This Class 510 is considered to be an integral part of Class 252 (see the Class 252 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 252.

100 WITH SAFETY OR INDICATOR FEATURE

101 WITH OXYGEN, HALOGEN, SULFUR, OR NITROGEN CONTAINING OR ETHYLENICALLY UNSATURATED COMPONENT WHICH IS A FRAGRANCE OR AROMA ENHANCER (E.G., PERFUME, ORGANOLEPTIC MATERIAL, ETC.)

102 .Ring in the component (e.g., benzene, 5-membered ring, etc.)

103 ..Heterocyclic ring

104 ..Polycyclic ring system (e.g., camphor, cedar oil, borneol, etc.)

105 ...Acyclic carbonyl (-C(=O)-) attached directly or indirectly to the system by nonionic bonding

106 ...Six-membered alicyclic ring (e.g., menthol, etc.)

107 .Carboxylic or thiocarboxylic ester function in the component

108 CLEANING COMPOSITIONS OR PROCESSES OF PREPARING (E.G., SODIUM BISULFATE COMPONENT, ETC.)

109 .For cleaning a specific substrate or removing a specific contaminant (e.g., for smoker’s pipe, etc.)

110 ..For removing radioactive or toxic chemical contaminant (e.g., chemical warfare agent, PCBs, etc.)

111 ..For food product (e.g., shell egg, etc.)

112 ..For contact lenses

113 ...Solid particulate component

114 ...Enzyme component of specific activity or source (e.g., protease; of bacterial origin, etc.)

115 ...Water-soluble peroxo, silicone resin, or polyvinyl pyrrolidone component

116 ..For removable dentures

117 ...Gas generating (e.g., effervescent, etc.)

118 ..Nail polish remover

119 ..For human scalp hair, scalp, or wig (e.g., shampoo, etc.)

120 ...Package, solid, or gas-propelled composition (e.g., powder, aerosol container, etc.)

121 ...Steroid or carbohydrate gum component (e.g., lanolin, guar gum, etc.)

122 ...Silicon, boron, or phosphorus containing organic component

123 ...Amine oxide, quaternary, or zwitterion nitrogen component (e.g., betaine, sultaine, etc.)

124 ....With diverse amine oxide, quaternary, or zwitterion nitrogen component

125 ....With organic sulfoxy containing component (e.g., sulfate, sulfonate, etc.)

126 ...Carboxamido containing component having an alkanol, carboxyl, or alkylamino substituent, or salt thereof

127 ...Organic sulfoxy containing component (e.g., sulfate, sulfonate, etc.)

128 ....With a urea or with polyoxyalkylene containing component devoid of covalently bonded anionic substituents

129 ...Soap component

130 ..For human skin

131 ...With halogen, nitrogen, oxygen, or phosphorus containing antiseptic, biocidal, or deodorizing component

132 ....Surgical scrub

133 ....Solid, shaped article (e.g., bar, etc.)

134 ...For removing adhesively attached material (e.g., bandage, etc.)

135 ...High-foaming bath composition (e.g., bubble bath, etc.)

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...Makeup remover
...For a specific area of the body (e.g., face, ears, etc.)
...For hands
...With particulate scrubbing or abrasive component (e.g., powdered pumice, etc.)
...With removable package, casing, receptacle, or in aerosol dispenser (e.g., cake wrapper, casing gradually removable throughout use, etc.)
...Solid, shaped article (e.g., bar, leaf, tablet, etc.)
....With nonremovable casing or coating integrally attached to the article exterior (e.g., ornamental design, encapsulating layer, etc.)
.....Hollow or buoyant core or insert (e.g., air-holding sponge, etc.)
....Floating, elastic, or malleable
....Composite (e.g., having segments of different color, solubility, composition, etc.)
....Transparent or translucent
....Having discrete indentation or protuberance (e.g., embossed, etc.)
.....For comminuting soap dispenser
....Boron or phosphorus containing component
....Carbohydrate component (e.g., cellulose, guar gum, etc.)
....Soap component
.....With free higher fatty acid component
......With lime-soap dispersant
.......Plural surfactant components (e.g., organic sulfate and sulfonate, sulfonate and amine oxide, etc.)
.......Organic sulfoxy containing component (e.g., sulfate, sulfonate, etc.)
......For waterless cleaning
.......Cream, paste, or gel
...Liquid composition
...For live animal (nonhuman)
...For medical or dental instruments or equipment (e.g., electronic hematological analyzer, etc.)
...For semipermeable membrane or ion-exchange resin or equipment
...For optical mirror, lens, or mold therefor (e.g., eyeglasses, camera lens, etc.)
...For synthetic resin lens or mold therefor
...For computer memory disk
...For electrophotographic equipment or parts thereof (e.g., xerographic plate, hot roll fuser, etc.)
...For magnetic tape or disk, recorder/playback head, or drive assembly therefor
...For sound record (e.g., recording for phonograph, CD player, etc.)
...For photographic film or processing equipment
...For ink recording or printing equipment, or mold therefor (e.g., ink jet recorder, etc.)
...For lithographic printing plate
...For silk printing screen
...For typewriter
...For removing ink, pencil, or writing fluid markings (e.g., ball pen fluid, printer's or magnetic ink, etc.)
...For printed or integrated electrical circuit, or semiconductor device
...For stripping photoresist material
...Azeotropic or azeotrope-like composition (e.g., for defluxing, etc.)
....Nitrogen-containing component
....For laboratory or pharmaceutical glassware
....For plate glass (e.g., window, mirror, windshield, etc.)
....Aqueous liquid composition
....With aliphatic alcohol, ether, or ketone component
CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COM- 510 - 3
POSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

183 For hydraulic power transmission system (e.g., automobile brake system, etc.)
184 For engine cooling system
185 For interior of engine or parts thereof (e.g., crankcase, etc.)
186 Inorganic component (other than water)
187 Phenol, cyclic carbonate, or soap component
188 For hydrocarbon or synthetic resin processing or conveying equipment (e.g., for oil or gas pipeline, fractionating equipment, curable resin fabrication tools, etc.)
189 For vehicle wheel, bumper, or tire
190 For firearm bore
191 For toilet bowl or urinal
192 Flush dispensed
193 Synthetic resin or carbohydrate gum component (e.g., polyvinyl alcohol, poly (ethylene oxide) resin, guar gum, etc.)
194 For mechanical garbage disposal unit or dishwasher interior
195 For household drain or sewer pipe
196 Exothermic (e.g., containing free metal, such as Al, etc.)
197 For removing heat-degraded food residue from solid surface (e.g., oven interior, grill, cooking pot exterior, etc.)
198 Gas-propelled composition or package
199 For removing fungal or algal growth from a substrate (e.g., removing mold, mildew, algae, etc.)
200 For removing adhesively attached material or adhesive agent from a substrate (e.g., wallpaper, gummied label, etc.)
201 For removing integral organic coating, sealant, or finish from a substrate (e.g., stripping paint, varnish, etc.)
202 From metallic substrate
203 Water-compatible concentrate or aqueous mixture thereof
204 Halogenated hydrocarbon component
205 With wax component
206 Aqueous component
207 With metal hydroxide or wax component
208 Wax component
209 With inorganic component
210 With carboxylic acid or phenolic component, or salt thereof (e.g., carboxylic acid, metal phenolate, etc.)
211 With carboxylic acid ester component (e.g., polymerized vegetable oil, etc.)
212 Amine, carboxamide, or metal hydroxide or alkoxide component (e.g., pyrrolidone, pyridine, etc.)
213 Liquid hydrocarbon component
214 For uncarpeted floor
215 For absorbing liquid or greasy matter (e.g., for removing oil, aqueous fluid, etc.)
216 Sweeping compound (i.e., for binding or suppressing dust during sweeping)
217 For no-wax floor covering
218 For equipment used in processing, handling, storing, or serving edible product (e.g., dairy or brewery equipment, household utensils, etc.)
219 For glass or synthetic resin equipment or container (e.g., bottle, jar, pipeline, etc., made of polycarbonate, etc.)
220 For use in automatic dishwasher
221 Liquid, paste, or gel (e.g., slurry, etc.)
222 Wax or phosphorus or silicon containing organic component
223 Polycarboxylic acid component, or salt thereof
224 Solid, shaped article (e.g., tablet, briquette, pellet, etc.)
225 Alkali metal hydroxide component
226 Enzyme component of specific activity or source (e.g., protease, ethanol oxidase, of bacterial origin, etc.)

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<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>227</td>
<td>With overglaze or glassware protection component (except alkali metal silicate)</td>
</tr>
<tr>
<td>228</td>
<td>Phosphorus, silicon, or sulfoxy containing organic component (e.g., sulfate, sulfonate, etc.)</td>
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<tr>
<td>229</td>
<td>Polycarboxylic acid component, or salt thereof</td>
</tr>
<tr>
<td>230</td>
<td>The component is a polymer (e.g., polyacrylic acid salt, etc.)</td>
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<tr>
<td>231</td>
<td>Halogen-free inorganic phosphorus containing component</td>
</tr>
<tr>
<td>232</td>
<td>With inorganic silicon containing component</td>
</tr>
<tr>
<td>233</td>
<td>With alkali metal hydroxide, carbonate, bicarbonate, or sesquicarbonate component</td>
</tr>
<tr>
<td>234</td>
<td>For in-place cleaning of stationary apparatus</td>
</tr>
<tr>
<td>235</td>
<td>For manual dishwashing</td>
</tr>
<tr>
<td>236</td>
<td>Abrasive, protein, or organic phosphorus containing component</td>
</tr>
<tr>
<td>237</td>
<td>Carboxamide, amine oxide, heterocyclic, quaternary, or zwitterion nitrogen-containing component</td>
</tr>
<tr>
<td>238</td>
<td>For grouted tile, bathtub, or procelain or ceramic surface (e.g., ceramic bathroom tile, etc.)</td>
</tr>
<tr>
<td>239</td>
<td>For enameled surface or acoustic material</td>
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<tr>
<td>240</td>
<td>For stonework, brickwork, or cementitious material (e.g., marble, granite, concrete, alabaster, etc.)</td>
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<tr>
<td>241</td>
<td>For removing foreign matter from surface carrying a protective or ornamental coating, finish, or adhesively attached covering (e.g., from painted or papered wall, automobile body, etc.)</td>
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<tr>
<td>242</td>
<td>Liquid composition (e.g., emulsion, etc.)</td>
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<tr>
<td>243</td>
<td>For clear or translucent plastic surface (e.g., Plexiglas acrylic, Lexan polycarbonate, etc.)</td>
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<tr>
<td>244</td>
<td>For nontextile synthetic resin, rubber, or fiberglass substrate (e.g., vinyl, etc.)</td>
</tr>
<tr>
<td>245</td>
<td>For bare metal surface (e.g., degreasing composition, etc.)</td>
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<tr>
<td>246</td>
<td>For glassware mold</td>
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<tr>
<td>247</td>
<td>For descaling the inner surface of equipment which is in continuous contact with water (e.g., boiler scale removal; for water storage tank, conduit, etc.)</td>
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<tr>
<td>248</td>
<td>Free element component (e.g., metal, carbon, sulfur, etc.)</td>
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<td>249</td>
<td>Tannin, whole animal or plant material component, or crude extract thereof</td>
</tr>
<tr>
<td>250</td>
<td>With sugar, molasses, or starch component</td>
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<tr>
<td>251</td>
<td>With vegetable oil, hydrocarbon, fat, or phenolic component (e.g., mineral oil, etc.)</td>
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<tr>
<td>252</td>
<td>With alkali metal hydroxide, carbonate, or bicarbonate component</td>
</tr>
<tr>
<td>253</td>
<td>Free organic or inorganic acid component</td>
</tr>
<tr>
<td>254</td>
<td>For use on nonferrous surface (e.g., aluminum, copper, tin plate, etc.)</td>
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<tr>
<td>255</td>
<td>With corrosion inhibiting or solvent stabilizing component</td>
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<tr>
<td>256</td>
<td>With halogenated hydrocarbon, abrasive, coating, or polishing component</td>
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<tr>
<td>257</td>
<td>With inorganic fluoride containing component (e.g., HF, etc.)</td>
</tr>
<tr>
<td>258</td>
<td>With corrosion or embrittlement inhibiting or solvent stabilizing component (e.g., pickling bath, etc.)</td>
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<tr>
<td>259</td>
<td>Quaternary ammonium or heavy metal in the component (e.g., Zn, Sn, etc.)</td>
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<tr>
<td>260</td>
<td>Organic sulfonium group in the component</td>
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<tr>
<td>261</td>
<td>Organic divalent sulfur containing substituent in the component (e.g., sulfide, mercaptan, etc.)</td>
</tr>
<tr>
<td>262</td>
<td>Heterocyclic ring in the component</td>
</tr>
</tbody>
</table>

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CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COM-
POSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

263 .....Nitrogen containing substituent in the component (e.g., thiourea, etc.)
264 .....Organic nitrogen containing substituent in the component
265 .....Heterocyclic nitrogen in the component
266 .....Plural inhibitor or stabilizer components
267 .....Ethynically or acetylenically unsaturated substituent in the component (e.g., propargyl alcohol, ester, etc.)
268 .....Abrasive or polishing component
269 .....Inorganic acid component (e.g., sodium bisulfate, etc.)
270 .....With heavy metal containing component
271 .....With hydrocarbon or halogen or oxygen containing organic solvent (e.g., alcohol, ester, etc.)
272 .....Alkali metal hydroxide component
273 .....Halogenated hydrocarbon component (e.g., degreasing composition, etc.)
274 .....Organic sulfoxy containing component
275 .....For leather, hair, feathers, fur, or straw (e.g., Panama hat, etc.)
276 .....For textile material (e.g., laundry detergent, etc.)
277 .....Multifunctional assembly (e.g., package with detergent and prespotter in separate containers, etc.)
278 .....For pile fabric or upholstery (e.g., carpet, rug, etc.)
279 .....Gas-propelled composition (e.g., aerosol, etc.)
280 .....Gel or liquid composition
281 .....For removing stains (other than merely in the course of laundering or dry-cleaning operation)
282 .....Prior to dry cleaning
283 .....Prior to laundering (e.g., spotting stick, pre-spot, etc.)
284 .....Aqueous component

285 .....Dry cleaning (e.g., using nonaqueous fluid, etc.)
286 .....With halogen, oxygen, or nitrogen containing chemical bleach, oxidant, antiseptic, or biocidal component
287 .....With metal corrosion inhibiting or textile treating component (other than mere cleaning) (e.g., antistatic or fabric softening, wrinkle reducing, optical brightener, lusterizing, etc., component)
288 .....Organic phosphorus containing component
289 .....Polyoxyalkylene containing surfactant devoid of covalently bonded anionic substituents
290 .....Sulfur-containing anionically substituted surfactant
291 .....Aqueous component
292 .....For delicate material (e.g., wool, silk, fine fabric, etc.)
293 .....Multiple-dose article (e.g., detergent-containing plastic bottle, etc.)
294 .....Solid, shaped article (e.g., bar, etc.)
295 .....Dosing unit (e.g., detergent-imregnated water-insoluble substrate of fabric, tissue, etc.)
296 .....All or part of the unit enclosure is made of water-sensitive material (e.g., water-soluble or dispersible envelope enclosing powdered detergent, etc.)
297 .....Pouchlike water-insoluble unit enclosure
298 .....Solid, shaped article (e.g., tablet, briquette, etc.)
299 .....With soil release or antisoiling component
300 .....Enzyme component of specific activity or source (e.g., protease, of bacterial origin, etc.)
301 .....With photoactivator component or photobleaching function (e.g., porphine component, requiring use of visible or UV light, etc.)

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CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

302 ...With oxygen or halogen containing chemical bleach or oxidant component
303 ....Liquid composition
304 ....Nonaqueous liquid
305 ....Enzyme component of specific activity or source (e.g., lipase, of bacterial origin, etc.)
306 .....Proteolytic enzyme
307 ....With oxygen, nitrogen, or sulfur containing optical brightener
308 .....With oxygen, nitrogen, or sulfur containing textile softening or antistatic component
309 .....Peroxy component
310 .....Percarboxylic acid component, or salt thereof
311 ....With heavy metal containing catalyst or activator (e.g., containing Mn, Cu, Fe, etc.)
312 ....With nitrogen or oxygen containing bleach precursor or activator (e.g., ester, acid anhydride, etc.)
313 .....Carbonyl single bonded to nitrogen in the activator or precursor (e.g., amide, imide, etc.)
314 .....Nitrogen multiple bonded to carbon in the activator or precursor (e.g., cyano, imidoyl, triazino, etc., substituent)
315 .....With aluminosilicate component (e.g., synthetic zeolite, etc.)
316 .....With soap component
317 .....With suds regulating or inorganic alkaline earth metal salt component
318 .....With polycarboxylic acid component, or salt or anhydride thereof (e.g., carboxylic acid copolymer, etc.)
319 .....With halogen, nitrogen, oxygen, or phosphorus containing antiseptic or biocidal component
320 .....Enzyme component of specific activity or source (e.g., protease, of bacterial origin, etc.)
321 .....Liquid composition (e.g., slurry, etc.)
322 .....With nitrogen, oxygen, or sulfur containing textile softening or antistatic component
323 .....With aluminosilicate component (e.g., ion-exchange zeolite, etc.)
324 .....With nitrogen, oxygen, or sulfur containing optical brightener
325 .....Liquid composition (e.g., slurry, etc.)
326 .....Process of preparing (other than mere combining of components)
327 .....Liquid composition (e.g., slurry, etc.)
328 .....Process of preparing (other than mere combining of components)
329 .....Quaternary nitrogen or phosphorus, or heterocyclic nitrogen containing fabric softener or antistatic component
330 .....Quaternary nitrogen or phosphorus, or heterocyclic nitrogen containing fabric softener or antistatic component
331 .....Nonionic oxygen containing surfactant or polyacrylamide component
332 .....Nitrogen single bonded to plural carbons in the component, or salt thereof (e.g., secondary or tertiary amine, etc.)
333 .....The component is a carboxamide or an amine oxide
334 .....Layered or swelling inorganic silicate containing component (e.g., smectite clay, bentonite, etc.)
335 .....With component inhibiting corrosion of metal or vitreous enamel laundering equipment (other than inorganic silicate)
336 .....Gel, cream, or paste
337 .....Liquid composition (e.g., slurry, etc.)
338 .....Nonaqueous liquid

November 2003
...Alkali metal hydroxide or borate or whole plant or animal material component or crude extract thereof (e.g., borax, sodium metaborate, flour, etc.)

...Plural nonsoap organic surfactants (e.g., nonionic and anionically substituted, diverse nonionic surfactants, etc.)

...Nitrogen containing organic surfactant devoid of covalently bonded anionic substituents (e.g., cationic, nonionic, etc., surfactant)

...Liquid alcohol or hydrocarbon component

...Colorant, soap, or organic silicon containing component

...Whole plant or animal material component or crude extract thereof (e.g., glue, flour, etc.)

...Alkali metal borate component (e.g., borax, sodium metaborate, etc.)

...Sulfonium, phosphonium, or nonanionic sulfoxide containing organic component (e.g., sulfoxide, sulfonamide, etc.)

...Phosphate ester, wax, or organic silicon containing component (e.g., defoamer, etc.)

...Titanium dioxide or inorganic alkaline earth metal salt component (e.g., calcium or magnesium carbonate, etc.)

...Coated, encapsulated, or impregnated particle component in a physically heterogeneous composition (e.g., coated or encapsulated particles mixed with powder, granules, etc.)

...Nitrogen containing surfactant devoid of covalently bonded anionic substituents which is admixed with a diverse non-soap surfactant

...Sulfur containing anionically substituted surfactant which is admixed with a diverse non-soap surfactant

...Plural sulfur-containing, anionically substituted surfactants

...Higher fatty acid component, or salt or glyceride ester thereof (e.g., soap, vegetable oil, magnesium stearate, etc.)

...With lime-soap dispersant

...With non-soap surfactant component

...Oxygen containing surfactant devoid of covalently bonded anionic substituents (e.g., polyethoxylated alcohol, amine oxide, etc.)

...Sulfur-containing, anionically substituted surfactant

...With higher fatty alcohol component

...With inorganic phosphorus containing component

...Poly(oxyalkylene) or plural carboxamido groups containing component (e.g., polyvinyl pyrrolidone, etc.)

...Polycarboxylic acid component, or acid anhydride or salt thereof (e.g., sodium citrate, maleic anhydride polymer, polyacrylic acid, etc.)

...For removing soap scum or curd or combustion residues (e.g., carbon deposits, etc.)

...For removing stains caused by iron, aluminum, or protein containing material (e.g., rust, aluminum marks, blood, food, etc.)

...For displacing organic liquid film from a solid surface

...For removing greasy or oily contaminant from a substrate

...For removing asphalt, tar, or hardened cementitious material (e.g., concrete, etc.)

...With oxygen or halogen containing chemical bleach or oxidant component

...With scrubbing or scouring component (e.g., containing an abrasive, etc.)

...Liquid composition (e.g., slurry, etc.)

...Liquid, paste, foam, or gel (e.g., slurry, aerosol composition or package, etc.)
CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

371 ...Nonaqueous liquid
372 ...The bleach or oxidant component contains peroxy
373 ...Colorant, amine or phosphine oxide, or nonanionic sulfoxyl containing organic component
374 ...With enzyme component of specific activity or source (e.g., protease, of bacterial origin, etc.)
375 ...The bleach or oxidant component contains peroxy
376 ...With heavy metal, nitrogen, or oxygen containing activator, catalyst, or precursor
377 ...Aluminosilicate or soap component
378 ...Perborate salt component
379 ...Chlorine-containing bleach or oxidant component
380 ...The component is a hypochlorite salt
381 ...The component is organic (e.g., chloro(iso)cyanurate derivative, etc.)
382 ...With halogen, nitrogen, oxygen, or phosphorus containing antiseptic or biocidal component
383 ...Liquid, paste, or gel
384 ...Quaternary ammonium containing antiseptic or biocidal component
385 ...Elemental iodine antiseptic or biocidal component
386 ...Hydroxyphenyl or halophenyl moiety in the antiseptic or biocidal component (e.g., phenol, etc.)
387 ...Halophenyl moiety in the antiseptic or biocidal component
388 ...Halogenated hydroxyphenyl moiety in the antiseptic or biocidal component
389 ...Soap component
390 ...Heavy metal, heterocyclic nitrogen, or organic phosphorus containing antiseptic or biocidal component
391 ...Quaternary ammonium or sulfonium or iodine containing antiseptic or biocidal component (e.g., elemental iodine, etc.)
392 ...Enzyme component of specific activity or source (e.g., protease, of bacterial origin, etc.)
393 ...Liquid composition (e.g., slurry, etc.)
394 ...With nitrogen, oxygen, or sulfur containing optical brightener, ultraviolet absorber, antistatic, or fiber softening component
395 ...With scrubbing or scouring component (e.g., containing an abrasive, etc.)
396 ...Cream; paste; gel; solid, shaped article; or gas-propelled composition (e.g., bar, aerosol, etc.)
397 ...Liquid composition (e.g., slurry, etc.)
398 ...Polycarboxylic acid component, or acid anhydride, salt, or ester thereof (e.g., maleic anhydride polymer, polyacrylic acid, etc.)
399 ...Soap component
400 ...With soil-release, anti-soiling, coating, or nonabrasive polishing component (e.g., with polysiloxane, chalk, etc.)
401 ...With metal-corrosion inhibiting component (i.e., preventing corrosion, such as tarnishing, discoloration, etc., of metal equipment which is in contact with the cleaning composition)
402 ...Sulfur or nitrogen containing organic substituent in the component
403 ...Gel or malleable composition (e.g., plastic-like, etc.)
404 ...Cream or paste
405 ...Liquid composition
406 ...Packaged or gas-propelled composition
407 ...Nonaqueous liquid
408 ...Azeotropic or azeotrope-like composition
409 ...Nitrogen containing component
410 ...Ternary composition

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CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COM-
POSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

411 ...Oxygen containing component
412 ...Halogenated hydrocarbon component
413 ...Polyoxyalkylene containing surfactant devoid of covalently bonded anionic substituents
414 ...Sulfur containing anionically substituted surfactant
415 ...Azeotropic or azeotropelike composition
416 ...Opaque or pearlescent composition
417 ...Plural immiscible liquid phases (e.g., emulsion, oily and aqueous layers, etc.)
418 ...Liquid and solid phases (e.g., suspension, slurry, etc.)
419 ...With colorant component
420 ...Alkali metal or ammonium borate, or crude plant or animal material extract component (e.g., borax, sour milk, soap bark extract, etc.)
421 ...Polyoxyalkylene containing surfactant devoid of covalently bonded anionic substituents
422 ...With diverse non-soap surfactant
423 ...Nitrogen or phosphorus in organic surfactant devoid of covalently bonded anionic substituents
424 ...Sulfur containing anionically substituted surfactant
425 .....With soap or diverse sulfur containing surfactant component
426 ...Sulfur containing anionically substituted surfactant
427 ...With diverse non-soap surfactant
428 ...Plural anionically substituted sulfur containing surfactants
429 .....Sulfonate surfactant with sulfate monoester surfactant
430 ...With soap component
431 ...Organic phosphorus containing component
432 ...Organic solvent component
433 ...Nitrogen in organic surfactant devoid of covalently bonded anionic substituents

434 ...Polycarboxylic acid component, or acid anhydride or salt thereof (e.g., acrylic acid polymer, maleic anhydride, sodium citrate, etc.)
435 ...Ammonia or alkali metal hydroxide or carbonate component
436 ...Organic phosphorus containing component
437 ...Higher fatty acid component or salt or ester thereof (e.g., soap, vegetable oil, etc.)
438 ...Heterogeneous arrangement (e.g., mixture of macroscopic particles differing in physical or chemical composition, etc.; liquid component encapsulated in or sorbed on solid material, etc.)
439 ...Package or dosing unit (e.g., sachet, wrapped cake soap, etc.)
440 ...Bar or cake (e.g., having segments of different color, solubility, etc.)
441 ...Coated or encapsulated solid material, or process of preparing
442 ...Aqueous coating agent
443 ...Spray-dried component, or process of preparing (e.g., postdosed composition, etc.)
444 ...Agglomerated product or component, or process of preparing
445 ...Solid, shaped macroscopic article or structure (e.g., pellet, film, etc.)
446 ...Of compacted powdery or granular material (e.g., tablet, briquette, etc.)
447 ...Bar or cake
448 ...With lime-soap dispersant
449 ...Having discrete indentation or protuberance
450 ...With anionically substituted nonsoap surfactant and soap component
451 ...Extruded product, or process of preparing (e.g., noodles, etc.)
452 ...Spray-dried product, or process of preparing

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CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COM-
POSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

453 ...Inorganic phosphorus containing component
454 ...Soap component
455 ...Gas-filled void containing (e.g., foamed particle, hollow pellet, etc.)
456 .Spray cooling process, or product thereof
457 .Heat drying process, or product thereof
458 .Process of making a soap containing composition by saponification of an ester, or product thereof
459 ...With subsequent processing, or product thereof (e.g., postdosing of other components, etc.)
460 ...With boron or silicon containing inorganic component or cellular animal or plant material component (e.g., potato pulp, flour, etc.)
461 .Specific organic component (e.g., triazines, etc.)
462 ...Cellular animal or plant material (e.g., tree bark, leather, flour, cellulose fiber, etc.)
463 ...Crude animal or plant material extract (e.g., pine oil, etc.)
464 ...Lignin
465 ...Boron in the component
466 ...Silicon in the component
467 ...Phosphorus in the component
468 ...Phospholipid (e.g., lecithin, etc.)
469 ...Carbon bonded directly to the phosphorus (e.g., phosphonic acid or salt or ester thereof, etc.)
470 ...Carbohydrate
471 ...Containing carboxyl group or salt thereof (e.g., carboxymethyl cellulose, etc.)
472 ...With organic sulfoxy containing component
473 ...Cellulose
474 ...Starch
475 ...Synthetic polymer or natural rubber (other than polyether, such as polyethylene glycol, alkylene oxide condensation products, etc.)
476 ...Carboxylic acid anhydride, free carboxyl group, or salt thereof in the polymer
477 ...Polycarboxylic acid component, or salt thereof
478 ...With alkali metal carbonate or bicarbonate component
479 ...Ether group in the polycarboxylic component
480 ...Nitrogen attached to the polycarboxylic component by nonionic bonding (e.g., nitrilotriacetate salt, etc.)
481 ...Soap
482 ...With lime-soap dispersant
483 ...Transparent or translucent composition, or process of preparing
484 ...With hydrocarbon or organic sulfoxy containing component
485 ...With clay, aluminum, or heavy metal containing component
486 ...With boron, silicon, or phosphorus containing inorganic component
487 ...Natural resin (e.g., rosin, shellac, tall oil, etc.)
488 ...Carboxylic acid, or salt thereof
489 ...Sulfur attached indirectly to the carboxyl group by nonionic bonding, or salt thereof
490 ...Nitrogen attached indirectly to the carboxyl group by nonionic bonding, or salt thereof
491 ...Higher fatty acid, or salt thereof
492 ...Sulfur in the component
493 ...Sulfoxy (e.g., dimethyl sulfoxide, sulfone, etc.)
494 ...Nitrogen attached directly or indirectly to the sulfoxy group by nonionic bonding
495 ...Sulfonic acid or sulfate monoester substituent in the component, or salt thereof
496 ...With nitrogen containing organic component devoid of covalently bonded anionic substituents
497 ...With nonionic hydroxy containing organic component (e.g., alcohol, etc.)
CLASS 510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS

498 .....With diverse sulfonic acid or sulfate monoester component, or salt thereof (e.g., sulfate and sulfonate, etc.)
499 ..Nitrogen in the component (except triazines) (e.g., amine, etc.)
500 ...Heterocyclic nitrogen (except triazines)
501 ...Amido nitrogen (e.g., urea, etc.)
502 ....Hydroxy in the component
503 ...Amine oxide
504 ...Quaternary ammonium
505 ..Oxygen in the component (except substituted triazines)
506 ...Ether
507 .Clay or inorganic aluminosilicate salt component (e.g., bentonite, zeolite, etc.)
508 .Heavy metal or aluminum containing inorganic component
509 .Alkali metal carbonate, bicarbonate, or sesquicarbonate component
510 ..With inorganic phosphorus containing component
511 .Inorganic silicon containing component
512 ..With inorganic phosphorus containing component
513 AUXILIARY COMPOSITIONS FOR CLEANING, OR PROCESSES OF PREPARING (E.G., LAUNDERING AIDS, SUCH AS WRINKLE-REDUCING COMPOSITIONS, ETC.)
514 .Dishwasher rinse composition
515 .Textile softening or antistatic composition (e.g., for use in the wash cycle, etc.)
516 ..With diverse textile treating component (e.g., laundry sour, optical brightener, etc.)
517 ...Soil-release or anti-soiling component
518 ...Halogen, nitrogen, oxygen, or phosphorus containing chemical bleach or oxidant or antiseptic, biocidal, or deodorant component
519 ..Dryer-activated composition or article (e.g., rupturable capsule, reusable dispenser, etc.)
520 ...Water-insoluble, single-use solid substrate or enclosure, or composition combinable therewith (e.g., dryer sheet, etc.)
521 ..Rinse-added composition
522 ...Liquid composition
523 ....Package or encapsulated component
524 ....Nonionic polyoxyalkylene containing component (e.g., polyethylene glycol, etc.)
525 ....Water-miscible organic solvent component (e.g., lower alkanol, ethylene glycol, etc.)
526 ....Acyclic hydrocarbon or nitrogen-free higher fatty acid component, or ester or alcohol derived therefrom
527 ..Liquid composition
528 .Soil-release or antisoiling composition
529 .Laundry sour composition
530 .Enzyme composition
531 .Detergent builder composition
532 ..Aluminum or boron containing metal silicate component (e.g., aluminosilicate, zeolite, etc.)
533 ..Polycarboxylic acid component, or salt thereof (e.g., nitrilotriacetic acid, polyacrylic acid, etc.)
534 ..Inorganic phosphorus containing component
535 .Surfactant composition for cleaning agents (other than raw soap)
536 ..Sulfoxy containing anionically substituted surfactant component
537 ...Liquid or paste composition

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

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Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

| FOR 100 | DESCALING AGENT CONTAINING (252/80) |
| FOR 101 | Deoxidant or free-metal containing (252/81) |
| FOR 102 | Plant or organic material containing (252/82) |
| FOR 103 | Tannin, bark, or bark extract containing (252/83) |
| FOR 104 | With inorganic compound or element (except water) (252/89) |
| FOR 105 | Inorganic matter other than alkali-metal hydroxides and carbonates and water (252/85) |
| FOR 106 | With inorganic compound or element (except water) (252/86) |
| FOR 107 | Inorganic matter other than alkali-metal hydroxides and carbonates and water (252/87) |
| FOR 108 | DETERGENTS (FOR USE ON SOLID MATERIALS) (252/89.1) |
| FOR 109 | Packages or heterogeneous arrangements (252/90) |
| FOR 110 | Impregnated or coated with detergents (252/91) |
| FOR 111 | Separate soap containing and non-soap zones (252/92) |
| FOR 112 | Wrapped or encased soaps (252/93) |
| FOR 113 | With chemical bleachant, oxidant, or reductant (252/94) |
| FOR 114 | Oxidant containing (252/95) |
| FOR 115 | Soap (water-soluble fatty acid or rosin) containing (252/96) |
| FOR 116 | Water-soluble inorganic B, Si, or P compound containing (252/97) |
| FOR 117 | Ammonia, amine, or nitrogen base compound containing (except proteins) (252/98) |
| FOR 118 | Water-soluble inorganic B, Si, or P compound containing (252/99) |
| FOR 119 | Acidic (252/100) |
| FOR 120 | Nitric acid or aqua regia containing (252/101) |
| FOR 121 | Ammonia, amine, or nitrogen base compound containing (except proteins) (252/102) |
| FOR 122 | Alkaline (252/103) |
| FOR 123 | Soluble (physical or chemical) containing (252/104) |
| FOR 124 | Reductant containing (252/105) |
| FOR 125 | Antiseptic, insecticide, or biocide containing (252/106) |
| FOR 126 | Soap (water-soluble fatty acid or rosin) containing (252/107) |
| FOR 127 | Soap (water-soluble fatty acid or rosin) containing (252/108) |
| FOR 128 | Water-soluble inorganic B, Si, or P compound (252/109) |
| FOR 129 | Ammonia, amine, or nitrogen base compound containing (except proteins) (252/110) |
| FOR 130 | Physical non-water solvent containing (252/111) |
| FOR 131 | Water soluble abradant, wax, or filler containing (252/112) |
| FOR 132 | Water-insoluble abradant, wax, or filler containing (252/113) |
| FOR 133 | Physical non-water solvent containing (252/114) |
| FOR 134 | Water-soluble abradant, wax, or filler containing (252/115) |
| FOR 135 | Water-soluble abradant, wax, or filler containing (252/116) |
| FOR 136 | Ammonia, amine, or nitrogen base compound containing (except proteins) (252/117) |
| FOR 137 | Physical non-water solvent containing (252/118) |
| FOR 138 | Water-soluble abradant, wax, or filler containing (252/119) |
| FOR 139 | Water-insoluble abradant, wax, or filler containing (252/120) |
| FOR 140 | Organic sulpho-compound containing (252/121) |
| FOR 141 | Physical non-water solvent containing (252/122) |
| FOR 142 | Water-insoluble abradant, wax, or filler containing (252/123) |
| FOR 143 | Organic and inorganic type (252/124) |
| FOR 144 | Organic type (252/125) |
| FOR 145 | Hydrocarbon or halohydrocarbon containing (252/126) |
FOR 146 ....Nonhydrocarbon non-soap
organic compound containing
(252/127)
FOR 147 ...Water-insoluble abradant, wax,
or filler containing (252/128)
FOR 148 ...Organic and inorganic type
(252/129)
FOR 149 ...Organic type (252/130)
FOR 150 ...Inorganic type (252/131)
FOR 151 ...With other organic, plant, or
animal matter or compound
(252/132)
FOR 152 ...With inorganic compound or
element (except alkali-metal
hydr oxides and carbonates and
water) (252/133)
FOR 153 .Shapes or structures (252/134)
FOR 154 .Water-soluble inorganic B, Si,
or P compound containing (252/
135)
FOR 155 ...Acidic (252/136)
FOR 156 ...Nitrogen base containing
(except protein) (252/523)
FOR 157 ...Heterocyclic (252/524)
FOR 158 ...Amine or amide (252/525)
FOR 159 ...Sulfur or phosphorus
containing (252/526)
FOR 160 ...Soluble carboxylic acid or
salt (252/527)
FOR 161 ...Quaternary or amine oxide
(252/528)
FOR 162 ...Hydroxy (252/529)
FOR 163 ...Organic sulfoxy (252/530)
FOR 164 ...Organic sulfate (252/531)
FOR 165 ...Oxy (252/532)
FOR 166 ...With acyclic sulfonate (252/
533)
FOR 167 ...With aromatic sulfonate (252/
534)
FOR 168 ...Aliphatic sulfonate (252/535)
FOR 169 ...Unsaturated (252/536)
FOR 170 .....With aromatic sulfonate
(252/537)
FOR 171 ...Non-oxo carboxylic (252/538)
FOR 172 ...Aromatic sulfonate (252/539)
FOR 173 ...With non-ionic wetting agent
or fatty alcohol (252/540)
FOR 174 ...Physical non-water solvent
containing (252/139)
FOR 175 ...Water-insoluble abradant, wax,
or filler containing (252/140)
FOR 176 ...Water-insoluble cyanides or
cyanates containing (252/141)
FOR 177 .Acidic (252/142)
FOR 178 ...Physical non-water solvent
containing (252/143)
FOR 179 ...Water-insoluble abradant, wax,
or filler containing (252/144)
FOR 180 ...Water-insoluble abradant, wax,
or filler containing (252/145)
FOR 181 ...With corrosion inhibitors
(252/146)
FOR 182 ...Compounds of elements other
than C, H, O, N, S, Cl, Na, and
K containing (252/147)
FOR 183 ...Organic nitrogen compound
containing (252/148)
FOR 184 ...Thio organic compound
containing (252/149)
FOR 185 .....Thiazole nucleus containing
(252/150)
FOR 186 ...Organic sulphur compound
containing (252/151)
FOR 187 .Nitrogen base containing (except
protein) (252/541)
FOR 188 ...Heterocyclic (252/542)
FOR 189 ...Optical bleach (252/543)
FOR 190 ...Amine or amide (252/544)
FOR 191 ...Sulfur or phosphorus
containing (252/545)
FOR 192 ...Soluble carboxylic acid or
salt (252/546)
FOR 193 ...Quaternary or amine oxide
(252/547)
FOR 194 ...Hydroxy (252/548)
FOR 195 ...Physical non-water solvent
containing (252/153)
FOR 196 ...Water-insoluble abradant, wax,
or filler containing (252/154)
FOR 197 ...Water-insoluble abradant, wax,
or filler containing (252/155)
FOR 198 .Alkaline (252/156)
FOR 199 ...Gas-generative (252/157)
FOR 200 ...Physical non-water solvent
containing (252/158)
FOR 201 ...Water-insoluble abradant, wax,
or filler containing (252/159)
FOR 202 ...Water-insoluble abradant, wax,
or filler containing (252/160)
FOR 203 ...Organic sulfoxy (252/549)
FOR 204 ...Organic sulfate (252/550)
FOR 205 ...Oxy (252/551)
FOR 206 ...With acyclic sulfonate (252/
552)
FOR 207 ...With aromatic sulfonate (252/
553)
FOR 208 ...Aliphatic sulfonate (252/554)
FOR 209 ...Unsaturated (252/555)

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FOR 210 ...With aromatic sulfonate (252/556)
FOR 211 ...Non-oxo carboxylic (252/557)
FOR 212 ...Aromatic sulfonate (252/558)
FOR 213 ...With non-ionic wetting agent or fatty alcohol (252/559)
FOR 214 ...Physical or chemical non-water solvent containing (252/162)
FOR 215 ...Abradant, wax, cellulose ester, inorganic solid, or filler containing (252/163)
FOR 216 ...With oxygen organic compounds (252/164)
FOR 217 ...With organic compounds of other than C, H, and O (252/165)
FOR 218 ...With hydrocarbon solvents (252/166)
FOR 219 ...With hydrocarbon solvents (252/167)
FOR 220 ...Wax or cellulose-ester and abradant, inorganic solid, or other filling containing (252/168)
FOR 221 ...Wax or cellulose-ester containing (252/169)
FOR 222 ...Oxygen organic compound containing (252/170)
FOR 223 ...Organic compounds of other than C, H, and O containing (252/171)
FOR 224 ...Nonhydrocarbon substances containing (252/172)
FOR 225 ...Aqueous (252/173)
FOR 226 ...Shapes or structures (252/174)
FOR 227 ...Perfume containing (252/174.11)
FOR 228 ...Enzyme containing (252/174.12)
FOR 229 ...Coated or encapsulated particle or liquid containing (other than spray dried detergents (252/174.13)
FOR 230 ...Alkali metal inorganic carbonate containing (252/174.14)
FOR 231 ...Organo-silicon compound containing (252/174.15)
FOR 232 ...Organo-phosphorus compound containing (252/174.16)
FOR 233 ...Carbohydrate moiety containing (252/174.17)
FOR 234 ...Carboxyl group containing (252/174.18)
FOR 235 ...Nonpolymeric compound having at least two free carboxyl groups containing (252/174.19)
FOR 236 ...Polyoxyalkylene compound containing (252/174.21)
FOR 237 ...Two or more polyoxyalkylene compounds containing (252/174.22)
FOR 238 ...Polymer containing (252/174.23)
FOR 239 ...Carboxylic acid anhydride, free carboxyl group, or salt thereof containing (252/174.24)
FOR 240 ...Water-insoluble inorganic compound containing (252/174.25)