

CLASS 260, CHEMISTRY OF CARBON COMPOUNDS**SECTION I - CLASS DEFINITION**

In general terms, this is the generic class for:

- (1) organic carbon compounds,
- (2) processes for their preparation not otherwise provided for,
- (3) the treatment and modification of organic carbon compounds (including mixtures of organic carbon compounds resulting from a synthesis or of natural origin)
 - (a) by chemical means,
 - (b) by both chemical and physical means, or
 - (c) by physical means,and the products of such treatment and modification not otherwise provided for,
- (4) compositions (not otherwise provided for) containing a synthetic resin, or ingredients which under the reaction conditions employed are known to form a synthetic resin,
- (5) compositions (not otherwise provided for) containing vulcanizable natural hydrocarbon gum or derivatives, and
- (6) hydrocarbon compositions (not otherwise provided for) (i.e., principally those that do not consist entirely of mineral oils.)

An organic carbon compound is defined as satisfying one of the following criteria:

- (1) two carbon atoms bonded to each other,
- (2) one carbon atom bonded to at least one hydrogen atom or halogen atom, or
- (3) one carbon atom bonded to at least one nitrogen atom by a single or double bond.

Exceptions to the above criteria are: hydrocyanic acid, cyanogen, isocyanic acid, cyanamide, cyanogen halides, isothiocyanic acid, fulminic acid, and metal carbides;

these exceptions are considered as inorganic compounds for classification purposes.

The expression "mixtures of organic carbon compounds resulting from a synthesis" is intended to encompass mixtures of compounds resulting from a chemical process wherein plural organic carbon compounds are unavoidably and simultaneously formed, as distinguished from mixtures produced by mere physical admixing of plural preformed compounds. The expression is, further, not intended to encompass mixtures resulting from a chemical process wherein reaction conditions (e.g., a mixture of starting materials, etc.) were purposely chosen to prepare a mixture of final products; such final product mixtures are classified in an appropriate composition class.

The expression "mixtures of organic compounds of natural origin" is intended to encompass mixtures of compounds (such as fats, oils, or proteins) obtained by extraction from a single plant or animal source. It should be noted that the product of, for example, hydrolyzing such extracts is also provided for by Class 260 and its integral classes.

This class also includes the admixture of an organic carbon compound of the class with a preserving agent whose sole function is to prevent physical or chemical change in the compound. If there is present an additional ingredient, and the resultant mixture has a function other than preservation of the compound, the mixture will then be classified in an appropriate composition class. "Preserving agent" is intended to include agents which inhibit chemical or physical change of, corrosion by, or caking of the organic carbon compounds to which they are added. Preserved organic carbon compounds classifiable in this class and its integral classes are classified on the basis of the organic carbon compound preserved, even if the preserving agent is itself an organic carbon compound classified higher in the Class 260 hierarchy.

Exceptions to the above general statements are pointed out below in II. LINES WITH OTHER CLASSES and III. REFERENCES TO OTHER CLASSES.

Class 260 was at one time the largest class in the United States Patent Classification System. Extensive reclassification work has been done on Class 260, and it has been almost entirely reclassified. Because of its great size, the reclassification was done in stages. Each stage was completed and published as a separate integral class, but the separate classes retained their place in the Class 260 hierarchy.

The present arrangement of Class 260 and its integral classes is shown below in II. LINES WITH OTHER CLASSES.

A. Rules of Classifying in Class 260 and Integral Classes.

1. Genus-species. The rule followed in classifying a patent containing several species which fall into different subclasses within Class 260 and its integral classes is that the original classification of the patent is placed in the first appearing subclass that provides for the claimed subject matter. Cross-reference classifications of the patent are placed in appropriate subclasses lower in the hierarchy, except where a compulsory search note between subclasses renders such cross-referencing unnecessary.

Where there are one or more indents to a generic subclass and a claimed species is not provided for specifically by the indents, the patent is placed as original in the generic subclass, since the generic subclass is the first subclass that provides for said claimed species.

2. Tautomeric forms. If a patent claims a single compound that has plural, separately classified tautomeric forms, the original classification is that providing for the highest appearing tautomeric form. The other tautomeric forms are classified as cross-references lower in the hierarchy.

3. Markush claims. In classifying a patent containing Markush type claims (i.e., a compound selected from the group consisting of A, B, and C), where no species claim is presented, the original classification of the patent is the first appearing subclass that provides for any species of the Markush group.

If, in addition to the Markush group claim, the patent contains species claims, the original classification will be the highest appearing subclass that provides for any of the species claims. Any remaining species claims and any species covered by the Markush claim but not claimed in a species claim will be cross-reference classifications.

4. Intermediate-final product. If a patent claims a final product compound and a compound used as an intermediate in the preparation of the final compound, the original classification of the patent will be determined by which compound is provided for highest in the Class 260 hierarchy.

5. The primary determinant of classification in Class 260 and its integral classes is the compound. Patents claiming both compound and a process therefor are classified with the compound, unless a process subclass has been provided. If a process subclass has been provided, the original classification of the patent is determined by whether the process subclass is higher or lower in the schedule than the compound subclass, with the highest appearing subclass being the original classification. If a compound subclass has process indents thereunder, a patent claiming both compound and process will be placed as an original in the compound subclass and cross-referenced to the appropriate indented process subclass.

6. Unknown structure. The structure of an organic carbon compound is "unknown" when not enough information about the structure is available to enable its unequivocal placement in a single subclass. In such a case, the compound is generally classified on the basis of the process involved in its synthesis, if such a process subclass exists and the nature of the process can be determined. If no such process subclass exists, the compound is classified on the basis of the highest appearing starting material used in its synthesis. If no structure is provided for the compound, but the structure can be deduced with confidence from a consideration of the starting materials and process used in its synthesis, a cross-reference should be placed in the subclass which provides for the structure deduced. These rules may be superseded by rules specifically set forth for particular integral classes of Class 260.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

A. Hierarchy of Class 260 and its Integral Classes.

As a result of extensive reclassification, Class 260 has been subdivided as follows:

CLASS 260 HIERARCHY

CLASS 260/1 (Miscellaneous Organic Carbon Compounds)

- . Class 518 (Fischer-Tropsch Processes)
- . Class 520/1 (Synthetic Resins & Natural Rubbers)
- . . Class 521 (Ion-Exchange Polymers, Cellular Products, Waste Polymer Recovery)

- . . Class 522 (Wave Energy Polymer Chemistry)
- . . Class 523/1 (Synthetic Resin Compositions with Nonreactant Material)
- . . . Class 524
- . . Class 525 (Chemically Treated Synthetic Resins, Compositions of Plural Synthetic Resins)
- . . Class 526 (Miscellaneous Processes, Synthetic Resins from Only Ethylenically Unsaturated Monomers)
- . . Class 527 (Synthetic Resins from Specified Natural Sources)
- . . Class 528 (Synthetic Resins from Plant Material of Unknown Constitution or Specified Reactant)
- . Class 530 (Natural Resins, Peptides, Proteins, Lignins)
- . Class 532/1 (No Patents Here at Present; Intended Future Residual Subclass After Abolition of Class 260)
- . . Class 534 (Radioactive or Rare Earth Metal Compounds, Azo and Diazo Compounds)
- . . Class 536 (Carbohydrates)
- . . Class 540/1 (Heterocyclic Carbon Compounds)
- . . . Class 544 (Six-Membered Nitrogen Hetero Rings with Two or More Hetero Atoms)
- . . . Class 546 (Six-Membered Hetero Rings with One Ring Nitrogen)
- . . . Class 548 (Five-, Four- or Three-Membered Nitrogen Hetero Rings)
- . . . Class 549 (Oxygen or Sulfur Hetero Rings)
- . . Class 552 (Azides, Triphenylmethanes, Quinones, Hydroquinones, Steroids)
- . . Class 554 (Fats, Fatty Derivatives)
- . . Class 556 (Heavy Metal, Aluminum or Silicon Compounds)

- . . Class 558 (Esters)
- . . Class 560 (Esters)
- . . Class 562 (Acids, Acid Halides, Acid Anhydrides, Selenium & Tellurium Compounds)
- . . Class 564 (Amino Nitrogen Compounds)
- . . Class 568 (Boron, Phosphorus, Sulfur, or Oxygen Compounds)
- . . Class 260/665R (Carbon-Metal Compounds)
- . . Class 570 (Halogen Compounds)
- . Class 585 (Hydrocarbons)

The integral classes of Class 260 (i.e., Classes 518-585) retain the original hierarchy of Class 260. Each integral class should be regarded as a subclass within Class 260; note that different classes are at different indent levels, and that these indent and outdent classes bear the same relationship to each other that indent and outdent subclasses within a single class do.

All the integral classes are subject to the provisions of this Class 260 Class Definition. In addition, Class 518, each Class (520-528) in the Class 520 Series of Classes, Class 523 (the parent class of the Class 532 series of classes) and Class 585 have their own Class Definitions.

B. Statements of General Class Lines.

Organic carbon compounds are classified in Class 260 and its integral classes, irrespective of the utility claimed or disclosed for the compound. For example, a new organic carbon compound disclosed to exhibit herbicidal properties is classified herein. To be classified in Class 504, Plant Protecting and Regulating Compositions, the compound must be claimed as the active ingredient in a herbicidal composition claim or in a herbicidal method of use claim.

To qualify as a composition claim, a claim must contain positive recitation of at least two components. In other words, a claim that reads

— A herbicidal composition comprising pyridine —

would be treated as a compound claim proper for the Class 260 area rather than as a composition claim. If the claim were presented as

— A herbicidal composition comprising pyridine and a herbicidally acceptable carrier —

said claim would be considered a proper composition claim classifiable in Class 504, Plant Protecting and Regulating Compositions, even though the positive recitation of the second component is functional and generic.

Physical treatments, per se, of organic carbon compounds are not provided for by Class 260 and its integral classes when they are specifically provided for elsewhere.

C. Statements of Specific Class Lines.

This section sets forth lines between the Class 260 area and individual classes.

(1) Class 106, Compositions, Coating or Plastic, provides for coating or plastic compositions not elsewhere provided for that contain organic carbon compounds; new organic carbon compounds, however, are provided for in Class 260 and its integral classes, even though they may have utility as plastic or coating materials. An exception to the above is that Classes 523 and 524, integral classes of Class 260, (each entitled Synthetic Resins or Natural Rubbers - Part of the Class 520 Series) provide for certain coating, plastic and other compositions containing synthetic resins or natural rubber.

Class 106 also includes compositions of materials or ingredients not in themselves coating or plastic compositions but which are limited to use in the preparation of coating or plastic compositions.

Lakes, being for the most part adsorption products of carbon dyes with insoluble metal hydroxides, carbonates, or sulfates, are not regarded as being carbon compounds when a preformed substratum is employed and are placed in Class 106, subclass 402. When, however, the substratum is simultaneously synthesized with the dye compound, it is classified in Class 260 and integral classes. For example, a lake formed by coupling a diazo and a coupling component in the presence of barium sulfate is classified in Class 106, whereas a lake formed by synthesizing the same dye in the presence of barium chloride and soluble sulfate would be classified in Class 260 and its integral classes. Metal salts of a definite organic carbon compound are classified in Class 260 and its integral classes.

(2) Class 127, Sugar, Starch and Carbohydrates, pro-

vides for the hydrolytic conversion of carbohydrates to starches, sugars and dextrin. Class 260 (most specifically in integral Class 536, Organic Compounds - Part of the Class 532-570 Series) provides generally for other syntheses of such compounds. Class 127 also includes subject matter which is wholly peculiar to processes of extracting, or purifying, natural starch, natural sucrose or other natural carbohydrates (except cellulose), processes of hydrolyzing carbohydrates or processes of separating or purifying the products of such hydrolysis.

(3) Class 204, Chemistry: Electrical and Wave Energy, subclasses 157.15-158.21, provide for wave energy synthetic methods for the production of organic carbon compounds (except for wave energy synthesis of synthetic resins and natural rubbers, which are classified in Class 522, Synthetic Resins or Natural Rubbers - Part of the Class 520 Series, an integral Class of Class 260). Class 204, subclasses 165-172 provide for the synthesis of organic carbon compounds by electrostatic field or electrical discharge energy methods. Synthetic chemical reactions which result from merely the thermal effects of electrical or wave energy are classified in this Class 260 and its integral classes. Chemical processes which recite both a Class 260 synthetic step and a Class 204 synthetic step are classified in (a) Class 260 or its integral classes if the Class 204-type step precedes the Class 260-type step, and (b) in Class 204 if the Class 260-type step precedes the Class 204-type step. Branching processes wherein one branch comprises a Class 204-type process and another branch comprises a Class 260-type process will be classified in Class 260 or its integral Classes and cross-referenced to Class 204.

(4) Class 205, Electrolysis: Processes, Compositions Used Therein, and Methods of Preparing the Compositions, provides in subclasses 355-356 for electrolytic synthesis of organic carbon compounds from a fused bath, and in subclasses 413-463 for electrolytic synthesis of organic carbon compounds from an aqueous bath or a bath other than a fused bath. Class 205 is an integral class of Class 204, supra, and thus processes involving (1) combinations of Class 205-type steps and Class 260-type steps and (2) Class 205-Class 260 branching processes are treated in a manner parallel to that described in the discussion of Class 204, supra. Class 205 does not provide for synthetic reactions which result from the thermal effects of electrical energy; such reactions are classified in this Class 260 and its integral classes.

(5) Class 423, Chemistry of Inorganic Compounds, provides for certain compounds which fall under the Class 260 class definition, i.e., hydrocyanic acid, cyanogen,

isocyanic acid, cyanamide, cyanogen halide, isothiocyanic acid, fulminic acid, and metal carbide. For dicyanamide, dicyandiamide, and salts thereof, see Class 564, Organic Compounds - Part of the Class 532-570 Series (an integral class of Class 260), particularly subclasses 103-106. Processes directed to the production of both Class 423 and Class 260 area compounds are classified in Class 423 and cross-referenced to Class 260, unless the Class 423 compound is only incidentally produced and is not an objective of the process.

(6) Class 424, Drug, Bio-Affecting and Body Treating Compositions, and its integral Class 514 provide for compositions containing organic carbon compounds. A claim to the use of an organic carbon to treat an animal body or to kill, repel, etc. a pest is classified in these classes. An animal or plant extract of undetermined constitution, from a single source and useful for body treating or pest control, etc., is classified in Class 424, particularly subclasses 195.15-195.17, 520-583, and 725-780.

SECTION III - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

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| <p>18, Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers, for compositions adapted and intended for use in dyeing and in the chemical treatment of textiles, hides, skins, feathers, animal tissues, and fibers, together with processes of use of such compositions and processes for their manufacture. Class 260 and its integral classes provide for patents containing claims to a definite carbon compound and claims to (a) "fiber dyed therewith" or (b) a broadly defined process of dyeing therewith.</p> <p>34, Drying and Gas or Vapor Contact With Solids, for subject matter wholly peculiar to the drying of solids or slurries, such as, for example, the drying of a specific organic carbon compound in an inert atmosphere. Class 260 and its integral classes, on the other hand, provide for removal of water of crystallization; such removal is considered a chemical manufacturing operation.</p> <p>48, Gas: Heating and Illuminating, subclass 216 for acetylene made by processes wherein carbides are decomposed with water.</p> <p>62, Refrigeration, includes means for separating liquids by selectively freezing one of them and means for separating gaseous mixtures in</p> | <p>71, Chemistry: Fertilizers, for fertilizer mixtures containing organic carbon compounds.</p> <p>95, Gas Separation: Processes, for subject matter which is wholly peculiar to the separation by physical means, except by refrigeration, of a gaseous or vaporous organic carbon compound from a mixture of gases or vapors.</p> <p>117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, for processes and non-coating apparatus for growing therein-defined single-crystal of all types of materials, including inorganic or organic, and by all techniques, including chemical reactions (e.g., synthesis, modifying). See Class 117 definitions for guidance in placement of single-crystal art.</p> <p>149, Explosive and Thermic Compositions or Charges, for explosive mixtures containing organic carbon compounds,</p> <p>156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for laminating processes which use adhesives which may contain an organic carbon compound. See particularly subclasses 326 through 338.</p> <p>159, Concentrating Evaporators, includes subject-matter wholly peculiar to the concentration by physical means of solutions of carbon compounds coming within the definition of this class (260).</p> <p>162, Paper Making and Fiber Liberation, subclasses 1 through 99 for matter which is wholly peculiar to processes of treating cellulose containing natural products, involving chemical action, to separate or purify the cellulose. Class 19, Textiles, Fiber Preparation, for processes of liberating cellulose fibers involving physical treatment only.</p> <p>201, Distillation: Processes, Thermolytic, includes subject matter peculiar to thermolytic distillation not otherwise provided for.</p> <p>203, Distillation: Processes, Separatory, includes matter peculiar to distilling a mixture to separate as a product a desired component present as such in the original mixture. For a process including an extraction step followed by a distillation step, see Class 260, Chemistry of Carbon Compounds (including Class 585, Chemistry of Hydrocarbon Compounds) or Class 423, Chemistry of Inorganic Compounds.</p> |
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- 203, Distillation: Processes, Separatory, provides for subject matter peculiar to distilling a mixture to separate as a product a desired component present as such in the original mixture. Processes including a separatory distillation step and a disparate physical separation step, such as extraction, are classified in Class 203 if the disparate step follows the distillation step and the process is not otherwise provided for. Processes of separating a specific organic chemical compound which recite an extraction step followed by a distillation step are classified in Class 260 and its integral classes.
- 208, Mineral Oils, Processes and Products, for cracking methods of treating mineral oils or fractions thereof, except where the objective of the purification process is to recover or prepare a compound falling within the scope of Class 260 and its integral classes.
- 209, Classifying, Separating, and Assorting Solids, subclass 166 for subject-matter peculiar to the separating and assorting of solids; also flotation processes involving the use of carbon compounds as flotation agents, even though a definite carbon compound is also claimed.
- 210, Liquid Purification or Separation, for subject matter peculiar to the separation or purification of liquids.
- 241, Solid Material Comminution or Disintegration, for processes and apparatus for comminuting solid material.
- 252, Compositions, for a variety of compositions of different utilities, which may contain organic carbon compounds as components of the compositions. See the reference to Class 117 in this section for colloid systems.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for processes of molding or shaping materials which may consist of or contain organic carbon compounds. In general, patents which include both the preparation and a significant molding or working treatment of a compound or composition classifiable in Class 260 or its integral classes are classified in Class 264 and cross-referenced to Class 260 or its integral classes when desirable. Where the molding of such a material or composition is nominally recited or is merely incidental to the preparation of the compound or composition, the patent is classified in Class 260 or its integral classes.
- 376, Induced Nuclear Reactions: Processes, Systems, and Elements, for the production of certain organic compounds and compositions, when the chemical reaction takes place within a nuclear reactor and some nuclear reactor structure or step is claimed. The broad recitation of using a nuclear reactor in such process is not sufficient to place patent in Class 376.
- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses, for chemical apparatus, and processes as listed in the class title.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, appropriate subclasses for apparatus for molding or shaping of plastic materials which consist of or contain organic carbon compounds.
- 426, Food or Edible Material: Processes, Compositions, and Products, includes compositions or products containing carbon compounds, but a new organic carbon compound is classified in this class (260), even though it may be a food or edible material. Proteins, oils and fats from a single source are regarded as being definite carbon compounds. For process of removing caffeine and tannin from coffee and tea, see subclasses 427 through 428. Class 426 also provides for extracts or essential oils of unknown constitution which have been traditionally employed as flavorings, flavor unknowns, seasoning agents, food acidulents or condiments; examples are citrus oil, which has been used for centuries as a flavorant, and vinegar. Processes of extracting such extracts or essential oils are classified with the mixtures, unless provided for elsewhere.
- 427, Coating Processes, the generic coating class, for all coating processes not otherwise provided for. Patents, however, which contain a claim to a coating compound or composition classified in Class 260 or its integral classes and a claim to a nonsignificant coating process are classified with the coating compound or composition. See the Class Definition of Class 427 for a discussion of what constitutes a nonsignificant coating process.
- 428, Stock Material or Miscellaneous Articles, appropriate subclasses for a stock material product in the form of a web or sheet which may include structurally defined organic compounds, and especially the appropriate subclasses in the subclasses 411.1 through 704 for a nonstructural composite web or sheet which includes a layer including a carbon compound.
- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, for compositions containing organic carbon compounds, such as,

- for example, sensitizing or developing compositions.
- 435, Chemistry: Molecular Biology and Microbiology, takes mere processes of making, separating, or purifying organic carbon compounds by operations that include fermentations, as well as compositions and apparatus that are specialized for use therein, and processes of making such compositions for such use; also ferments that are carbon compounds (enzymes) respectively and processes of making. Products resulting from biological processes (fermentation) are classified according to the products of those processes.
- 502, Catalyst, Solid Sorbent, or Support Therefor: Product or Process of Making, for catalysts and methods of making catalysts. However, claims to producing organic carbon compounds via catalytic methods are classified in appropriate subclasses of Class 260 or its integral classes.
- 504, Plant Protecting and Regulating Compositions, for plant growth regulating compositions containing organic carbon compounds.
- 506, Combinatorial Chemistry Technology: Method, Library, Apparatus, for a chemical or biological library or a process of creating said library.
- 512, Perfume Compositions, for plant extracts or essential oils of unknown constitution which are disclosed as essences, aromatic oils, perfume essences, or odoriferous essential oils. The class also provides for processes of extracting these substance (e.g., enfleurage, etc.) unless provided for elsewhere.
- 516, Colloid Systems and Wetting Agents; Subcombinations Thereof; Processes of Making, Stabilizing, Breaking, or Inhibiting, appropriate subclasses for subject matter relating to: colloid systems (such as sols*, emulsions, dispersions, foams, aerosols, smokes, gels, or pastes) or wetting agents (such as leveling, penetrating, or spreading); subcombination compositions of colloid systems containing at least an agent specialized and designed for or peculiar to use in making or stabilizing colloid systems; compositions and subcombination compositions specialized and designed for or peculiar to use in breaking (resolving) or inhibiting colloid systems; processes of making the compositions or systems of the class; processes of breaking (resolving) or inhibiting colloid systems; in each instance, when generically claimed or when there is no hierarchically

superior provision in the USPC for the specifically claimed art. For finely divided organic compounds, placement is proper where the organic compound is classified.

- 588, Hazardous or Toxic Waste Destruction or Containment, appropriate subclasses for the chemical destruction or containment of hazardous or toxic waste that contains an organic carbon compound.
- 987, Organic Compound Containing a Bi, Sb, As, or P Atom or Containing a Metal Atom of the 6th to 8th Group of the Periodic System, for U.S. patents relating to the above subject matter classified according to the European Patent Classification Systems (EPCS) and for the most part classified by personnel in the European Patent Office (EPO).

SECTION IV - GLOSSARY

ACYCLIC

Denotes a compound which does not contain a ring.

ALICYCLIC

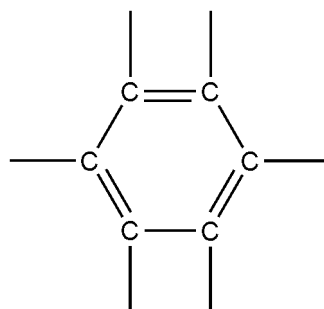
Denotes a carbocyclic compound not containing a benzene nucleus. Thus, decahydronaphthalene is alicyclic, but 1,2,3,4-tetrahydronaphthalene is aromatic.

AROMATIC

Denotes a compound which contains a benzene nucleus whether or not it is condensed with other rings.

BENZENE NUCLEUS

Denotes the presence of a six-membered ring, all of whose members are carbons and containing three conjugated double bonds, thus:



C-SUBSTITUENT

Indicates that the substituent is bonded to a carbon.

CARBOCYCLIC

Denotes the presence of one or more rings, none of which is a heterocyclic or a nitrocyclic ring, of which the ring members of at least one ring are all carbons.

CARBONYLIC

Denotes the presence of the carbonyl group, C=O.

CONDENSATION

Denotes combination between at least two or more molecules of the same or different carbon compounds between carbons thereof.

HEAVY METAL

Denotes any metal having a specific gravity greater than 4 and, as employed herein, includes arsenic and antimony.

HETEROCYCLIC

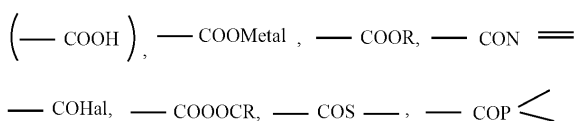
Denotes the presence of a ring whose members are composed of at least one carbon and one or more atoms of the elements taken from the group consisting of nitrogen, oxygen, sulfur, selenium, and tellurium.

NITROCYCLIC

Denotes the presence of a ring, all of whose ring atoms are nitrogens, e.g., azides, etc.

NONOXO-CARBONYLIC

Denotes the presence of C=O in combination other than as found in ketone and aldehydes and is generic, for example, to carbonyl, thus:

**NUCLEAR CARBON**

Denotes a carbon which is a ring carbon of a closed chain.

OXO

Denotes the presence of a carbonyl (C=O) bonded to hydrogen and/or carbon and is a term generic to ketones and aldehydes.

OXY

Denotes the presence of oxygen singly bonded to a carbon, which is not the carbon of a carbonyl group, and is further bonded to hydrogen, metal, or an organic radical. The term is generic to alcohols, phenols, alcoholates, phenolates, and ethers and esters thereof, but in view of the fact that, in this classification, esters take precedence over hydroxy, the term oxy, as herein employed, is generic to C-OH, C-O Metal, and C-OR (ether type).

PHENOLIC-OXY

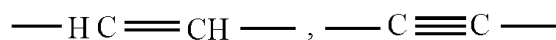
Denotes the presence of an oxygen single-bonded to a ring carbon of a benzene nucleus.

SULFOXY

Denotes the presence of a radical containing sulfur bonded to oxygen and includes the sulfoxide, sulfone, sulfonyl, sulfo, and sulfate groups.

UNSATURATED

Denotes the presence of a double or triple bond linking two adjacent carbon atoms, thus:

**SUBCLASSES****1 MISCELLANEOUS ORGANIC CARBON COMPOUNDS:**

This subclass is indented under the class definition. Organic carbon compounds.

- (1) Note. This subclass serves as the residual home for any organic carbon compounds comprehended by the Class Definition and not provided for by the integral classes delineated in the Class 260 hierarchy outline in the Lines With

Other Classes section of the class definition.

665 C-metal:

This subclass is indented under subclass 1. Compounds under Class 532, ... containing a metal other than a heavy metal or aluminum bonded to carbon, e.g.; 1, 4-disodium naphthalene and phenyl magnesium chloride.

CROSS-REFERENCE ART COLLECTIONS

These Art Collections are based on industry or art use.

998.11 DENTAL:

This subclass is indented under subclass 1. Product classifiable under Class 520 ... useful in the filling of teeth or the manufacture of artificial teeth.

998.12 ABLATIVE:

This subclass is indented under subclass 1. Product under Class 520 ... intended to be used in heat shields of the type which function by a controlled decomposition of the front surface to keep heat from the back surface. Some patents in this subclass are related to compositions useful in re-entry heat shields for space vehicles.

998.13 BRAKE, FRICTION OR ANTI-SKID:

This subclass is indented under subclass 1. Product under Class 520 ... intended to operate by friction or rubbing as in a brake or clutch or which is intended to have a high coefficient of friction as in the prevention of skidding or slipping.

998.14 BALL, BAT, PIN OR BILLY:

This subclass is indented under subclass 1. Product under Class 520 ... intended for use as a ball, bat, pin or billy or as any part thereof. This subclass included compositions used as e.g., solid golf balls, golf ball covers, bowling pin coating, etc.

998.15 FLOOR COVERING:

This subclass is indented under subclass 1. Product under Class 520 ... intended to be used in preformed sheet form to cover floors or like areas exposed to pedestrian or vehicular traffic and compositions used in making the external traffic bearing surfaces of same (e.g., roll flooring, plastic tile etc.).

998.16 SOUND RECORD:

This subclass is indented under subclass 1. Products under Class 520 ... which are intended for use in making records of sound or which are used to reproduce sound (e.g., phonograph records, etc.) by other than magnetic means.

SEE OR SEARCH CLASS:

252, Compositions, subclasses 62.51+ for compositions which record or reproduce sound by magnetic means.

998.17 PEARLESCENT:

This subclass is indented under subclass 1. Product under Class 520 ... which has a pearlescent or opalescent appearance.

998.18 MOLD OR MOLD COATING:

This subclass is indented under subclass 1. Product under Class 520 ... useful as a mold or in coating a mold. Many patents in this subclass are drawn to sand molds bonded with synthetic resin useful in the metal casting art.

998.19 ROAD MARKING OR PAVEMENT COMPOSITIONS (NON-CEMENTITIOUS, NON BITUMINOUS):

This subclass is indented under subclass 1. Product under Class 520 ... which are either used as the surface exposed to vehicular traffic and applied to the surface as fluent material or are used to mark a surface used for vehicular traffic. The marking materials may be either fluent or preformed (e.g., strips, etc.).

998.2 DIPEPTIDES, E.G., ASPARTAME, ANSERINE, CARNOSINE, ETC.:

This subclass is indented under subclass 1. Compounds which are compound formed by the formation of a peptide bond between 2 amino acids.

(1) Note. The presence of the term dipeptide is not dispositive although it should alert the user to the possibility of classification in this subclass.

(2) Note. Caution should be observed in search for compounds denominated as dipeptides or containing a single peptide bond between an amino acid and another moiety or a peptide bond connecting

complex heterocyclic compounds. Such compounds should be searched as if this subclass did not exist.

- (3) Note. Dipeptide. Compounds denominated dipeptides have been placed in this subclass and its indents as a search aid. The patents in these subclasses have been otherwise placed as if these subclasses did not exist.

998.21 Aspartylphenylalanone esters and cyclohexylalanine esters:

This subclass is indented under subclass 998.2. Subject matter in which the dipeptide is either a aspartylphenylalanine ester or a cyclohexylalanine ester.

- (1) Note. This subclass is intended to collect dipeptide sweeteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

801, for peptide or proteins disclosed as providing a sweet taste.

SEE OR SEARCH CLASS:

530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclass 801 for peptide or proteins disclosed as providing a sweet taste.

998.22 Arginine containing:

This subclass is indented under subclass 998.2. Subject matter in which one of the amino acids of the dipeptide is arginine.

END