

This Class 526 is considered to be an integral part of Class 520 (see the Class 520 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 520

- SYNTHETIC RESINS (CLASS 520, SUBCLASS 1)**
- 59 .EFFECTING A CHANGE IN A POLYMERIZATION PROCESS IN RESPONSE TO A MEASUREMENT OR TEST
 - 60 ..Change responsive to composition property other than density
 - 61 ..Change responsive to pressure or temperature
 - 62 .POLYMERIZING IN REACTOR OF SPECIFIED MATERIAL, OR IN REACTOR IN WHICH SURFACE CONTACTING POLYMERIZING MATERIAL HAS BEEN TREATED
 - 63 .POLYMERIZING IN PRESENCE OF INERT SOLID MASSES SO AS TO HEAT, COOL, OR GRIND POLYMERIZING MASS
 - 64 .POLYMERIZING IN TUBULAR OR LOOP REACTOR
 - 65 .POLYMERIZING IN TWO OR MORE PHYSICALLY DISTINCT ZONES
 - 66 ..Adding material to polymerization zone in an incremental or sequential manner
 - 67 .REMOVING AND RECYCLING REMOVED MATERIAL FROM AN ONGOING POLYMERIZATION ZONE TO A POLYMERIZATION ZONE
 - 68 ..Recycling monomer
 - 69 ..Recycling catalyst
 - 70 ..Recycling diluent
 - 71 .REMOVING ONLY NONPOLYMERIZED OR NONPOLYMERIZABLE MATERIAL DURING POLYMERIZATION PROCESS

- 72 .POLYMERS FROM ONLY ETHYLENIC MONOMERS OR PROCESSES OF POLYMERIZING, POLYMERIZABLE COMPOSITIONS CONTAINING ONLY ETHYLENIC MONOMERS AS REACTANTS OR PROCESSES OF PREPARING
- 73 ..Polymerization involving two or more specified temperature or pressure conditions
- 74 ..Utilizing material during polymerization to prevent or remove reactor buildup, e.g., fouling, clogging, etc.
- 75 ..Including step of synthesis of monomer or pre-polymer
- 76 ...Polymerizable material derived from petroleum fraction
- 77 ..Including step of purifying monomer
- 78 ..Adding material to an on-going polymerization reaction, said addition being other than the continuous addition of the initial charge
- 79 ...Adding in an incremental or sequential manner
- 80 ...Polymerizing in the presence of water
- 81Added material is other than monomer per se, or composition containing monomer
- 82 ..Adding polymerization inhibitor or terminator, e.g., short-stopper, etc.
- 83 ...Added material contains nitrogen compound
- 84 ...Added material contains oxygen compound
- 85 ...Added material contains sulfur atom
- 86 ..Adding catalyst or catalyst component
- 87 ...Adding monomer
- 88 ..Polymerization involving specified mixing, stirring, agitating, or movement of material
- 89 ..Polymerizing in the presence of a specified material other than monomer
- 90 ...Material contains transition metal or compound thereof
- 91In presence of water

92	.....Carbon-metal bond	110	.....With non-transition
93	.....Group VIII transition metal (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt)		elemental metal, hydride thereof, or carbon to non transition metal atom bond
94	.....With organo-sulfur compound or organic-transition metal compound containing sulfur atom	111	.....With non-metal P, S, O, or N containing material
95	...Material contains transition metal oxide (other than peroxide)	112	....With transition metal compound
96	.....Contains elemental transition metal or a non- oxide compound of a transition metal	113	...Two or more diverse transition metal atoms in distinct compounds or in the same compound
97	.....Contains non-transition elemental metal, hydride thereof, or carbon to non- transition metal atom bond	114	.....Contains non-transition elemental metal, hydride thereof, or carbon to non transition metal atom bond
98	.....Contains non-metallic halogen-containing material	115	.....Contains Group VIII metal atom (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt)
99	.....Contains compound containing aluminum to halogen bond and wherein the same aluminum atom is not bonded to a hydrogen or carbon atom	116	.....At least one Group IVB metal atom (Ti, Zr, Hf) and at least one Group VB meta l (V, Nb, Ta)
100	.....Contains non-metal organic N, O, S or P containing compound	117	....Contains Group VIII metal atom (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt)
101	.....Two or more transition metal oxides, at least two of said oxides being other than oxides of Ti, Zr, Hf, or Th	118	...Material contains two or more different compounds of same transition metal
102	.....Contains non-transition heavy metal or compound thereof	119	.....Contains non-transition elemental metal, hydride thereof, or carbon to non- transition metal atom bond
103	.....Group VIII metal oxide (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt)	120	...Material contains compound of non-transition heavy metal wherein non-transition heavy metal is not bonded to hydrogen or carbon
104	.....Group VIB metal oxide (Cr, Mo, W)	121	.....Contains non-transition elemental metal, hydride thereof, or carbon to non- transition metal atom bond
105	.....Contains non-transition elemental metal, hydride thereof, or nontransition metal to carbon atom bond	122	.....Nontransition heavy metal compound is halogen-containing
106	.....Metal oxide is of chromium	123.1	...Material contains compound of Group IA (Li, Na, K, Rb, Cs, Fr) or Group IIA (Be, Mg, Ca, Sr, Ba, Ra) metal wherein IA or IIA metal is not bonded to hydrogen or to carbon
107	.....Group IVB metal oxide (Ti, Zr, Hf)		
108	...Contains one or more elemental transition metal atoms		
109	.....With peroxy compound (-O-O-)	124.1	.....Contains nontransition elemental metal, hydride thereof, or carbon to non- transition metal atom bond

124.2	.....Contains a magnesium compound as the Group IIA metal compound	126	....Material contains silicon atom
124.3	.....Contains at least one additional specified material	127	....Contains non-transition free metal, hydride thereof, or carbon to non-transition metal atom bond
124.4	.....Contains two or more magnesium compounds having no H to magnesium or C to magnesium bonds or at least one additional said Group IA or IIA compound	128	.....Silicon present in organic non-metal compound
124.5	.....Contains Si or Al inorganic oxygen-containing compound	129	.....Silicon present in inorganic oxygen-containing compound
124.6	.....Contains organic non-metal containing B, Si, N, P, or chalcogen material	130	....Silicon present in inorganic oxygen-containing compound
124.7	.....Contains at least two non-transition elemental metals, hydrides thereof, or compounds containing carbon to non-transition metal atom bond, or mixtures thereof	131	....Material contains boron atom
124.8	.....Contains organic non-metal containing B, Si, N, P, or chalcogen material	132	....Contains non-transition elemental metal, hydride thereof, or carbon to non transition metal atom bond
124.9	.....Contains organic non-metal containing B, Si, N, P, or chalcogen material	133	.....Boron compound is halogen-containing
125.1	.....Contains organic Al compound containing no H to aluminum or C to aluminum bonds	134	....Boron compound contains boron bonded to hydrogen or to carbon atom
125.2	.....Contains compound containing only C, H and halogen atoms or only C and halogen atoms	135	....With non-metal N, P, O, S, Se, Te, or halogen material other than nitrogen gas
125.3	.....Contains organic non-metal containing B or Si material	136	....Contains non-transition elemental metal, hydride thereof, or carbon to non transition metal atom bond
125.4	.....Contains at least one inorganic material having no H to metal bonds	137	.....Non-metal material is inorganic halogen-containing material
125.5	.....At least one of said inorganic materials is an Al halide	138	.....Non-metal material is inorganic oxygen-containing material
125.6	.....Contains at least two organic non-metal containing N, P, or chalcogen materials	139	.....Non-metal material is organic phosphorus-containing compound
125.7	.....Contains compound containing only C, H and halogen atoms or only C and halogen atoms	140	.....Non-metal material is organic sulfur-containing compound
125.8	.....Contains at least one inorganic material having no H to metal bonds	141	.....Non-metal material is organic nitrogen-containing compound
		142	.....Non-metal material is organic oxygen-containing compound
		143	.....Non-metal organic oxygen compound is halogen-containing
		144	.....Non-metal material is organic halogen-containing compound
		145	....Non-metal phosphorus-containing material

146	.....Non-metal sulfur-containing material	162	.....Non-transition metal is bonded to carbon atom in compound which contains ethylenic unsaturation
147	.....Non-metal nitrogen-containing material		
148	....Contains two or more diverse non-transition elemental metals, different non-transition hydride compounds, different carbon to non transition metal compounds, or mixture thereof	163	.....Non-transition metal hydride or carbon to non-transition metal metal atom bond compound contains P, S, or N atom
149	.....At least one atom of As, Sb, or Bi, in elemental form or bonded to hydrogen or carbon atom	164	.....Transition metal is IB, IIIB, VIIB or atomic number 58-71, 88, 90 or higher
150	.....At least one atom of Ge, Sn, or Pb in elemental form or bonded to hydrogen or carbon atom	165	.....Non-transition metal to carbon atom bond compound contains at least two atoms of same or different non-transition metal
151	.....At least one atom of Group IIIA metal (Al, Ga, In, Tl) in elemental form or bonded to hydrogen or carbon atom	166	.....Group IVA (Ge, Sn, Pb) or Group VA (As, Sb, Bi) metal is bonded to hydrogen or carbon atom
152	.....At least one atom of Group IA metal (Li, Na, K, Rb, Cs, Fr) in elemental form or bonded to hydrogen or carbon atom	167	.....Elemental non-transition metal atom
153	.....Two or more Group IIIA metals in elemental form or bonded to hydrogen or carbon atom	168	.....Elemental carbon
154	....Material contains aluminum compound wherein aluminum atom is not bonded to hydrogen or carbon atom	169	.....Transition metal is Group VB, VIB or VIII metal
155	.....Contains non-transition elemental metal, hydride thereof or carbon to non transition metal atom bond	169.1	.....Transition metal is Group VIII
156	.....Inorganic oxygen containing aluminum compound	169.2	.....Transition metal is vanadium
157	.....Aluminum trihalide	169.3	.....At least one monomer is nonhydrocarbon material
158	.....With Group IVB transition metal compound (Ti, Zr, Hf)	170	....Transition metal bonded to carbon atom
159	....Material contains non-transition elemental metal, hydride thereof, or carbon to non-transition metal atom bond	171	.....Transition metal is Group VIII (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt)
160	.....Transition metal bonded to carbon atom	172	....Transition metal compound has at least one atom of P, S, N or O therein
161	.....Transition metal compound contains P, S, or N atom	173	...Material contains elemental alkali metal, hydride thereof, or alkali metal to carbon atom bond (Li, Na, K, Rb, Cs, Fr)
		174	....Contains at least two diverse alkali metal atoms, at least one of which is in the form of a free alkali metal, or in the form of a hydride, or has an alkali metal to carbon atom bond

175	....Contains two or more separate chemical entities containing atoms of the same alkali metal, with at least one atom in elemental form, or in the form of a hydride, or has an alkali metal to carbon atom bond	200	...Material contains carbohydrate, e.g., starch, sugar, etc.
176	....Contains heavy metal atom	201	...Material contains previously formed normally solid polymer which is distinct from polymer to be formed and is a polymer formed from at least one ethylenic monomer
177	....Contains aluminum atom	202	...Normally solid polymer contains free alcohol group or alcoholate thereof
178	....Contains boron or silicon atom	203	...Normally solid polymer is formed from ethylenically unsaturated dicarboxylic acid, ester, salt, or anhydride thereof
179	....Contains phosphorus atom	204	...Material contains heterocyclic compound
180	....Contains compound of nitrogen	205	...Sulfur and nitrogen together in a single ring
181	....Contains oxygen atom	206	...Material contains halogenated hydrocarbon wherein at least one halogen atom is other than chlorine, and mixtures of water and a halogenated hydrocarbon one ethylenic monomer
182	....Contains halogen atom	207	...Material contains water and a hydrocarbon
183	...Material contains metal atom bonded to a carbon atom	208	...Material contains aldehyde or ketone or polymeric reaction product thereof, e.g., urea-formaldehyde, etc.
184	....With free oxygen or peroxy compound (-O-O-)	209	...Material contains ether
185	....Metal bonded to carbon is aluminum	210	...Material contains alcohol or alcoholate
186	.....Contains aluminum not bonded to carbon	211	...Alcohol or alcoholate has at least one atom of nitrogen or sulfur chemically combined therewith
187	.....Contains Group IA or IIA atom	212	...Alcohol contains a single hydroxy group or is alcoholate thereof
188	.....Contains heavy metal atom	213	...Material contains carboxylic acid, salt, ester, or anhydride thereof
189	.....Contains P, N, S, or O atom	214	...Derived from carboxylic acid containing at least one atom of halogen or sulfur
190	....Metal bonded to carbon atom is a heavy metal atom	215	...Derived from carboxylic acid containing at least one atom of nitrogen
191	...Material contains elemental metal	216	...Derived from aliphatic acid
192	...Material contains a heavy metal atom containing organic compound	217	...Material contains organic nitrogen compound
193	...Material contains organic compound having a phosphorus atom		
194	...Material contains Si, Te, Se, or Group VIIIA atom, e.g., He, Ne, etc.		
195	...Material contains boron compound other than boron trihalide or non-metal organic complex of boron trihalide		
196	....Boron bonded to hydrogen or carbon atom compound		
197	.....With free oxygen or peroxy compound		
198	.....Contains P, S, or N atom other than as elemental nitrogen		
199	...Material contains polypeptide, e.g., protein, gelatin, etc.		

218.1	....Organic compound contains N=N or N-N group	229.5	....Nitrogen- or halogen-containing inorganic -O-O- compound free of sulfur, or wherein an -O-O- compound is in admixture with a compound devoid of sulfur and containing a N, halogen or P atom
219	....Organic N-N or N=N containing compound also contains at least one S or O chemically bound therein	230	...Hydroperoxide
219.1	....Organic N=N or N-N group containing compound contains carbocyclic group or element other than C,H, or N	230.5	...Peroxy carbonate
219.2	....N=N or N-N group-containing compound is a catalyst admixed with at least one other catalyst, co-catalyst, or accelerator, e.g., redox catalyst, etc.	231	...Peroxide contains halogen atom chemically combined therein
219.3	....Contains specified ingredient other than the N=N or N-N group containing compound, or water, or defined hydrocarbon or defined halogenated hydrocarbon	232	...Peroxide contains an aryl group
219.4	....Ingredient contains halogenated hydrocarbon	232.1	....Benzoyl peroxide
219.5	....Ingredient contains water, e.g., an emulsion, dispersion, etc.	232.3	...Two or more peroxy groups in same compound
219.6	....Azobisisobutyronitrile (AIBN)	232.5	...Cycloaliphatic or ethylenically unsaturated peroxy-containing compound
220	....Organic nitrogen compound contains at least one S or O atom chemically bound therein	233	..Material contains elemental phosphorus or inorganic phosphorus compound
221	..Material contains inorganic heavy metal compound	234	..Material contains sulfur or inorganic sulfur compound
222	..Material contains organic sulfur compound	235	..Material contains free oxygen, air, or ozone
223	....Organic sulfur compound contains -S-S- or -O-O-group	236	..Material contains nitrogen compound
224	...Mercaptan	237	..Material contains metal halide, boron halide or organic complexes thereof, hydrogen halide, elemental halogen, or compound containing only halogen atoms
225	....Organic compound contains hexavalent S atom, e.g., organosulfate, sulfonate, etc.	238	....At least one monomer is nonhydrocarbon material
226	..Material contains aluminum compound other than aluminum trihalide or nonmetallic organic complex of aluminum trihalide	238.1	..From protein or biologically active polypeptide containing monomer
227	..Material contains peroxy group compound (-O-O-)	238.2	..From carbohydrate, tannin, or derivative containing monomer
228	....Two or more peroxide compounds	238.21	...Cellulose or derivative containing monomer
229	....Inorganic peroxide, e.g., persulfate, hydrogen peroxide, etc.	238.22	...Starch or derivative containing monomer, e.g., starch-acrylamide, etc.
		238.23	...Mono- or di-saccharide containing monomer, e.g., allyl sucrose, etc.
		238.3	..From natural resin or derivative containing monomer
		239	..From boron containing monomer
		240	..From metal containing monomer

241	...Transition metal containing	267	...Polymer contains coumarone and indene
242	..From fluorine containing monomer	268	...From cyclic ether which is bridged or fused to a ring system
243	...Fluorine-containing monomer contains a sulfur atom	269	...Hetero-oxygen ring compound contains a carbonate group, i.e., -O-C(=O)-O as ring atoms
244	...Fluorine-containing monomer is a ketone or aldehyde	270	...5-membered heterocyclic ring compound contains at least one oxygen atom
245	...Fluorine containing monomer is a mono-carboxylic acid ester	271	...Acid anhydride
246	...Alcohol derived portion of ester contains ether group	272	....Interpolymerized with hydrocarbon monomer
247	...Fluorine containing monomer is an ether	273	...3-membered heterocyclic ring contains at least one oxygen atom
248	...Fluorine containing monomer contains nitrogen atom	274	..From monomer containing a phosphorus atom
249	...Fluorine containing monomer contains at least one diverse halogen atom	275	...Phosphorus is part of a ring
250	...Fluorine containing monomer contains F, C and H only or F and C only	276	...Phosphorus is bonded to a nitrogen atom
251	....Aromatic	277	...Phosphorus atom is pentavalent
252	....Fluorine compound contains two or more ethylenic groups	278	....Pentavalent phosphorus is bonded to at least one atom of carbon
253	....Five or more fluorine atoms	279	..From monomer containing a silicon atom
254	....Contains only carbon and fluorine atoms	280	..From fused or bridged ring containing monomer
255	....Two or more fluorine atoms, e.g., vinylidene fluoride, etc.	281	...Bridged monomer
256	..From monomer containing sulfur atom as part of a heterocyclic ring	282	....Contains an exterior ethylenic substituent bonded to a single carbon atom of the bridged ring system
257	...Sulfur-containing ring contains additional hetero atom, i.e., N, O, Se, Te	283	....Compound containing dicyclopentadiene moiety
258	..From monomer containing nitrogen atom as part of a heterocyclic ring	284	...Contains an exterior ethylenic substituent bonded directly or indirectly to a single carbon atom of the fused ring system
259	...Nitrogen atom is part of a bridged or fused ring system	285	..From monomer containing an acetylenic group
260	...5- or 6-membered nitrogen ring compound having at least one oxygen in the ring	286	..From S-containing monomer
261	...Three or more nitrogen atoms in a single ring	287	...From monomer containing three or more oxygen atoms bonded to a single sulfur atom, e.g., sulfonate, etc.
262	...Imide monomer	288	...From sulfur monomer containing nitrogen atom
263	...Nitrogen of ring is bonded directly or indirectly to extracyclic ethylenic moiety	289	...From sulfide-containing monomer
264	....Lactam monomer		
265	...6-membered ring contains a single nitrogen atom		
266	..From monomer containing oxygen as part of a heterocyclic ring		

290	..Monomer from unsaturated petroleum hydrocarbon fraction; from unsaturated coal or bituminous material, extract, or derivative thereof; or from unsaturated fatty still residue	302	..From monomer containing a >>N-C(=O)-N<< or >>N-C(-O)-N<< group e.g., urea, isourea, etc.
291	..From halogen containing monomer having at least three carbon atoms	303.1	..From carboxylic acid amide-containing monomer
292.1	...Halogen monomer is carboxylic acid ester	304	...Contains oxygen atom other than in amide form bonded to a carbon atom
292.2	...Contains nitrogen	305	...Cycloaliphatic or aromatic
292.3	...Contains oxygen other than as part of a carboxylic acid ester group	306	...Plural amide group containing
292.4	...Contains two or more carboxylic acid ester groups	307	...Non-amide nitrogen containing
292.5	...Contains carbocyclic ring, e.g., aryl, etc.	307.1	...N- substituted unsaturated hydrocarbon group
292.6	...Interpolymerized with a monomer containing atom other than carbon, hydrogen, or halogen	307.2	...With monomer containing carboxylic acid amide group
292.7	...Interpolymerized	307.3	...With monomer containing nitrogen other than (meth)-acrylonitrile
292.8	..Halogen monomer is nitrile	307.4	...With monomer containing oxygen
292.9	..Halogen monomer contains an ether group	307.5	...Oxygen atom is part of ether or hydroxyl group
292.95	..Halogen monomer contains a carboxylic acid, salt, or carboxylic acid amide	307.6	...Oxygen atom is part of carboxylic acid group
293	..Aromatic	307.7	...Oxygen atom is part of ester group derived from unsaturated carboxylic acid
294	...Plural halogen atom	307.8	...With hydrocarbon monomer
295	...Plural ethylenic groups	308	..From cycloaliphatic monomer
296	..From bromine or iodine containing monomer, dichloroethylene, trichloroethylene or tetrachloroethylene	309	...Contains atoms other than carbon and hydrogen
297	..From nitrile group containing monomer other than acrylonitrile or methacrylonitrile	310	..From nitrogen containing monomer other than acrylonitrile or methacrylonitrile
298	...Contains non-nitrile nitrogen atom or contains an oxygen atom	311	..Nitrogen bonded to oxygen atom (including nitrogen containing salts)
299	...Aromatic	312	...Contains oxygen atom bonded to a carbon atom
300	...Plural nitrile group-containing	313	..From phenol, phenol ether, or inorganic phenolate monomer
301	..From monomer containing a >N-C(=O)-O- group, e.g., carbamic acid, etc.	314	..From monomer containing a carbonate group, i.e., -O-C(=O)-O-
		315	..From aldehyde monomer
		316	..From ketone or ketene monomer
		317.1	..From carboxylic acid monomer
		318	...Carboxylic acid contains ester group
		318.1	...Carboxylic acid contains aryl group, or two or more ethylenic groups
		318.2	...Carboxylic acid contains two or more carboxyl groups

318.25	....With hydrocarbon, vinyl chloride or vinylidene chloride monomer	329.3	.....Additional monomer is acrylonitrile or methacrylonitrile
318.3	...Carboxylic acid other than acrylic or methacrylic acid	329.4	.....Additional monomer is a halogen-containing monomer
318.4	...With ester monomer	329.5	.....Additional monomer is an ester derived from saturated carboxylic acid
318.41	....Monomer contains chalcogen other than in C(=O)-O-chalcogen in any monomer)	329.6	.....Additional monomer contains an ether group
318.42	.....Hydroxyl group	329.7	...Polymer derived from methyl acrylate or methyl methacrylate
318.43	....Monomer contains two or more ester groups	330	...Interpolymer of an ester derived from ethylenically unsaturated alcohol, e.g., interpolymer of vinyl acetate, etc.
318.44	....Two or more ester monomers	331	...Interpolymerized with hydrocarbon monomer
318.45	....With hydrocarbon monomer	332	..From monomer containing an ether group
318.5	...With chalcogen containing monomer, e.g., additional carboxyl monomer, etc.	333	...Plural ether groups
318.6	...With hydrocarbon monomer	334	...Aromatic or plural ethylenic groups
319	..From carboxylic acid ester monomer	335	..From hydrocarbon monomer containing at least two ethylenic groups, e.g., butadiene, etc.
320	...Ether or hydroxy containing	336	...Ethylenic groups are non-conjugated, e.g., divinylbenzene, etc.
321	..Monomer containing at least two carboxylic acid ester groups	337	...Interpolymerized with at least one diverse hydrocarbon monomer containing at least two ethylenic groups
322	....Derived from an ethylenically unsaturated alcohol	338	...Interpolymerized with non-hydrocarbon monomer
323	.....Derived from an ethylenically unsaturated acid containing plural carboxylic acid groups	339	...Interpolymerized with aliphatic hydrocarbon
323.1	....Diester derived from an ethylenically unsaturated monocarboxylic acid and polyol	340	...Interpolymerized with aromatic hydrocarbon
323.2	.....With additional monomer	340.1	...Polymerized in the presence of a water medium
324	....Interpolymerized with hydrocarbon monomer	340.2	...From hydrocarbon having only five carbon atoms
325	....Interpolymerized with monomer of diverse carboxylic ester	340.3	...From hydrocarbon having at least six carbon atoms
326	...Aromatic	340.4	...Butadiene homopolymer contains at least 75% cis-1,4-configuration
327	...Derived from an ethylenically unsaturated carboxylic acid and an ethylenically unsaturated alcohol	341	..From acrylonitrile or methacrylonitrile
328	...Derived from an ethylenically unsaturated carboxylic acid	342	...Interpolymerized
328.5	....With additional monomer	343	..From vinylidene chloride
329	.....Interpolymerized with hydrocarbon monomer		
329.1	.....Hydrocarbon monomer containing at least two ethylenic groups, e.g., butadiene, etc.		
329.2	.....Aromatic, e.g., styrene, etc.		

- 940 **HIGH SOFTENING TEMPERATURE, E.G.,
 EXPOSURE TO BOILING WATER,
 BOILABLE, ETC.**
- 941 **HAVING THE TRANSITION METAL
 BONDED DIRECTLY TO CARBON**
- 942 **POLYMERIZATION IN THE PRESENCE OF
 A LIQUID CO₂ DILUENT**
- 943 **POLYMERIZATION WITH METALLOCENE
 CATALYSTS**

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FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

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CLASS 526 SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS
520 SERIES

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