]-ethylenediamine	
urea	
dimerized fatty acid from animal or vegetable oil and fat	
valerolactone	
bis(aminomethyl)norbornane	

bis(4-octylphenyl)amine and/or bis[4-(2,4,4-trimethylpentyl)phenyl]amine	
bis(2-chloroethoxy)methane	
bis[(dimethylamino)methyl]phenol	
bis(2-hydroxypropyl)amine	
bis(2-hydroxy-3-mercaptopropyl) ether of bisphenol A	
piperazine	
2-phenylimidazole	
N-phenyl-urea	
1,3-phenylenediamine	
1,3-butadiene	
fumaric acid	
furfuryl alcohol	
1,2-propanediamine	
tris(2-aminomethylethyl) ether of propoxylated trimethylolpropane	
ether of Propoxylated pentaerythritol with 2,3-dihydroxy-1-propanethiol	
hexamethylenediamine	
hexamethylenetetramine	
benzyl alcohol	
pentaethylenehexamine	
pentaerythritol	
3-pentadecylphenol	
benzylamine	
N-(N-benzyl-aminomethyl)-thiourea	
N-benzyl-ethylenediamine	
maleic acid (including maleic anhydride)	
dibutyl maleate	
succinic anhydride	
1,2-cyclohexanedicarboxylic anhydride	
4-cyclohexene-1,2-dicarboxylic anhydride	
trimellitic anhydride (including chloride)	
phthalic anhydride	
methylcyclohexane-1,2-dicarboxylic anhydride	
methylcyclohexene-1,2-dicarboxylic anhydride	
methacrylic acid	
methyl methacrylate	
N-methyl-3-aminopropanol	
4,4'-methylenedianiline	
4,4'-methylenebis(cyclohexylamine)	
4,4'-methylenebis(2-methylcyclohexylamine)	
phosphoric acid (including condensate)	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
carboxylated	Can be applied only for the terminal modification of acrylonitrile / 1,3-butadiene copolymer.
hydrogenated	Can be applied only for aniline / formaldehyde copolymer.

### cross-linked polymer mainly composed of ester bonds

- Cross-linked polymer produced by denaturing polymer composed of ester bonds of following one or more acids, or following one or more acids and one or more alcohols with one or more essential monomers (acids, alcohols, cross-linking agent).
- Can be used with any of the following optional substances as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
<b>acid</b>	
acrylic acid	
adipic acid (including methyl ester)	
azelaic acid	
isophthalic acid (including methyl ester, chloride)	
itaconic acid	
chlorendic acid (including chlorendic anhydride)	
succinic acid (including methyl ester and succinic anhydride)	
1,2-cyclohexanedicarboxylic acid (including 1,2-cyclohexanedicarboxylic anhydride)	
4-cyclohexene-1,2-dicarboxylic acid (including 4-cyclohexene-1,2-dicarboxylic anhydride)	
sebacic acid (including methyl ester)	
terephthalic acid (including methyl ester, chloride)	
trimellitic acid (including trimellitic anhydride, chloride)	
lactic acid	
dimerized fatty acid from animal or vegetable oil and fat	
5-norbornene-2,3-dicarboxylic acid (including 5-norbornene-2,3-dicarboxylic anhydride)	
pyromellitic acid (including pyromellitic anhydride)	
phthalic acid (including phthalic anhydride)	
fumaric acid	
maleic acid (including butyl ester and maleic anhydride)	
methacrylic acid	
glycidyl methacrylate	
<b>alcohol</b>	
2-butyl-2-ethyl-1,3-propanediol	
ethyleneglycol and/or oxirane	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
ethoxylated bisphenol A	
glycerol	
1,4-cyclohexanedimethanol	
sorbitol	
tricyclodecanedimethanol	
2,2,4-trimethyl-1,3-pentanediol	
trimethyloethane	
trimethylolpropane	
neopentylglycol	
2,2-bis(4-hydroxycyclohexyl)propane	
bisphenol A	
diglycidyl ether of bisphenol A	
bis(2-hydroxypropyl) ether of bisphenol A	
phenol	
1,3-butanediol	
1,4-butanediol	
propyleneglycol and/or 2-methyloxirane	
1,6-hexanediol	

pentaerythritol and/or dipentaerythritol	
mannitol	
$\alpha$ -methylglucoside	
2-methyl-1,3-propanediol	
<b>cross-linking agent</b>	
isobornyl acrylate	
ethyl acrylate	
2-ethylhexyl acrylate	
2-hydroxyethyl acrylate	
butyl acrylate	
propyl acrylate	
methyl acrylate	
allyl glycidyl ether	
triallyl isocyanurate	
epichlorohydrin	
crotonic acid	
vinyl acetate	
triallyl cyanurate	
divinylbenzene	
styrene	
diallyl ether of trimethylolpropane	
N-vinyl-pyrrolidone	
diallyl phthalate	
diallyl maleate	
allyl methacrylate	
isobornyl methacrylate	
ethyl methacrylate	
dicyclopentenylloxyethyl methacrylate	
ester of methacrylic acid with ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
triester of methacrylic acid with trimethylolpropane	
diester of methacrylic acid with neopentylglycol	
2-phenoxyethyl methacrylate	
butyl methacrylate	
propyl methacrylate	
benzyl methacrylate	
methyl methacrylate	
$\alpha$ -methylstyrene	
methylstyrene	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
benzoic acid	
alkyl alcohol (branch C=10)	
2-ethylhexanol	
octanol	
octanoic acid	
acetic acid	
monobutyl ether of diethyleneglycol	
dicyclopentadiene	
1,4-cyclohexanedicarboxylic acid (including methyl ester)	
4,4'-dihydroxydiphenylsulfone	
2,2-dimethyl-1-propanol	
stearic acid	
5-sulfoisophthalic acid (including methyl ester, sodium salt)	
decanol	
1,12-dodecanedioic acid	
animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	

2,6-naphthalenedicarboxylic acid (including methyl ester)	
dimerized and hydrogenated fatty acid (unsaturated)	
nonanoic acid	
palmitic acid	
2,2-bis(hydroxymethyl)propionic acid	
2,2-bis(hydroxymethyl)butyric acid	
1,3-propanediol	
2,5-furandicarboxylic acid (including methyl ester)	
benzyl alcohol	
formaldehyde	
rosin	



**polymer composed of conjugated diene hydrocarbon as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
1,3-butadiene	
conjugated diene hydrocarbon (C=5)	
conjugated diene hydrocarbon (C=5), dimerized	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acrylic acid	
ethyl acrylate	
acrylonitrile	
alkene (C=4)	
alkene (C=5)	
alkene (C=6)	
alkene (C=7)	
alkene (C=8)	
alkene (C≥9)	
epichlorohydrin and/or β-methylepichlorohydrin	
ethylene	
cyclooctene	
cyclopentene	
styrene	
2-norbornene	
bisphenol A	
phenol	
fumaric acid	
propylene	
aromatic hydrocarbon (C≥9)	<ul style="list-style-type: none"> <li>• Not more than 50% in the polymer components.</li> <li>• Up to 5% of the use amount of the substance can be considered as essential monomer.</li> </ul>
maleic acid (including maleic anhydride)	
methacrylic acid	
diester of methacrylic acid with 1,3-butanediol	
methyl methacrylate	
methacrylonitrile	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
epoxidized	Can be applied only for the terminal modification of 1,3-butadiene homopolymer.
chlorinated	
carboxylated	Can be applied only for the terminal modification of 1,3-butadiene homopolymer or acrylonitrile / 1,3-butadiene copolymer.
cyclized	Can be applied only for isoprene homopolymer.
hydrogenated	
hydroxylated	

**polymer composed of alkenes as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
alkene (C=4)	
alkene (C=5)	
alkene (C=6)	
alkene (C=7)	
alkene (C=8)	
alkene (C≥9)	
ethylene	
cyclooctene	
cyclopentene	
2-norbornene	
propylene	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances : Less than 1,000 (except for ethyleneglycol condensate parts with the Mw≥ 1000).</b>
acrylic acid (including sodium, magnesium, potassium, zinc, ammonium salt)	
isobutyl acrylate	
ethyl acrylate	
2-ethylhexyl acrylate	
butyl acrylate	
methyl acrylate	
12-aminolauric acid	
carbon monoxide	
5-ethylidene-2-norbornene	
ethyleneglycol and/or oxirane (including condensate Mw≥1000)	
conjugated diene hydrocarbon (C=5)	
conjugated diene hydrocarbon (C=5), dimerized	
vinyl acetate	
2-(dimethylamino)ethanol	
styrene	
tetracyclododecene	
N,N-bis(2-hydroxyethyl)-alkylamine (C=8-18)	
1,3-butadiene	
aromatic hydrocarbon (C≥9)	
maleic acid (including sodium, potassium, ammonium salt and maleic anhydride)	
monoethyl maleate	
methacrylic acid (including sodium, potassium, magnesium, zinc, ammonium salt)	
glycidyl methacrylate	
3-(trimethoxysilyl)propyl methacrylate	
diester of methacrylic acid with 1,4-butanediol	
butyl methacrylate	
methyl methacrylate	
lauryl methacrylate	
methylphenol	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
imidized	
chlorinated	Chlorine: Not more than 65% in the polymer components.
hydrolyzed	
oxidized (including potassium salt)	Can be applied for ethylene homopolymer or ethylene/propylene copolymer.
hydrogenated	

**polymer composed of aromatic hydrocarbons as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.
- \* Polymer in which the total amount of acrylic acid, acrylonitrile, N-phenyl-maleimide, maleic anhydride, methacrylic acid is 10% or more as the components of the polymer, is classified as Polymer Group 3.

	Requirements
<b>essential monomer</b>	<b>Not less than 50% in the polymer components.</b>
xylene	
styrene	
aromatic hydrocarbon (C $\geq$ 9)	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acrylamide	
acrylic acid (including sodium, potassium, ammonium salt)	
ethyl acrylate	
2-ethylhexyl acrylate	
2-(2-ethoxyethoxy)ethyl acrylate	
butyl acrylate	
acrylonitrile	
2-amino-2-methyl-1-propanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
alkene (C=4)	
alkene (C=5)	
alkene (C=6)	
alkene (C=7)	
alkene (C=8)	
alkene (C $\geq$ 9)	
ammonia (including ammonium hydroxide)	
ethanol	
ethylene	
monomethyl ether of ethyleneglycol (including condensate)	
monoethyl ether of diethyleneglycol	
conjugated diene hydrocarbon (C=5)	
conjugated diene hydrocarbon (C=5), dimerized	
2-(diethylamino)ethanol	
cyclooctene	
cyclopentene	
2-(dimethylamino)ethanol	
alkyl (C=8-20) alkenyl (C=3, 4)	
sulfosuccinate, sodium salt	
2-norbornene	
N-hydroxymethyl-acrylamide	
N-phenyl-maleimide	
1,3-butadiene	
2-butoxyethanol	
2-propanol	
propylene	
benzofuran	
maleic acid (including sodium, potassium, ammonium salt and maleic anhydride)	
methacrylic acid (including ammonium salt)	
allyl methacrylate	
isobutyl methacrylate	
glycidyl methacrylate	
ester of methacrylic acid with ethyleneglycol (including condensate)	
butyl methacrylate	

methyl methacrylate	
ester of sulfuric acid with ethoxylated alkyl allyl glyceryl ether (C=10-14), ammonium salt	
ester of sulfuric acid with allyl ether of ethoxylated dihydric aliphatic alkyl alcohol (saturated C=12-14), ammonium salt	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
imidized	Can be applied only for styrene/maleic anhydride copolymer.
hydrogenated	
mechanical recycled	Can be applied only for polymer with 50% or more of styrene as the components.

### hydrolysates of polymer composed of vinyl acetate as the main monomer

- Hydrolysate of polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances as required.

	Requirements
<b>essential monomer</b>	
vinyl acetate	
vinyl alcohol	
<b>optional substance</b>	<ul style="list-style-type: none"> <li>•The sum of optional substances: Less than 50% in the polymer components.</li> <li>•Molecular weight of the part composed only of the following substances: Less than 1,000 (except for propyleneglycol condensate parts with the <math>M_w \geq 1000</math>).</li> </ul>
acrylic acid	
acetaldehyde	
itaconic acid	
ethylene	
diester of acetic acid with 2-methylene-1,3-propanediol	
3,4-diacetoxy-1-butene	Not more than 8 mol% in the polymer components.
4-diazodiphenyl amine	
N,N-diethyl-glycine	
N-(1,1-dimethyl-3-oxobutyl)-acrylamide	Not more than 8 mol% in the polymer components.
stearyl isocyanate	
N-hydroxymethyl-acrylamide	
vinyltrimethoxysilane	
N-vinyl-pyrrolidone	
N-vinyl-formamide	
butyraldehyde	
propyleneglycol and/or 2-methyloxirane (including condensate $M_w \geq 1000$ )	
formaldehyde	
maleic anhydride	
2-methylene-1,3-propanediol	
<b>essential chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
hydrolyzed (including sodium salt)	

**polymer mainly composed of urethane bonds**

- Polymer composed of urethane bonds of following one or more isocyanates and one or more alcohols.
- Can be used with any of the following optional substances as required.
- \* Polymer with heat resistant temperature over 150°C is classified as Polymer Group 1.

<b>essential monomer</b>	<b>The sum of isocyanate and alcohol: Not less than 50% in the polymer components.</b>
<b>isocyanate</b>	
isophorone diisocyanate	
xylene diisocyanate	
4,4'-dicyclohexylmethane diisocyanate	
dimethylcyclohexane- $\omega,\omega'$ -diisocyanate	
dimethylnorbornane- $\omega,\omega'$ -diisocyanate	
3,3'-dimethyl-4,4'-biphenylene diisocyanate	
tris(4-isocyanatophenyl) thiophosphate	
$\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,3-xylene diisocyanate	
toluene diisocyanate	
hexamethylene diisocyanate (including trimer)	
pentamethylene diisocyanate	
methylene-bridged phenyl isocyanate	
<b>alcohol</b>	
2-hydroxyethyl acrylate	
alkyl alcohol (C=5-38)	
ethanolamine	
2-ethyl-1,3-hexanediol	
ethyleneglycol and/or oxirane (including condensate $M_w \geq 1000$ )	
monomethyl ether of ethyleneglycol (including condensate)	Condensate ( $EO \geq 4$ ): Less than 50% in the polymer components.
epichlorohydrin	
caprolactone	
glycerol	
diethanolamine	
N,N-diethyl-isopropanolamine	
2,4-diethyl-1,5-pentanediol	
2-dioxolanone	
sucrose	
1,3-butadiene condensate, hydroxy terminated	
sorbitol	
1,10-decanediol	
N,N,N',N'-tetrakis(2-hydroxypropyl)-ethylenediamine	
tetrahydrofuran	
tetrahydrofurfuryl alcohol	
triisopropanolamine	
2,2,4-trimethyl-1,3-pentanediol	
trimethylolpropane	
methyl ester of dimerized and hydrogenated fatty acid (unsaturated C=18)	
neopentylglycol	
1,9-nonanediol	
1,4-bis(2-hydroxyethoxy)benzene	
N,N-bis(2-hydroxypropyl)-aniline	
2,2-bis(hydroxymethyl)propionic acid (including ammonium salt)	
bisphenol A	
3-hydroxy-2,2-dimethylpropyl 3-hydroxy-2,2-dimethylpropionate	
castor oil	
butanol	
1,3-(and/or 1,4-)butanediol	
propanol and/or 2-propanol	
1,3-propanediol	

propyleneglycol and/or 2-methyloxirane (including condensate Mw≥1000)	
monomethyl ether of propyleneglycol (including condensate)	Condensate (PO≥4): Less than 50% in the polymer components.
2-propoxyethanol	
propoxylated trimethylolpropane	
propoxylated bisphenol A	
1,6-hexanediol	
pentaerythritol and/or dipentaerythritol	
1,5-pentanediol	
mannitol	
water	
2-hydroxyethyl methacrylate	
2-methyl-1,8-octanediol	
4-methyl-2-dioxolanone	
2-methyl-1,3-propanediol	
3-methyl-1,5-pentanediol	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acrylic acid	
acrylonitrile	
adipic acid	
adipic dihydrazide	
N-(2-aminoethyl)-2-aminoethanol	
N-(2-aminoethyl)-piperazine	
1-amino-2-propanol	
N-(3-aminopropyl)-imidazole	
3-aminopropyltriethoxysilane	
alkylphenol (C=9)	
benzoic acid	
isophthalic acid (including methyl ester, chloride)	
isophoronediamine	
isobutyl alcohol	
2-butyl-2-ethyl-1,3-propanediol	
2-ethylhexanoic acid	
2-ethylhexylamine	
ethylmethylketone oxime	
ethylenediamine	
ethoxylated and/or propoxylated aliphatic alcohol (C=12-14)	
methyl ester of epoxidized fatty acid (saturated C=16-18, unsaturated C=18)	
oleic acid	
carbodiimidized diphenylmethane diisocyanate	
xylene	
1,3-xylenediamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
succinic acid (including succinic anhydride)	
vinyl acetate	
oxidized castor oil	
N-cyano-guanidine	
diaminotoluene	
diethylenetriamine	
1,4-cyclohexanedimethanol	
glyceryl ester of fatty acid (branch saturated C=10)	
3-(dimethylamino)-1-propanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
hydrogenated tallow-alkylamine	
hydrogenated castor oil	
styrene	
styrenated phenol	
5-sulfoisophthalic acid, sodium salt (including methyl ester)	
sebacic acid	
dehydrated castor oil	
diethyl carbonate	
diphenyl carbonate	
dimethyl carbonate	

terephthalic acid (including methyl ester, chloride)	
animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	
triethanolamine	
triethylamine	
trimethylamine	
2,2,4-(and/or 2,4,4-)trimethylhexamethylenediamine	
N-[3-(trimethoxysilyl)propyl]-ethylenediamine	
trimellitic acid (including chloride and trimellitic anhydride)	
carbon dioxide	
dimerized (or trimerized) fatty acid from animal or vegetable oil and fat	
lactic acid	
1,3-bis(aminomethyl)cyclohexane	
1,3-bis(2-oxazoliny)benzene	
2,2-bis(hydroxymethyl)butyric acid	
hydrazine	
piperazine	
methyl ester of castor oil-fatty acid	
1,3-butadiene	
phthalic acid (including phthalic anhydride)	
fumaric acid	
propionic acid	
propylamine	
formaldehyde	
maleic anhydride	
methacrylic acid	
4,4'-methylenedianiline	
N-methyl-diethanolamine	
melamine	
phosphoric acid	



**polymer mainly composed of amide bonds (including polymer composed of aziridine or 2-ethyl-2-oxazoline as the main monomer)**

- Polymer composed of amide bonds of following one or more amines, or following one or more amines and one or more acids (including aziridine or 2-ethyl-2-oxazoline homopolymer).
- Can be used with any of the following optional substances as required.

	Requirements
<b>essential monomer</b>	<b>The sum of amine and acid: Not less than 50% in the polymer components.</b>
<b>amine</b>	
aziridine	
11-aminoundecanoic acid	
N-(2-aminoethyl)-1,3-propanediamine	
3-aminopropylated ethyleneglycol (including condensate)	Not more than 10% in the polymer components.
2-aminopropylated propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
12-aminolauric acid	
isophoronediamine	
2-ethyl-2-oxazoline	Can be applied only for homopolymer.
ethylenediamine	
ethoxylated and/or butoxylated 12-aminolauric acid	
caprolactam	
xylenediamine	
1,3-diamino-4,6-dihydroxybenzene, hydrochloride salt	
3,4'-diaminodiphenyl ether	
diethylenetriamine	
hydrogenated and dimerized fatty acid (unsaturated C=18)	
1,10-decanediamine	
triethylenetetramine	
dimerized aliphatic amine (unsaturated C=18)	
1,9-nonanediamine	
N,N'-bis(3-aminopropyl)-ethylenediamine	
piperazine	
1,3-phenylenediamine	
1,4-phenylenediamine	
1,4-butanediamine	
hexamethylenediamine	
2-methyl-1,8-octanediamine	
4,4'-methylenebis(cyclohexylamine)	
4,4'-methylenebis(2-methylcyclohexylamine)	
lauro lactam	
<b>acid</b>	
adipic acid	
azelaic acid	
isophthalic acid (including methyl ester, chloride)	
caprolactone	
sebacic acid	
1,12-dodecanedioic acid	
terephthalic acid (including methyl ester, chloride)	
trimesoyl chloride	
dimerized (or trimerized) fatty acid (unsaturated C=18)	
valerolactone	

optional substance	Molecular weight of the part composed only of the following substances: Less than 1,000 (except for ethyleneglycol or 1,4-butanediol condensate parts with the $M_w \geq 1000$ ).
glycidyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
benzoic acid	
ethyleneglycol and/or oxirane (including condensate $M_w \geq 1000$ )	
epichlorohydrin	
formic acid	
glycidyl alcohol	
1-chlorobutane	
stearic acid	
animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	
trimethylolpropane	
urea	
12-hydroxystearic acid	
1,4-butanediol and/or tetrahydrofuran (including condensate $M_w \geq 1000$ )	
propionic acid	
hexamethylene diisocyanate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
lauric acid	

**polymer mainly composed of ester bonds**

• Polymer composed of the ester bonds of following one or more acids, or following one or more acids and one or more alcohols.

• Can be used with any of the following optional substances and/or chemical treatments as required.

\* Polymer with heat resistant temperature over 150°C is classified as Polymer Group 1.

<b>essential monomer</b>	<b>The sum of acid and alcohol: Not less than 50 mol% in the polymer components.</b>
<b>acid</b>	
adipic acid (including methyl ester)	
azelaic acid	
itaconic acid	
isophthalic acid (including methyl ester, chloride)	
caprolactone	
glycolic acid	
succinic acid (including methyl ester and succinic anhydride)	
1,4-cyclohexanedicarboxylic acid (including methyl ester)	
hydrogenated and dimerized fatty acid (unsaturated C=18)	
hydrogenated castor oil	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
5-sulfoisophthalic acid (including methyl ester, lithium, sodium salt)	
sebacic acid (including methyl ester)	
terephthalic acid (including methyl ester, chloride)	
2,6-naphthalenedicarboxylic acid (including methyl ester)	
dimerized (or trimerized) fatty acid from animal or vegetable oil and fat	
valerolactone	
2,2-bis(hydroxymethyl)propionic acid	
4-hydroxybenzoic acid	
3-hydroxyoctanoic acid	The sum of 3-hydroxyoctanoic acid, 3-hydroxydecanoic acid, 3-hydroxypentanoic acid, and 3-hydroxyhexanoic acid: Not more than 25 mol% in the polymer components.
3-hydroxypentanoic acid	The sum of 3-hydroxyoctanoic acid, 3-hydroxydecanoic acid, 3-hydroxypentanoic acid, and 3-hydroxyhexanoic acid: Not more than 25 mol% in the polymer components.
12-hydroxystearic acid	
3-hydroxydecanoic acid	The sum of 3-hydroxyoctanoic acid, 3-hydroxydecanoic acid, 3-hydroxypentanoic acid, and 3-hydroxyhexanoic acid: Not more than 25 mol% in the polymer components.
6-hydroxy-2-naphthoic acid	The sum of 4-hydroxybenzoic acid and 6-hydroxy-2-naphthoic acid: Not less than 55 mol% in the polymer components.
3-hydroxyhexanoic acid	Not more than 20 mol% in the polymer components.
3-hydroxybutanoic acid	
phthalic acid (including phthalic anhydride)	
2,5-furandicarboxylic acid (including methyl ester)	
lactic acid	Only for homopolymers, D-Lactic acid content is 6% or less (except for those used within 2 hours at 66°C or less, 30 min at 100°C or less).
trimellitic acid (including chloride and trimellitic anhydride)	
<b>alcohol</b>	
ethyleneglycol and/or oxirane (including condensate Mw≥1000)	Condensate (EO≥4): Less than 50% in the polymer components.
glycerol	
1,4-cyclohexanedimethanol	

ester of stearic acid and/or oleic acid with pentaerythritol and/or dipentaerythritol	
spiroglycol	
2,2,4,4-tetramethyl-1,3-cyclobutanediol	Not more than 40 mol% in the alcohol component.
tricyclodecanedimethanol	
trimethylolethane	
trimethylolpropane	
neopentylglycol	
bisphenol A	
bis(2-hydroxyethyl) ether of bisphenol A	
hydroquinone	
4,4'-biphenol	
1,2-butanediol	
1,3-butanediol	
1,4-butanediol and/or tetrahydrofuran (including condensate Mw≥1000)	
1,3-propanediol	
propyleneglycol and/or 2-methyloxirane (including condensate Mw≥1000)	Condensate (PO≥4): Less than 50% in the polymer components.
1,6-hexanediol	
pentaerythritol and/or dipentaerythritol	
2-methyl-1,3-propanediol	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
benzoic acid	
2-ethylhexyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
aziridine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
N-(3-aminopropyl)-imidazole	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
alkyl alcohol (C≥8)	
isosorbide	
isophorone diisocyanate	
2-butyl-2-ethyl-1,3-propanediol	
monoallyl ether of ethyleneglycol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ethylenediamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
4,4'-[oxybis(methylene)] bis(cyclohexanemethanol)	
glycidyl 2-methylphenyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
dimethyl glutarate	
acetic acid (including acetic anhydride)	
2-(diethylamino)ethanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2,4-diethyl-1,5-pentanediol	
diethylenetriamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-(dibutylamino)ethanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-(dimethylamino)ethanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
N,N-dimethyl-1,3-propanediamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
1,2-cyclohexanedicarboxylic acid (including 1,2-cyclohexanedicarboxylic anhydride)	
fatty acid (C≥8)	
hydrogenated coco-fatty acid	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
styrene	
1,12-dodecanedioic acid	
animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	
toluene diisocyanate	
dimerized fatty acid (unsaturated C=18)	
9,10-dihydro-10-(2,3-dicarboxypropyl)-9-oxa-10-phosphaphenanthren-10-oxide	
4,4-bis(4-hydroxyphenyl)pentanoic acid	
2,2-bis(hydroxymethyl)butyric acid	

4-hydroxyacetanilide	The sum of terephthalic acid, 4-hydroxyacetanilide and 4,4'-biphenol: Not more than 25 mol% in the polymer components.
3-hydroxy-2,2-dimethylpropyl 3-hydroxy-2,2-dimethylpropionate	
2-phenoxyethanol	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
[4-(hydroxymethyl)cyclohexyl]methyl 4-(hydroxymethyl)cyclohexanecarboxylate	
piperazine	
butanol	
fumaric acid	
propoxylated bisphenol A	
hexamethylene diisocyanate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
1,5-pentanediol	
maleic acid (including maleic anhydride)	
methanol	
3-methyl-1,5-pentanediol	
lauro lactam	
phosphoric acid (including condensate, magnesium salt)	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
mechanical recycled	Can be applied only for polymer with the sum of terephthalic acid and ethyleneglycol of 50 mol% or more as the components.
4-tert-butylphenyl terminated	Can be applied only for isophthalic acid (including methyl ester, chloride) / terephthalic acid (including methyl ester, chloride) / bisphenol A copolymer.

**polymer composed of acrylic acids as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
acrylamide	
acrylic acid (including sodium, potassium, zinc, ammonium salt)	
isobutyl acrylate	
ethyl acrylate	
oleyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-ethylhexyl acrylate	
stearyl acrylate	
triester of acrylic acid with trimethylolpropane	
palmitoleyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
acrylic acid, triethylamine salt	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
acrylic acid, stearylamine salt	
butyl acrylate	
tert-butyl acrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
methyl acrylate	
lauryl acrylate	
acrylonitrile	
isobutyl vinyl ether	
ethyl vinyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
vinyl acetate	
vinyl ester of fatty acid (branch saturated C=10)	
stearyl vinyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
dimerized sunflower oil-fatty acid	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
palmityl vinyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
N-vinyl-pyrrolidone	
methyl vinyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
lauryl vinyl ether	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
N-phenyl-maleimide	
N-butoxymethyl-acrylamide	
maleic acid (including sodium, potassium salt and maleic anhydride)	
isopropyl maleate	
diallyl maleate	
2-(1-methylethoxy)ethyl maleate	
methacrylamide	
methacrylic acid (including sodium, potassium, magnesium, zinc, ammonium salt)	
2-[2-(2-ethoxyethoxy)ethoxy]ethyl methacrylate	
2-ethylhexyl methacrylate	
alkyl methacrylate (branch C=10)	
alkyl methacrylate (C=12-20)	
allyl methacrylate	
isobutyl methacrylate	
ethyl methacrylate	
glycidyl methacrylate	
cyclohexyl methacrylate	
2-(dimethylamino)ethyl methacrylate	
ester of methacrylic acid with ethyleneglycol	

triester of methacrylic acid with trimethylolpropane	
3-[tris(trimethylsilyloxy)silyl]propyl methacrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
N,N,N-trimethylammonioethyl methacrylate, chloride	
diester of methacrylic acid with 1,3-butanediol	
butyl methacrylate	
benzyl methacrylate	
methyl methacrylate	
methacrylonitrile	
methallylsulfonic acid (including sodium salt)	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000 (except for ethyleneglycol condensate parts with the Mw ≥ 1000).</b>
2-(2-ethoxyethoxy)ethyl acrylate	
diester of acrylic acid with 1,4-butanediol	
diester of acrylic acid with 1,6-hexanediol	
2-hydroxyethyl acrylate	
2-phenoxyethyl acrylate	
ester of acrylic acid with propyleneglycol adipic dihydrazide	
aziridine (including hydrochloride salt)	
sulfurous acid, sodium salt	
alkyl alcohol (C=12-18)	
itaconic acid	
imidazole	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ethylstyrene	
tert-butyl 2-ethylhexaneperoxoate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ethylmethylketone oxime	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ethylene	
ethyleneglycol and/or oxirane (including condensate Mw ≥ 1000)	Condensate (EO ≥ 4): Less than 50% in the polymer components.
ether of alkyl alcohol (branch C=10-14) with ethoxylated allyl glyceryl ether (and/or allyl glycidyl ether)	
benzyl chloride	
caprolactone	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
crotonic acid	
(3-chloro-2-hydroxypropyl)trimethylammonium, chloride	
acetic acid	
diallylamine (including hydrochloride salt)	
monoethyl ether of diethyleneglycol	
divinylbenzene	
N-(1,1-dimethyl-3-oxobutyl)-acrylamide	
N,N-dimethyl-1,3-propanediamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
styrene	
alkyl (C=8-20) alkenyl (C=3, 4)	
sulfosuccinate, sodium salt	
alkyl thioglycolate (C=8)	
1-tetradecene	
tall oil-fatty acid	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
dodecanethiol	
1-dodecene	
tert-butyl 3,5,5-trimethylhexaneperoxoate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
trimethylpentene	
N,N-bis(2-hydroxyethyl)-oleylamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.

N-hydroxymethyl-acrylamide	
vinyl alcohol	
N-vinyl-imidazole	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
vinylsulfonic acid, sodium salt	
1,3-butadiene	
diallyl phthalate	
1,2-butanediol	
propylene	
propyleneglycol and/or 2-methyloxirane	
dibutyl fumarate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
ester of maleic acid with aliphatic alcohol (C=1-8) (including sodium salt)	
2-(acetoacetoxy)ethyl methacrylate	
2-isocyanatoethyl methacrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
isobornyl methacrylate	
2-(2-oxo-1-imidazolidinyl)ethyl methacrylate	
3-(trimethoxysilyl)propyl methacrylate	
ester of methacrylic acid with propyleneglycol	
2-[3-(2H-benzotriazol-2-yl)-4-hydroxyphenyl]ethyl methacrylate	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
tert-butyl methacrylate	
methanol	
$\alpha$ -methylstyrene	
monochloroacetic acid, sodium salt	
ester of sulfuric acid with ethoxylated alkyl allyl glyceryl ether (C=10-14), ammonium salt	
ester of sulfuric acid with allyl ether of ethoxylated dihydric aliphatic alcohol (saturated C=12-14), ammonium salt	
ester of sulfuric acid with ethoxylated (EO $\geq 4$ ) 4-nonyl-2-(1-propenyl)phenol, ammonium salt	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
thermal cross-linked	Can be applied only for N-vinyl-pyrrolidone homopolymer.
irradiation cross-linked	Can be applied only for N-vinyl-pyrrolidone homopolymer.
methylated	



**glucose homopolymer or chemically modified cellulose**

- Polymer composed of following essential monomers, or cellulose.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
α-D-glucose	Only (1→3) bond
cellulose	Can be used only with any of the optional chemical treatments.
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000 (except for ethyleneglycol or propyleneglycol condensate parts with the Mw ≥ 1000).</b>
1,2-ethanedione	
ethyleneglycol and/or oxirane (including condensate Mw ≥ 1000)	
acetic acid	
N,N,N-trimethyl-glycidylammonium chloride	
propionic acid	
butyric acid	
propyleneglycol and/or 2-methyloxirane (including condensate Mw ≥ 1000)	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
ethylated	
carboxymethylated (including sodium salt)	
nitrated	
methylated	

**polymer with adsorptive and/or ion exchange ability (excluding those correspond to Polymer Group 1, 2 and 4)**

Polymer with adsorptive or ion exchange ability composed of following one or more essential monomers (Can be used with any of the following optional substances and/or chemical treatments as required) (including sodium, potassium, calcium, and magnesium salts)

\* Polymer with heat resistant temperature over 150°C is classified as Polymer Group 1.

	Requirements
<b>essential monomer</b>	
N-acrylamidopropyl-N,N,N-trimethylammonium chloride	
acrylic acid (including lithium, sodium, magnesium, calcium, silver salt)	
ethyl acrylate	
acrylonitrile	
aziridine	
ethylstyrene	
ethylenediamine	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
hydrochloric acid	
chloromethylstyrene	
chloromethyl methyl ether	
diallylamine	
N-cyano-guanidine	
divinylbenzene	
1,6-dibromohexane	
styrene	
styrenesulfonic acid (including sodium salt)	
N,N,N',N'-tetramethyl-hexamethylenediamine	
2-[2-(trifluorovinyloxy)-1-(trifluoromethyl)trifluoroethoxy]tetrafluoroethanesulfonic acid (including fluoride)	
methyl 3-[2-(trifluorovinyloxy)-1-(trifluoromethyl)trifluoroethoxy]tetrafluoropropionate	
1,4-bis(chloromethyl)benzene	
N-(2-hydroxyethyl)-acrylamide	
2-(and/or 4-)vinylpyridine	
tert-butylstyrene	
4-(4-bromobutyl)styrene	
trifluorovinyl ether of hexafluoro-4-hydroxybutyric acid	
N,N,N,N',N',N'-hexamethyl-1,3-propane diammonium	
formaldehyde	
maleic acid, ammonium salt	
glycidyl methacrylate	
diester of methacrylic acid with ethyleneglycol	
methylstyrene	
o-methylstyrene	

optional substance	Molecular weight of the part composed only of the following substances: Less than 1,000.
acrylamide	
2-acrylamide-2-methylpropanesulfonic acid	
butyl acrylate	
methyl acrylate	
(aminomethyl)phosphonic acid	
isoprene	
diethyl iminodiacetate	
iminodiacetic acid	
ethylene	Less than 50% in the polymer components.
ethyleneglycol and/or oxirane	·Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2. ·Condensate (EO≥4): Less than 50% in the polymer components.
epichlorohydrin	
vinyl chloride	Less than 50% in the polymer components.
1,7-octadiene	
hydrogen peroxide	
chlorosulfonic acid	
vinyl acetate	
diethylamine	
diethyleneglycol	
divinyl ether of diethyleneglycol	
diethylenetriamine	
4,4'-dichlorodiphenylsulfone	Can be used only with both N,N,N,N',N',N'-hexamethyl-1,3-propanediammonium and 4,4'-biphenol.
1,3-dihydroxybenzene	
glycidyl ester of fatty acid (branch saturated C=10)	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
2-(dimethylamino)ethanol (including chloride, hydroxide)	
ethyl 2-(dimethylamino)acetate	
N-[3-(dimethylamino)propyl]-acrylamide	
N,N-dimethyl-aminomethylstyrene	
dimethylamine	
N,N-dimethyl-N-(6-dimethylaminoethyl)ammoniomethylstyrene, chloride	
N,N-dimethyl-N,N-bis(vinylphenylmethyl)ammonium chloride	
2,6-dimethylphenol	
N,N-dimethyl-1,3-propanediamine	
carbonic acid	
1-deoxy-1-(methylamino)-sorbitol	
decanol	
tetrafluoroethylene	
triethylamine (including chloride)	
triethylenetetramine	
1,2,4-trivinylcyclohexane	
tributylamine	
tripropylamine	
N,N,N-trimethyl-2-glycidylammonium chloride	

N,N,N-trimethyl-[4-(4-vinylphenyl)butyl]ammonium bromide	
N,N,N-trimethyl-vinylbenzylammonium chloride	
trimethylamine (including chloride, hydroxide)	
triester of methacrylic acid with trimethylolpropane	
3,3,4,4,5,5,6,6,6-nonafluoro-1-hexene	
1,6-bis(N-vinylbenzyl-dimethylammonio)hexane chloride	
N,N-bis(2-pyridylmethyl)amine	
hydrazine	
N-vinylbenzyl-iminodiacetic acid	
N-vinyl-formamide	
4,4'-biphenol	Can be used only with both N,N,N,N',N',N'-hexamethyl-1,3-propanediammonium and 4,4'-dichlorodiphenylsulfone.
pyrogallol	
phenylethyleneglycol and/or phenyloxirane	Can be applied only as a component of the polymer corresponding to serial No. 1667 in Table 2.
1,3-phenylenediamine	
phenol	
1,3-butadiene	
2-butoxyethanol	
hexamethylenediamine	
hexamethylenetetramine	
methacrylic acid	
butyl methacrylate	
benzyl methacrylate	
methyl methacrylate	
monochloroacetic acid	
methyl iodide	
lauric acid	
sulfuric acid	
phosphoric acid	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
aminomethylated	
chlorinated	
hydrolyzed (including silver, silver oxide salt)	
carboxylated	
chloromethylated	
saponificated	
brominated	
hydrogenated	
sulfonated (including ammonium salt)	
phosphonomethylated	
methylated	

**polymer composed of chlorine-substituted ethylene as the main monomer**

- Polymer composed of following one or more essential monomers.
- Can be used with any of the following optional substances and/or chemical treatments as required.

	Requirements
<b>essential monomer</b>	<b>The sum of essential monomers: Not less than 50% in the polymer components.</b>
vinylidene chloride	
vinyl chloride	
<b>optional substance</b>	<b>Molecular weight of the part composed only of the following substances: Less than 1,000.</b>
acrylic acid	
ethyl acrylate	
2-hydroxyethyl acrylate	
butyl acrylate	
ester of acrylic acid with propyleneglycol	
methyl acrylate	
acrylonitrile	
isobutyl vinyl ether	
itaconic acid	
ethylene	
vinyl acetate	
fumaric acid	
methacrylic acid	
methyl methacrylate	
methacrylonitrile	
vinyl laurate	
<b>optional chemical treatment</b>	<b>Can be applied only for the treatment of polymer.</b>
chlorinated	• Can be applied only for vinyl chloride homopolymer. • Chlorine: Not more than 69% in the polymer components.
hydrolyzed	Can be applied only for vinyl chloride/vinyl acetate copolymer.

**polymer used for coating that involves chemical reaction during film formation**

- Polymer composed of following one or more substances.
- Can be used with any of the following optional chemical treatments as required.

Classification No.		Requirements
<b>10</b>	<b>natural component, inorganic compound, or their derivative</b>	<b>The sum of natural components, inorganic compounds, and their derivatives: Less than 50% in the polymer components.</b>
<b>11</b>	<b>natural high molecule component</b>	<b>Can be used only with substances listed in No.21-75.</b>
11	arabic gum	
11	elemi gum	
11	ghatti gum	
11	karaya gum (sterculia gum)	
11	guar gum	
11	copal gum	
11	sandarac gum	
11	hydrogenated rosin (including gum rosin, tall oil rosin, wood rosin, rosin acid, resin acid, and their sodium, potassium, magnesium, calcium, zinc salt)	
11	cellulose	
11	decarboxylated rosin (including gum rosin, tall oil rosin, wood rosin, rosin acid, resin acid, and their sodium, potassium, magnesium, calcium, zinc salt)	
11	dammar gum	
11	dextrin	
11	natural rubber	
11	tragacanth gum	
11	dimerized (or polymerized) rosin (including gum rosin, tall oil rosin, wood rosin, rosin acid, resin acid, and their sodium, potassium, magnesium, calcium, zinc salt)	
11	disproportionated rosin (including gum rosin, tall oil rosin, wood rosin, rosin acid, resin acid, and their sodium, potassium, magnesium, calcium, zinc salt)	
11	lac gum (shellac)	
11	rosin (including gum rosin, tall oil rosin, wood rosin, rosin acid, resin acid, and their sodium, potassium, magnesium, calcium, zinc salt)	
<b>13</b>	<b>natural low molecule component or its derivative</b>	
13	ester of acrylic acid with epoxidized soybean oil	
13	epoxidized soybean oil	
13	oxidized castor oil	
13	hydrogenated castor oil	
13	animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat, dehydrated	
13	natural rubber latex	
13	animal or vegetable oil and fat, fatty acid from animal or vegetable oil and fat	
13	amide of tall oil-fatty acid with triethylenetetramine	
13	dimerized (or trimerized, tetramerized) fatty acid from animal or vegetable oil and fat	

<b>15</b>	<b>inorganic compound or its derivative</b>	
15	sulfurous acid, sodium salt	
15	ammonia (including ammonium hydroxide)	
15	zirconium oxide chloride	
15	peroxysulfuric acid, potassium and/or ammonium salt	
15	phosphorous oxytrichloride	
15	zinc oxide	
15	nitric acid, chromium salt	
15	sodium hydroxide	
15	diethyl carbonate	
15	diphenyl carbonate	
15	dimethyl carbonate	
15	carbonic acid, ammonium and zirconium salt	
15	carbonic acid, guanidine salt	
15	tetraethoxysilane (including hydrolyzed)	
15	triethoxymethoxysilane	
15	silicon dioxide (including quartz)	
15	carbon dioxide	
15	urea	
15	zirconium fluoride	
15	water	
15	ester of sulfuric acid with ethoxylated, phenylethylated and allylated phenol, ammonium salt	
15	ester of sulfuric acid with ethoxylated 4-alkyl-2-(1-propenyl)phenol (C=9), ammonium salt	
15	ester of sulfuric acid with ethoxylated allyl 4-alkylphenyl glyceryl ether (C=9), ammonium salt	
15	ester of sulfuric acid with ethoxylated alkyl allyl glyceryl ether (C=10-14), ammonium salt	
15	ester of sulfuric acid with ethoxylated allyl oxyalkyl ether, ammonium salt	
15	ester of sulfuric acid with ethoxylated and styrenated phenol, sodium salt	
15	phosphoric acid (including condensate, phosphoric anhydride and zinc, copper, zirconium salt)	
15	(mono- and/or di-)ethyl phosphate	
15	(mono- and/or di-)butyl phosphate	
15	butyl phosphate, ethanol and 2-propanol, titanium salt	
15	ester of phosphoric acid with 2-hydroxyethyl methacrylate	
<b>21</b>	<b>organohalogen compound</b>	
21	epichlorohydrin	
21	vinylidene chloride	When the content of vinylidene chloride is 50% or more in the polymer component, the material is classified as Polymer Group 4.
21	vinyl chloride	When the content of vinyl chloride is 50% or more in the polymer component, the material is classified as Polymer Group 4.
21	chlorotrifluoroethylene	
21	(3-chloro-2-hydroxypropyl)trimethylammonium	
21	1-chlorobutane	
21	chloroprene	
21	chloromaleic acid	
21	4,4'-dichlorodiphenylsulfone	
21	3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl methacrylate	
21	monochloroacetic acid (including sodium salt)	

<b>31</b>	<b>organotin or organosulfur compound</b>	
31	3-sulfopropyl acrylate, potassium salt	
31	N-(2-aminoethyl)-2-aminoethanesulfonic acid, sodium salt	
31	allylsulfonic acid, sodium salt	
31	4,4'-dihydroxydiphenylsulfone	
31	4-styrenesulfonic acid, sodium salt	
31	5-sulfoisophthalic acid, sodium salt (including methyl ester)	
31	alkyl allyl sulfosuccinate, sodium salt	
31	thioglycerol	
31	alkylthiol (C=12)	
31	3-trimethoxysilyl-1-propanethiol	
31	toluenesulfonamide	
31	naphthalenesulfonic acid, sodium salt	
31	diether of bisphenol S with ethyleneglycol	
31	2-hydroxyethyl vinyl sulfide	
31	vinylsulfonic acid, sodium salt	
31	N-(N-benzyl-aminomethyl)-thiourea	
31	monobutyltin oxide	
31	laurylbenzenesulfonic acid and 2-propanol, titanium salt	
<b>41</b>	<b>organosilicon compound</b>	
41	3-(trimethoxysilyl)propyl acrylate	
41	3-(2-aminoethylamino)propyldimethoxymethyl silane	
41	3-aminopropyltriethoxysilane	
41	3-aminopropyltrimethoxysilane	
41	3-isocyanatopropyltriethoxysilane	
41	tris[3-(trimethoxysilyl)propyl] isocyanurate	
41	2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane	
41	glycidyl 3-(trimethoxysilyl)propyl ether	
41	chlorotrimethylsilane	
41	chlorovinyl dimethylsilane	
41	triester of acetic acid with ethylsilanetriol	
41	triester of acetic acid with methylsilanetriol	
41	diethoxydiphenylsilane	
41	diethoxydimethylsilane	
41	dichlorodiphenylsilane	
41	dichlorodimethylsilane	
41	dichlorovinylmethylsilane	
41	dichloromethylsilane	
41	dimethoxydiphenylsilane	
41	dimethylchlorosilane	
41	dimethoxydimethylsilane	
41	N-[3-(triethoxysilyl)propyl]-ethylenediamine	
41	glycidyl 3-(triethoxysilyl)propyl ether	
41	triethoxyvinylsilane	
41	triethoxyphenylsilane	
41	triethoxymethylsilane	
41	trichlorophenylsilane	
41	trichloromethylsilane	
41	tris(2-methoxyethoxy)vinylsilane	
41	N-[3-(trimethoxysilyl)propyl]-aniline	
41	3-(trimethoxysilyl)propyl isocyanate	
41	N-[3-(trimethoxysilyl)propyl]-ethylenediamine	
41	bis[3-(triethoxysilyl)propyl]amine	
41	N,N-(and/or N,N'-)bis[3-(trimethoxysilyl)propyl]-ethylenediamine	
41	vinyltrimethoxysilane	
41	N-β-(N-vinylbenzylamino)ethyl-γ-aminopropyltrimethoxysilane, hydrochloride salt	
41	phenyltrimethoxysilane	
41	hexamethyldisiloxane	



41	3-(dimethoxymethylsilyl)propyl methacrylate	
41	3-(triethoxysilyl)propyl methacrylate	
41	3-(trimethoxysilyl)propyl methacrylate	
41	methyltrimethoxysilane	
<b>50</b>	<b>organonitrogen compound</b>	
<b>51</b>	<b>aromatic compound</b>	
51	acetoguanamine	
51	aniline	
51	2-aminoethylbenzene	
51	2-isopropenyl-2-oxazoline	
51	3-isopropenyl- $\alpha,\alpha$ -dimethylbenzyl isocyanate	
51	imidazole	
51	2-ethyl-4-methylimidazole	
51	xylenediamine	
51	xylene diisocyanate	
51	2,4-diamino-6-[2-(2-undecyl-imidazolyl)ethyl]-1,3,5-triazine	
51	diaminotoluene	
51	diphenylamine	
51	3,3'-dimethyl-4,4'-biphenylene diisocyanate	
51	3,5-dimethylpyrazole	
51	N,N,N',N'-tetraglycidyl-1,3-xylenediamine	
51	$\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,3-xylene diisocyanate	
51	2,4,6-tris[(dimethylamino)methyl]phenol	
51	toluene diisocyanate	
51	1,3-bis(2-oxazoliny)benzene	
51	bis(4-octylphenyl)amine and/or bis[4-(2,4,4-trimethylpentyl)phenyl]amine	
51	bis[(dimethylamino)methyl]phenol	
51	N,N-bis(2-hydroxypropyl)-aniline	
51	N-vinyl-imidazole	
51	N-vinyl-pyrrolidone	
51	phenyl isocyanate	
51	2-phenylimidazole	
51	1,3-(and/or 1,4-)phenylenediamine	
51	benzylamine	
51	benzoguanamine	
51	formoguanamine	
51	N-(2-methacrylamidoethyl)-imidazolidinone	
51	N-[(2-methacryloxyacetamido)ethyl]-imidazolidinone	
51	2-[(3,5-dimethyl-1H-pyrazolyl)carbonylamino]ethyl methacrylate	
51	2-(2-oxo-1-imidazolidinyl)ethyl methacrylate	
51	2-[3-(2H-benzotriazol-2-yl)-4-hydroxyphenyl]ethyl methacrylate	
51	2-methylimidazole	
51	methylene-bridged phenyl isocyanate	
51	4,4'-methylenedianiline	
<b>53</b>	<b>nonaromatic compound</b>	
53	acrylamide	
53	2-isocyanatoethyl acrylate	
53	diester of acrylic acid with 2-isocyanato-2-methyl-1,3-propanediol	
53	N-acryloyl-morpholine	
53	acrylonitrile	
53	adipic dihydrazide	
53	triester of 3-aziridinopropionic acid with trimethylolpropane	
53	aziridine	
53	11-aminoundecanoic acid	
53	N-(2-aminoethyl)-2-aminoethanol	
53	N-(2-aminoethyl)- $\beta$ -alanine, sodium salt	
53	N-(2-aminoethyl)-piperazine	

53	3-aminopropylated ethyleneglycol (including condensate)	Condensate (EO≥4): Less than 50% in the polymer components.
53	N-(2-aminoethyl)-1,3-propanediamine	
53	2-aminopropanol	
53	1-amino-2-propanol	
53	2-amino-2-methyl-1-propanol	
53	alkylamine (linear C=14-18)	
53	triglycidyl isocyanurate	
53	tris(2-hydroxyethyl) isocyanurate	
53	N-(isobutoxymethyl)-acrylamide	
53	isophoronediamine	
53	isophorone diisocyanate	
53	ethanolamine	
53	N-ethyl-propylamine	
53	2-ethylhexylamine	
53	ethylmethylketone oxime	
53	2-aminoethyl ether of ethyleneglycol and/or propyleneglycol (including condensate)	Condensate (EO, PO≥4): Less than 50% in the polymer components.
53	ethylenediamine	
53	2-ethoxyethylamine	
53	3-ethoxypropylamine	
53	methyl ether of ethoxylated and/or propoxylated 2-aminopropanol	
53	ethoxylated and/or propoxylated 2-hydroxypropylamine	
53	octylamine	
53	N-oley-1,3-diaminopropane	
53	caprolactam	
53	succinic dihydrazide	
53	triallyl cyanurate	
53	2-ethoxyethyl 2-cyanoacrylate	
53	isobutyl 2-cyanoacrylate	
53	isopropyl 2-cyanoacrylate	
53	ethyl 2-cyanoacrylate	
53	methyl 2-cyanoacrylate	
53	2-methoxyethyl 2-cyanoacrylate	
53	N-cyano-guanidine	
53	N,N-dialkyl (C=1-2)-alkyldiamine (C=2-6)	
53	diisopropylamine	
53	diethanolamine	
53	N,N-diethyl-isopropanolamine	
53	diethylamine	
53	diethylenetriamine	
53	1,4-cyclohexanediamine	
53	3-(cyclohexylamino)propanesulfonic acid	
53	cyclohexylamine	
53	cyclohexyl isocyanate	
53	4,4'-dicyclohexylmethane diisocyanate	
53	dibutylamine	
53	dipropylamine	
53	2-(dimethylamino)ethanol	
53	N,N-dimethyl-N'-(3-aminopropyl)-1,3-propanediamine	
53	2-(dimethylamino)-2-methyl-1-propanol	
53	dimethylamine	
53	N-(1,1-dimethyl-3-oxobutyl)-acrylamide	
53	dimethylcyclohexane- $\omega$ , $\omega'$ -diisocyanate	
53	N,N-dimethyl-cyclohexylamine	
53	dimethylnorbornane- $\omega$ , $\omega'$ -diisocyanate	
53	stearyl isocyanate	
53	tetraethylenepentamine	
53	N,N,N',N'-tetrakis(2-hydroxypropyl)adipamide	
53	N,N,N',N'-tetrakis(2-hydroxypropyl)-ethylenediamine	
53	N,N,N',N'-tetraglycidyl-1,3-bis(aminomethyl)cyclohexane	
53	N,N,N',N'-tetra(2-hydroxy-3-methacryloxy (and/or butoxy, phenoxy))propyl-1,3-bis(aminomethyl)cyclohexane	

53	N,N,N',N'-tetramethyl-guanidine	
53	triisopropanolamine	
53	triethanolamine	
53	triethylamine	
53	triethylenetetramine	
53	trimethylamine	
53	2,2,4-(and/or 2,4,4- )trimethylhexamethylenediamine	
53	N,N'-bis(3-aminopropyl)-ethylenediamine	
53	N,N-bis(3-aminopropyl)-methylamine	
53	1,3-bis(aminomethyl)cyclohexane	
53	bis(aminomethyl)norbornane	
53	bis(2-hydroxypropyl)amine	
53	bis(2-methoxyethyl)amine	
53	hydrazine	
53	N-hydroxy-diethylamine	
53	N-hydroxymethyl-acrylamide	
53	N-hydroxy-N-methyl-ethanolamine	
53	N-hydroxymethyl-methacrylamide	
53	N-vinyl-caprolactam	
53	piperazine	
53	sec-(and/or tert-)butylamine	
53	butylamine	
53	N-butoxymethyl-acrylamide	
53	1,2-propanediamine	
53	propylamine and/or 2-propylamine	
53	tris(2-aminomethylethyl) ether of propoxylated trimethylolpropane	
53	hexamethylenediamine	
53	hexamethylene diisocyanate (including trimer)	
53	hexamethylenetetramine	
53	hexylamine	
53	pentaethylenhexamine	
53	pentamethylene diisocyanate	
53	methacrylamide	
53	2-aminoethyl methacrylate, hydrochloride salt	
53	2-isocyanatoethyl methacrylate	
53	N-carboxymethyl-N,N- dimethylammonioethyl methacrylate	
53	2-(N,N-diethylamino)ethyl methacrylate	
53	2-(dimethylamino)ethyl methacrylate	
53	ester of methacrylic acid with ethoxylated alkyl alcohol (C=12-18)	
53	N,N,N-trimethylammonioethyl methacrylate, chloride	
53	2-(N-tert-butylamino)ethyl methacrylate	
53	methacrylonitrile	
53	2-methylaziridine	
53	N-methyl-3-aminopropanol	
53	N-methyl-diethanolamine	
53	N-methyl-cyclohexylamine	
53	2-methyl-1,5-pentanediamine	
53	N,N'-methylene-bis(acrylamide)	
53	4,4'-methylenebis(cyclohexylamine)	
53	2-methoxyethylamine	
53	3-methoxypropylamine	
53	melamine	
53	morpholine	
53	lauro lactam	
<b>60</b>	<b>aromatic compound not corresponding to No.11-53</b>	
<b>61</b>	<b>acid</b>	
61	acetophenone	
61	benzoic acid	
61	isophthalic acid (including methyl ester, chloride)	
61	diallyl isophthalate	
61	ester of acrylic acid with monoallyl ether of ethyleneglycol (including condensate)	Condensate (EO≥4): Less than 50% in the polymer components.

61	salicylic acid	
61	terephthalic acid (including methyl ester, chloride)	
61	bis(2-hydroxyethyl) terephthalate	
61	trimesic acid (including chloride)	
61	trimellitic acid (including chloride and trimellitic anhydride)	
61	2,6-naphthalenedicarboxylic acid (including methyl ester and 2,3-naphthalenedicarboxylic anhydride)	
61	hydroquinone	
61	pyromellitic acid (including pyromellitic anhydride)	
61	phthalic acid (including phthalic anhydride)	
61	diallyl phthalate	
61	tert-butylbenzoic acid	
61	4-tert-butyl peroxybenzoate	
61	diester of trimellitic anhydride with ethyleneglycol	
61	benzyl methacrylate	
<b>63</b>	<b>alcohol</b>	
63	diester of acrylic acid with ethoxylated bisphenol A	
63	ester of acrylic acid with diethyleneglycol monophenyl ether	
63	2-phenoxyethyl acrylate	
63	4-tert-amylphenol	
63	alkylated (C=1-4) phenol	
63	alkylphenol (C=9)	
63	alkylphenyl (C=9) ether of ethyleneglycol (including condensate)	Condensate (EO≥4): Less than 50% in the polymer components.
63	ethoxylated bisphenol A	
63	4-octylphenol	
63	catechol	
63	cardanol	
63	glycidyl phenyl ether	
63	glycidyl (4-tert-butyl phenyl) ether	
63	diether of bisphenol A with glycidyl butyl ether of glycerol	
63	4-cyclohexylphenol	
63	4,4'-dihydroxy-3,3',5,5'-tetramethyldiphenylmethane	
63	1,3-dihydroxybenzene	
63	diglycidyl ether of 1,3-(and/or 1,4-)dihydroxybenzene	
63	4,4'-[2,2-dimethyl-1,3-propanediylbis(oxymethylene)]bis(2-dioxolanone)	
63	1,3-(and/or 1,4-)bis(2-hydroxyethoxy)benzene	
63	4,4-bis(4-hydroxyphenyl)pentanoic acid	
63	bisphenol A	
63	diglycidyl ether of bisphenol A	
63	bisphenol B	
63	bisphenol F	
63	allyl ether of (mono-, di- or tri-)hydroxymethylphenol	
63	4-phenylphenol	
63	4,4'-[1,3-phenylenebis(oxymethylene)]bis(2-dioxolanone)	
63	phenol	
63	phenol and methanol, titanium salt	
63	4-tert-butylcatechol	
63	propoxylated bisphenol A	
63	benzyl alcohol	
63	benzofuran	
63	2-methyl-4-phenylphenol	
63	allyl ether of (mono-, di- and/or tri-)methylolphenol	
<b>65</b>	<b>hydrocarbon</b>	
65	xylene	

65	styrene	
65	aromatic hydrocarbon (C $\geq$ 9)	
<b>70</b>	<b>nonaromatic compound not corresponding to No.11-65</b>	
<b>71</b>	<b>acid</b>	
71	acrylic acid (including ammonium salt)	
71	alkyl acrylate (C=1-13)	
71	alkyl acrylate (C=18)	
71	isobornyl acrylate	
71	2-(2-ethoxyethoxy)ethyl acrylate	
71	glyceryl ester of acrylic acid and methacrylic acid	
71	2-carboxyethyl acrylate	
71	2-(dicyclopentenyl)ethyl acrylate	
71	tetrahydrofurfuryl acrylate	
71	ester of acrylic acid with 5-ethyl-5-hydroxymethyl-1,3-dioxane	
71	ester of acrylic acid with ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
71	triester of acrylic acid with ethoxylated trimethylolpropane	
71	diester of acrylic acid with ethoxylated 1,6-hexanediol	
71	ester of acrylic acid with ethoxylated methanol	
71	tetraester of acrylic acid with ditrimethylolpropane	
71	ester of acrylic acid with ethoxylated and/or propoxylated allyl alcohol	
71	diester of acrylic acid with tricyclodecanedimethanol	
71	diester of acrylic acid with allyl ether of trimethylolpropane	
71	triester of acrylic acid with trimethylolpropane	
71	diester of acrylic acid with neopentylglycol	
71	diester of acrylic acid with 1,9-nonanediol	
71	diester of acrylic acid with 1,4-butanediol	
71	ester of acrylic acid with propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
71	ester of acrylic acid with propoxylated glycerol	
71	triester of acrylic acid with propoxylated trimethylolpropane	
71	diester of acrylic acid with propoxylated neopentylglycol	
71	ester of acrylic acid with propoxylated methanol	
71	diester of acrylic acid with 1,6-hexanediol	
71	ester of acrylic acid with pentaerythritol (including condensate)	
71	diester of acrylic acid with 3-methyl-1,5-pentanediol	
71	2-(2-hydroxyethoxy)ethyl acrylate	
71	4-hydroxybutyl acrylate	
71	2-methoxyethyl acrylate	
71	adipic acid (including methyl ester)	
71	ester of adipic acid with propoxylated glycerol	
71	acetylacetone and 2-propanol, titanium salt	
71	acetylacetone, aluminium salt	
71	acetylacetone, zirconium salt	
71	acetylacetone, titanium salt	
71	acetone	
71	ethyl acetoacetate (including calcium salt)	
71	ethyl acetoacetate and 2-propanol, titanium salt	

71	azelaic acid	
71	itaconic acid (including lithium, sodium, magnesium, potassium, calcium, aluminium, ammonium salt)	
71	2-ethylhexanoic acid, tin salt	
71	2-ethylhexanoic acid, titanium salt	
71	(3,4-epoxycyclohexyl)methyl 3,4-epoxycyclohexylcarboxylate	
71	methyl ester of epoxidized fatty acid (saturated C=16-18, unsaturated C=18)	
71	caprolactone	
71	formic acid	
71	glutaraldehyde	
71	dimethyl glutarate	
71	succinic acid (including succinic anhydride)	
71	dimethyl succinate	
71	acetic acid (including aluminium salt)	
71	vinyl acetate	
71	methyl acetate	
71	3,4-diacetoxy-1-butene	
71	2,2-diethylbutanal	
71	2-dioxolanone	
71	cyclohexanone	
71	1,2-cyclohexanedicarboxylic acid (including 1,2-cyclohexanedicarboxylic anhydride)	
71	1,4-cyclohexanedicarboxylic acid (including methyl ester)	
71	fatty acid (C $\geq$ 10)	
71	(mono- and/or di-)ester of fatty acid (saturated C=14-18, unsaturated C=18) with glycerol	
71	amide of fatty acid (unsaturated C=18) with triethylenetetramine	
71	glycidyl ester of fatty acid (branch saturated C=10)	
71	vinyl ester of fatty acid (branch saturated C=10)	
71	oxalic acid	
71	vinyl stearate	
71	sebacic acid	
71	sorbic acid	
71	1,12-dodecanedioic acid	
71	tris(ethyl acetoacetate)aluminium	
71	lactic acid	
71	lactic acid (including ammonium salt), titanium salt	
71	dimerized and hydrogenated fatty acid (unsaturated)	
71	dimerized fatty acid (unsaturated C=18)	
71	dimerized, hydrogenated and methylated fatty acid (unsaturated C=18)	
71	monobutyl 5-norbornene-2,3-dicarboxylate	
71	paraformaldehyde	
71	2,2-bis(hydroxymethyl)propionic acid (including ammonium salt)	
71	2,2-bis(hydroxymethyl)butyric acid	
71	3-hydroxy-2,2-dimethylpropyl 3-hydroxy-2,2-dimethylpropionate	
71	12-hydroxystearic acid	
71	4-hydroxymethyl-2-dioxolanone	
71	butyrolactone	
71	fumaric acid	
71	ester of fumaric acid with aliphatic alcohol (C=1-8)	
71	propionic acid	
71	formaldehyde	
71	maleic acid (including maleic anhydride)	
71	2-(2-ethoxyethoxy)ethyl maleate	

71	ester of maleic acid with aliphatic alcohol (C=1-8) (including sodium salt)	
71	2-(1-methylethoxy)ethyl maleate	
71	2-[2-(2-methoxyethoxy)ethoxy]ethyl maleate	
71	diethyl malonate	
71	5-(2,5-dioxotetrahydrofuryl)-3-methyl-3-cyclohexene-1,2-dicarboxylic anhydride	
71	4-cyclohexene-1,2-dicarboxylic anhydride	
71	5-norbornene-2,3-dicarboxylic anhydride	
71	3-hexadecenylsuccinic anhydride	
71	4-methyl-1,2-cyclohexanedicarboxylic anhydride	
71	methylcyclohexene-1,2-dicarboxylic anhydride	
71	methacryloxyacetic acid	
71	methacrylic acid (including sodium, magnesium, potassium, calcium, zinc, ammonium salt)	
71	2-(acetoacetoxy)ethyl methacrylate	
71	allyl methacrylate	
71	alkyl methacrylate (C=1-24)	
71	isobornyl methacrylate	
71	glycidyl methacrylate	
71	cyclohexyl methacrylate	
71	ester of methacrylic acid with ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
71	triester of methacrylic acid with trimethylolpropane	
71	diester of methacrylic acid with 1,3-(and/or 1,4-)butanediol	
71	ester of methacrylic acid with propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
71	diester of methacrylic acid with 4-methyl-1,4-pentanediol	
71	3,3,5-trimethylcyclohexyl methacrylate	
71	4-methyl-2-dioxolanone	
71	monoallyl ether of glyceryl monoacrylate	
71	monoallyl ether of glyceryl monoacetate	
71	butyric acid	
71	ricinoleic acid	
71	malic acid	
71	levulinic acid	
<b>73</b>	<b>alcohol</b>	
73	allyl glycidyl ether	
73	alkyl alcohol	
73	isosorbide	
73	2-ethyloxirane	
73	3-ethyl-3-oxetanemethanol	
73	ethyl vinyl ether	
73	2-butyl-2-ethyl-1,3-propanediol	
73	2-ethyl-1,3-hexanediol	
73	2-ethyl-2-methyl-1,3-propanediol	
73	alkyl ether (C=10-16) of ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
73	glycidyl and/or glycerylether of ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
73	monoallyl ether of ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
73	monomethyl ether of ethyleneglycol (including condensate)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
73	monotricyclodecyl ether of ethyleneglycol	
73	ethyleneglycol and/or oxirane (including condensate Mw $\geq$ 1000)	Condensate (EO $\geq$ 4): Less than 50% in the polymer components.
73	2-ethoxyethanol	
73	monoethyl ether of diethyleneglycol	
73	ether of alkyl alcohol (branch C=10-14) with ethoxylated allyl glyceryl ether (and/or allyl glycidyl ether)	

73	ethoxylated and/or propoxylated glycerol and/or glycidyl alcohol	Less than 50% in the polymer components.
73	1,2-epoxy-4-vinylcyclohexane	
73	3,4-epoxy-1-butene	
73	1,8-octanediol	
73	xylitol	
73	glycerol and/or glycidyl alcohol (including condensate)	Condensate (GO $\geq$ 4): Less than 50% in the polymer components.
73	2,4-diethyl-1,5-pentanediol	
73	monobutyl ether of diethyleneglycol	
73	monomethyl ether of diethyleneglycol	
73	cyclohexanol	
73	1,4-cyclohexanediol	
73	1,4-cyclohexanedimethanol	
73	cyclohexyl vinyl ether	
73	2,4-dihydroxy-2-methylpentane	
73	divinyl butyral	
73	divinyl formal	
73	sucrose	
73	spiroglycol	
73	sorbitol	
73	tetrahydrofuran	
73	tetrahydrofurfuryl alcohol	
73	2,2,4,4-tetramethyl-1,3-cyclobutanediol	
73	tricyclodecanedimethanol	
73	tricyclodecenol	
73	2,2,4-trimethyl-1,3-pentanediol	
73	trimethylethane	
73	trimethylolpropane	
73	diallyl ether of trimethylolpropane	
73	neopentylglycol	
73	diglycidyl ether of neopentylglycol	
73	1,9-nonanediol	
73	5-norbornene-2,3-dimethanol	
73	2,2-bis(4-hydroxycyclohexyl)propane	
73	3,4-dihydroxy-1-butene	
73	vinyl alcohol	
73	vinyl butyl ether	
73	butanol, aluminium salt	
73	butanol, zirconium salt	
73	butanol, titanium salt	
73	butanediol	
73	vinyl ether of 1,4-butanediol	
73	butenediol	
73	2-butoxyethanol	
73	propanol, zirconium salt	
73	2-propanol, titanium salt	
73	1,3-propanediol	
73	allyl ether of propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
73	alkyl ether (C=10-16) of propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
73	glycidyl and/or glyceryl ether of propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
73	methyl ether of propyleneglycol (including condensate)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
73	propyleneglycol and/or 2-methyloxirane (including condensate Mw $\geq$ 1000)	Condensate (PO $\geq$ 4): Less than 50% in the polymer components.
73	2-propoxyethanol	
73	propoxylated trimethylolpropane	
73	1,6-hexanediol	
73	diglycidyl ether of 1,6-hexanediol	
73	pentaerythritol and/or dipentaerythritol	
73	1,5-pentanediol	
73	mannitol	
73	2-methyl-1,8-octanediol	
73	$\alpha$ -methylglucoside	
73	2-methyl-1,3-propanediol	
73	2-methyl-1,3-pentanediol	
73	3-methyl-1,5-pentanediol	
<b>75</b>	<b>hydrocarbon</b>	
75	alkene (C=4)	
75	alkene (C=5)	



75	alkene (C=6)	
75	alkene (C=7)	
75	alkene (C=8)	
75	ethylene	
75	conjugated diene hydrocarbon (C=5)	
75	conjugated diene hydrocarbon (C=5), dimerized	
75	nonaromatic hydrocarbon (unsaturated C=9)	
75	1,3-butadiene	
75	propylene	
<b>91</b>	<b>optional chemical treatment</b>	<b>Can be applied only for polymer (including natural high molecule component).</b>
91	isobutylated	
91	ethylated	Can be applied only for benzoguanamine/formaldehyde/salicylic acid copolymer and cellulose.
91	epoxidized	Can be applied only for the terminal modification of 1,3-butadiene homopolymer.
91	chlorinated	Can be applied only for ethylene homopolymer, propylene homopolymer, isoprene homopolymer, 1,3-butadiene homopolymer, isophthalic chloride/trimesic chloride/1,3-phenylenediamine copolymer, trimesic chloride/1,3-phenylenediamine copolymer, propylene/maleic anhydride copolymer, ethylene/1-butene/propylene copolymer, and isobutene/isoprene copolymer.
91	hydrolyzed	Can be applied only for vinyl acetate homopolymer, vinylalcohol homopolymer, 4,4'-dichlorodiphenylsulfone homopolymer, acrylamide homopolymer, vinyl acetate / vinylalcohol copolymer, itaconic acid / vinyl acetate copolymer, ethylene / vinyl acetate copolymer, vinyl acetate / 3,4-diacetoxy-1-butene copolymer, and vinyl acetate / N-(1,1-dimethyl-3-oxobutyl)-acrylamide copolymer.
91	3-carboxy-1-cyano-1-methylpropylated	Can be applied only for acrylonitrile/1,3-butadiene copolymer.
91	carboxylated	Can be applied only for the terminal modification of 1,3-butadiene homopolymer.
91	glycidylated	Can be applied only for aziridine homopolymer.
91	carboxymethylated	Can be applied only for cellulose.
91	oxidized	Can be applied only for ethylene homopolymer and ethylene / propylene copolymer.
91	ultraviolet beam irradiated	
91	hydrogenated	
91	tetrahydrofurfurylated	Can be applied only for the terminal modification of acrylic acid homopolymer.
91	electron beam irradiated	
91	nitrated	Can be applied only for cellulose.
91	hydroxyethylated	Can be applied only for cellulose.
91	3-(2-hydroxyethoxy)propylated	Can be applied only for the terminal modification of dimethyl siloxane.
91	hydroxypropylated	Can be applied only for dimethyl siloxane and cellulose.
91	hydroxylated	Can be applied only for 1,3-butadiene homopolymer, isoprene homopolymer and vinyl chloride / vinyl acetate copolymer.
91	tert-butoxylated	Can be applied only for the terminal modification of acrylic acid / styrene / $\alpha$ -methylstyrene copolymer.
91	butylated	
91	methylated	Can be applied only for benzoguanamine / formaldehyde / salicylic acid copolymer and cellulose.
91	3-methyl-3-butenylated	Can be applied only for oxirane / 2-ethyloxirane copolymer.