CPC  COOPERATIVE PATENT CLASSIFICATION

C  CHEMISTRY; METALLURGY

(NOTES omitted)

CHEMISTRY

C09  DYSES; PAINTS; POLISHES; NATURAL RESINS; ADHESIVES; COMPOSITIONS NOT OTHERWISE PROVIDED FOR; APPLICATIONS OF MATERIALS NOT OTHERWISE PROVIDED FOR

C09B  ORGANIC DYES OR CLOSELY-RELATED COMPOUNDS FOR PRODUCING DYSES {, e.g. PIGMENTS}; MORDANTS; LAKES (fermentation or enzyme using processes to synthesise a desired chemical compound C12P)

NOTE
In this subclass, in the absence of an indication to the contrary, a compound is classified in the last appropriate place

WARNING
The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C09B 23/01 covered by C09B 23/0008 - C09B 23/0091
C09B 29/01 covered by C09B 29/0003 - C09B 29/0022
C09B 29/03 covered by C09B 29/0007
C09B 29/033 covered by C09B 29/0025
C09B 29/036 covered by C09B 29/0029
C09B 29/039 covered by C09B 29/0074 - C09B 29/0081
C09B 29/042 covered by C09B 29/0085
C09B 29/045 covered by C09B 29/0088
C09B 29/048 covered by C09B 29/0092
C09B 29/085 covered by C09B 29/0003, C09B 29/0801 - C09B 29/0848
C09B 29/09 covered by C09B 29/0025, C09B 29/0801 - C09B 29/0848
C09B 29/15 covered by C09B 29/103
C09B 29/40 covered by C09B 29/3608 - C09B 29/3613
C09B 29/42 covered by C09B 29/3617 - C09B 29/3639
C09B 29/44 covered by C09B 29/3643
C09B 29/46 covered by C09B 29/3652
C09B 29/48 covered by C09B 29/3656
C09B 29/50 covered by C09B 29/366
C09B 29/52 covered by C09B 29/3665
C09B 33/13 covered by C09B 33/12
C09B 46/00 covered by C09B 27/00 - C09B 45/00
C09B 67/02 covered by C09B 67/0097
C09B 67/04 covered by C09B 67/0001
C09B 67/06 covered by C09B 67/0003
C09B 67/08 covered by C09B 67/0004
C09B 67/10 covered by C09B 67/0014
C09B 67/12 covered by C09B 67/0016
C09B 67/14 covered by C09B 67/0017
C09B 67/16 covered by C09B 67/0019
C09B 67/18 covered by C09B 67/0002
C09B 67/20 covered by C09B 67/0006
C09B 67/22 covered by C09B 67/0033
C09B 67/24 covered by C09B 67/0072
C09B 67/26 covered by C09B 67/0073
C09B 67/28 covered by C09B 67/0077
C09B 67/30 covered by C09B 67/0078
C09B 67/32 covered by C09B 67/0075
C09B 67/34 covered by C09B 67/0076
C09B 67/36 covered by C09B 67/0079
C09B 67/38 covered by C09B 67/008
C09B 67/40 covered by C09B 67/0082
Anthracene dyes

1/00 Dyes with anthracene nucleus not condensed with any other ring

1/002 . . . . . . {containing onium groups}
1/005 . . . . . . [Di-anthraquinonyl and derivative compounds]
1/007 . . . . . . {Seleno-anthraquinones}
1/02 . . . . . . Hydroxy-anthraquinones; Ethers or esters thereof

{ (C09B 1/007 takes precedence) }
1/04 . . . . . . Preparation by synthesis of the nucleus
1/06 . . . . . . Preparation from starting materials already containing the anthracene nucleus
1/08 . . . . . . Dyes containing only OH-groups
1/10 . . . . . . Dyes containing halogen
1/12 . . . . . . Dyes containing sulfonic acid groups
1/14 . . . . . . Dyes containing ether groups
1/16 . . . . . . Amino-anthraquinones

{ (C09B 1/46 takes precedence) }
1/18 . . . . . . Preparation by synthesis of the nucleus
1/20 . . . . . . Preparation from starting materials already containing the anthracene nucleus
1/201 . . . . . . [Dyes with no other substituents than the amino groups]
1/202 . . . . . . [sulfonated]
1/203 . . . . . . [only sulfonated in the anthracene nucleus]
1/204 . . . . . . [only sulfonated in a substituent]
1/205 . . . . . . [Dyes with an unsaturated C on the N atom attached to the nucleus (C=O and C=S, C09B 1/36)]
1/206 . . . . . . [Dyes with amino groups substituted by heterocyclic radicals (triazinic or analogous heterocyclic radical, C09B 1/46)]
1/207 . . . . . . [Dyes with amino groups and with onium groups]
1/208 . . . . . . [Dyes with amino groups substituted by inorganic radicals]
1/22 . . . . . . Dyes with unsubstituted amino groups
1/24 . . . . . . sulfonated
1/26 . . . . . . Dyes with amino groups substituted by hydrocarbon radicals
1/262 . . . . . . [Dyes with no other substituents than the substituted amino groups]
1/264 . . . . . . [sulfonated]
1/266 . . . . . . [only sulfonated in the anthracene nucleus]
1/268 . . . . . . [only sulfonated in a substituent]
1/28 . . . . . . substituted by alkyl, aralkyl or cyclo alkyl groups
1/285 . . . . . . [Dyes with no other substituents than the amino groups]
1/30 . . . . . . sulfonated
1/303 . . . . . . [only sulfonated in the anthracene nucleus]
1/306 . . . . . . [only sulfonated in a substituent]
Anthracene dyes

3/00  Dyes with an anthracene nucleus condensed with one or more carbocyclic rings

3/02  Benzanthrones
3/04  Preparation by synthesis of the nucleus
3/06  Preparation from starting materials already containing the benzanthrone nucleus
3/08  by halogenation
3/10  . . .  Amino derivatives
3/12  . . .  Dibenzanthronyls
3/14  . . .  Perylene derivatives
3/16  . . .  Preparation by synthesis of the nucleus
3/18  . . .  Preparation from starting materials already containing the perylene nucleus
3/20  . . .  by halogenation
3/22  . . .  Dibenzanthrones; Isodibenzanthrones
3/24  . . .  Preparation by synthesis of the nucleus
3/26  . . .  from dibenzanthronyls
3/28  . . .  from perylene derivatives
3/30  . . .  Preparation from starting materials already containing the dibenzanthrone or isodibenzanthrone nucleus
3/32  . . .  by halogenation
3/34  . . .  by oxidation
3/36  . . .  by etherification of hydroxy compounds
3/38  . . .  by introduction of hydrocarbon or acyl residues into amino groups
3/40  . . .  Pyranthrones
3/42  . . .  Preparation by synthesis of the nucleus
3/44  . . .  Preparation from starting materials already containing the pyranthrone nucleus
3/46  . . .  by halogenation

5/00  Dyes with an anthracene nucleus condensed with one or more heterocyclic rings with or without carbocyclic rings

5/002  . . .  [the heterocyclic rings being condensed in peri position and in 1-2 or 2-3 position]
5/004  . . .  [only O-containing hetero rings]
5/006  . . .  [only S-containing hetero rings]
5/008  . . .  [only N-containing hetero rings]
5/02  . . .  the heterocyclic ring being [only] condensed in peri position
5/022  . . .  [not provided for in one of the sub groups C09B 3/44 - C09B 3/46]
5/024  . . .  [only O-containing hetero rings]
5/026  . . .  [only S-containing hetero rings]
5/028  . . .  [only N-containing hetero rings]
5/04  . . .  Pyrazolanthrones
5/06  . . .  Benzanthronyl-pyrazolanthrone condensation products
5/08  . . .  Dipyrazolanthrones
5/085  . . .  [Condensation products of dipyrazolanthrones]
5/10  . . .  Isothiazolanthrones; Isoxazolanthrones; Isoxelenazolanthrones
5/12  . . .  Thiophenanthrones
5/14  . . .  Benz-acenzenanthrones (anthrapyridones)
5/16  . . .  Benz-diazabenzenanthrones, e.g. anthrapyrimidones
5/18  . . .  Coeroxene; Coerhiene; Coeramidine; Derivatives thereof
5/20  . . .  Flavanthrones
5/22  . . .  Preparation from starting materials already containing the flavanthrone nucleus
5/24  . . .  the heterocyclic rings being [only] condensed with an anthraquinone nucleus in 1-2 or 2-3 position
5/2409  . . .  [not provided for in one of the sub groups C09B 5/26 - C09B 5/62]
5/2418  . . .  [only oxygen-containing hetero rings]
5/2427  . . .  [only sulfur-containing hetero rings]
5/2436  . . .  [only nitrogen-containing hetero rings]
Anthracene dyes

5/2445 . . . [Phthaloyl isoindoles]
5/2454 . . . [5,6 phthaloyl dihydro isoindoles]
5/2463 . . . [1,3 oxo or imino derivatives]
5/2472 . . . [1,3 dioxo derivatives]
5/2481 . . . [1-oxo-3-imino derivatives]
5/249 . . . [1,3 diimino derivatives]
5/26 . . . Carbazoles of the anthracene series
5/28 . . . Anthrimeide carbazoles
5/30 . . . 1,2 azoles of the anthracene series
5/32 . . . 1,3 azoles of the anthracene series
5/34 . . . Anthraquinone acridones or thioxanthrones
5/342 . . . [Anthraquinone thioxanthrones]
5/345 . . . [Compounds containing thioxanthone and carbazole rings]
5/347 . . . [Anthraquinone acridones]
5/36 . . . Amino acridones
5/38 . . . Compounds containing acridone and carbazole rings
5/40 . . . Condensation products of benzanthryl-amino-anthraquinones
5/42 . . . Pyridino anthraquinones
5/44 . . . Azines of the anthracene series
5/46 . . . Para-diaazines
5/48 . . . Bis-anthraquinonediazines (indanthrone)
5/50 . . . Preparation by alkaline melting of 2-amino-anthraquinones
5/52 . . . Preparation by condensation of 1,2-halogeno-amino-anthraquinones
5/54 . . . Preparation from 2-amino-anthrhydroquinones
5/56 . . . Preparation from starting materials already containing the indanthrene nucleus
5/58 . . . by halogenation
5/60 . . . Thiazines; Oxazines
5/62 . . . Cyclic imides or amidines of peri-dicarboxylic acids of the anthracene, benzanthrene, or perylene series

6/00 Anthracene dyes not provided for above

7/00 Indigoid dyes
7/02 . . . Bis-indole indigos
7/04 . . . Halogenation thereof
7/06 . . . Indone-thionaphene indigos
7/08 . . . Other indole-indigos
7/10 . . . Bis-thionaphene indigos
7/12 . . . Other thionaphene indigos

9/00 Esters or ester-salts of leuco compounds of vat dyestuffs
9/02 . . . of anthracene dyes
9/04 . . . of indigoid dyes

11/00 Diaryl- or thriarylmethane dyes
11/02 . . . derived from diarylmethanes
11/04 . . . derived from triarylmethanes (i.e. central C-atom is substituted by amino, cyano, alkyl)
11/06 . . . Hydroxy derivatives of triarylmethanes in which at least one OH group is bound to an aryl nucleus [and their ethers or esters]
11/08 . . . Phthalenes; [Phenolphthaleins; Fluorescein]
11/10 . . . Amino derivatives of triarylmethanes
11/12 . . . without any OH group bound to an aryl nucleus

11/14 . . . Preparation from aromatic aldehydes, aromatic carboxylic acids or derivatives thereof and aromatic amines
11/16 . . . Preparation from diarylketones or diarylcarbinols (e.g. benzhydrol)
11/18 . . . Preparation by oxidation
11/20 . . . Preparation from other triarylmethane derivatives, [e.g. by substitution, by replacement of substituents (for dyestals of triarylmethane dyes C09B 69/06)]
11/22 . . . containing OH groups bound to an aryl nucleus [and their ethers and esters]
11/24 . . . Phthaleins containing amino groups {; Phthalanes; Fluoranones; Phthalides; Rhodamine dyes; Phthaleins having heterocyclic aryl rings; Lactone or lactame forms of triarylmethane dyes]
11/245 . . . [Phthaleins having both OH and amino substituent(s) on aryl ring]
11/26 . . . Triarylmethane dyes in which at least one of the aromatic nuclei is heterocyclic ([phthaleins C09B 11/24])
11/28 . . . Pyronines {; Xanthon, thioxanthon, selenoxanthan, telluroxanthon dyes]

13/00 Oxyketo dyes
13/02 . . . of the naphthalene series, e.g. naphazarin
13/04 . . . of the pyrene series
13/06 . . . of the acetonaphone series

Acridine, azine, oxazine, or thiazine dyes

15/00 Acridine dyes
17/00 Azine dyes
17/005 . . . (Dyes containing at least four ortho-condensed rings with at least two ring N-atoms in the system, e.g. fluoflavine, fluorubine, fluorindine)
17/02 . . . of the benzene series
17/04 . . . of the naphthalene series
17/06 . . . Fluorindine or its derivatives

19/00 Oxazine dyes
19/005 . . . [Gallocyanine dyes]
19/02 . . . Bisoxazines prepared from aminooquinones

21/00 Thiazine dyes

Quinoline or polymethine dyes

23/00 Methine or polymethine dyes, e.g. cyanine dyes
23/0008 . . . [substituted on the polymethine chain]
23/0016 . . . [the substituent being a halogen atom]
23/0025 . . . [the substituent being bound through an oxygen atom]
23/0033 . . . [the substituent being bound through a sulfur atom]
23/0041 . . . [the substituent being bound through a nitrogen atom]
23/005 . . . [the substituent being a COOH and/or a functional derivative thereof]
23/0058 . . . [the substituent being CN]
23/0066 . . . [the polymethine chain being part of a carbocyclic ring, (e.g. benzene, naphthalene, cyclohexene, cyclobutenene-quadratic acid)]
23/0075 . . . [the polymethine chain being part of an heterocyclic ring]
Quinoline or polymethylene dyes

26/00 Quinophthalones

26/00 Hydrazone dyes; Triazene dyes

26/00 Azo dyes

NOTE

In groups C09B 27/00 - C09B 45/00, arrows in the formulae of the various types of azo dyes indicate which part of an azo dye, prepared by diazotising and coupling, is derived from the diazo component and which part is derived from the coupling component. The arrow is pointing to the part derived from the coupling component.

27/00 Preparations in which the azo group is formed in any way other than by diazotising and coupling, (e.g. oxidation)

27/06 Tartrazines

29/00 Monoazo dyes prepared by diazotising and coupling

29/003 from diazotized anilines

29/007 containing acid groups, e.g. COH, SOH, POH, OSH, OPOH; Salts thereof

29/008 from diazotized aminoanthracene

29/009 from diazotized aminoisoanthracene

29/011 from diazotized anilines directly substituted by a heterocyclic ring (not condensed)

29/014 from diazotized aninoanthracene

29/016 from diazotized aminoisoanthracene

29/019 containing only nitrogen as heteroatoms

29/029 containing only nitrogen as heteroatoms

29/033 containing a five-membered heterocyclic ring with one nitrogen atom

29/037 containing a five-membered heterocyclic ring with two nitrogen atoms

29/040 containing a five-membered heterocyclic ring with three nitrogen atoms

29/044 containing a five-membered heterocyclic ring with four nitrogen atoms

29/048 containing a six-membered heterocyclic ring with one nitrogen atom

29/051 containing a six-membered heterocyclic ring with two nitrogen atoms

29/055 containing a heterocyclic ring containing only oxygen as heteroatom

29/059 containing a heterocyclic ring containing only sulfur as heteroatom

29/062 containing a heterocyclic ring containing nitrogen and oxygen as heteroatoms

29/066 containing a five-membered heterocyclic ring with nitrogen and oxygen atoms

29/07 containing a six-membered heterocyclic ring with nitrogen and oxygen atoms

29/074 containing a six-membered heterocyclic ring with nitrogen and sulfur as heteroatoms

29/077 containing a five-membered heterocyclic ring with one nitrogen and one sulfur as heteroatoms

29/081 containing a five-membered heterocyclic ring with one nitrogen and one sulfur as heteroatoms

29/085 containing a five-membered heterocyclic ring with one nitrogen and one sulfur as heteroatoms

29/08 containing a five-membered heterocyclic ring with two nitrogen and one sulfur as heteroatoms

29/096 containing a five-membered heterocyclic ring with two nitrogen and one sulfur as heteroatoms

29/02 from diazotised o-amino-hydroxy compounds

29/06 containing water solubilising groups

29/08 containing amino benzenes

29/081 containing acid groups, e.g. COOH, SOH, POH, OSH, OPOH; Salts thereof, R being hydrocarbonyl}

29/08 containing COOH
Azo dyes

C09B

29/0803 . . . . . . [containing SO$_2$H, OSO$_3$H]
29/0804 . . . . . . [containing PO$_2$H$_2$, OPO$_2$H$_2$]
29/0805 . . . . . . [free of acid groups]
29/0807 . . . . . . [characterised by the amino group]
29/0808 . . . . . . [unsaturated amino group]
29/0809 . . . . . . [unsaturated amino group]
29/081 . . . . . . [unsaturated alkylaminonaphthol, alkylamino, alkylaminonaphthol, cycloalkylaminonaphthol, aralkylaminonaphthol, or arylaminonaphthol]
29/0811 . . . . . . [further substituted alkylnaphthol, alkylamino, alkylaminonaphthol, cycloalkylaminonaphthol, aralkylaminonaphthol, or arylaminonaphthol]
29/0813 . . . . . . [substituted by O-H, O-C(=X)-R, O-C(=X)-R, O-R (X being O,S,NR; R being hydroxycarbonyl)]
29/0814 . . . . . . [substituted by N]
29/0815 . . . . . . [substituted by -C(=O)-]
29/0816 . . . . . . [substituted by -COOR]
29/0817 . . . . . . [having N-(aliphatic residue-COOR)$_2$ as substituents]
29/0819 . . . . . . [substituted by -CON-]
29/082 . . . . . . [substituted by hydroxyl groups (or = O)]
29/0821 . . . . . . [substituted by SH, SR, SO$_2$R, SO$_2$XR, SO$_2$N]
29/0822 . . . . . . [substituted by NO$_2$]
29/0823 . . . . . . [substituted by CN]
29/0825 . . . . . . [having N-(alkenylene-CN/-alkynylene-CN)(-aliphatic residue-CN)]
29/0826 . . . . . . [having N-(alkenylene/-alkynylene-O)-(alkenylene/-alkynylene-CN)]
29/0827 . . . . . . [having N-(alkenylene/-alkynylene-CO)(alkenylene/-alkynylene-CN)]
29/0828 . . . . . . [having (Image)]
29/0829 . . . . . . [having N-(alkenylene/-alkynylene-CN)(alkenylene/-alkynylene-CN)]
29/083 . . . . . . [having -N= (in a ring)]
29/0832 . . . . . . [having -N-alkylheterocyclic ring]
29/0833 . . . . . . [characterised by the substituent on the benzene ring except the substituents: CH$_2$, C$_2$H$_4$, O-alkyl, NHCO-alkyl, NHCOO-alkyl, NHCO-C$_2$H$_4$, NHCOO-C$_2$H$_4$]
29/0834 . . . . . . [linked through -O- (for OH see C09B 29/24, C09B 29/26)]
29/0835 . . . . . . [linked through -S-]
29/0836 . . . . . . [linked through -N= (for heterocyclic ring, see C09B 29/0846)]
29/0838 . . . . . . [specific alkyl-CO-N-, aralkyl CON-, cycloalkyl CON-, alkyl OCON-]
29/0839 . . . . . . [specific -NCO aryl-, -NCO heteroaryl]
29/084 . . . . . . [specific -NSO$_2$N,NSO$_2$XR, -NSO$_2$R]
29/0841 . . . . . . [specific -NCON]
29/0842 . . . . . . [linked through-C-, -CS-, (Image); -CN]
29/0844 . . . . . . [substituted by alkyl, e.g. CF$_3$]
29/0845 . . . . . . [substituted by carbocyclic ring linked directly to the benzene ring]
29/0846 . . . . . . [substituted by heterocyclic ring linked directly to the benzene ring]
29/0847 . . . . . . [substituted by halogen]
29/0848 . . . . . . [substituted by NO$_2$]
29/095 . . . . . . [Amino naphthalenes]
29/0955 . . . . . . [containing water solubilizing groups]
29/10 . . . . . . [from coupling components containing hydroxy as the only directing group]
29/103 . . . . . . [of the naphthalene series]
29/106 . . . . . . [Hydroxy carboxylic acids of the naphthalene series]
29/11 . . . . . . [of the benzene series]
29/14 . . . . . . [Hydroxy carboxylic acids]
29/16 . . . . . . [Naphthol-sulfonic acids]
29/18 . . . . . . [ortho-Hydroxy carbonamides]
29/20 . . . . . . [of the naphthalene series]
29/22 . . . . . . [of heterocyclic compounds]
29/24 . . . . . . [from coupling components containing both hydroxyl and amino directing groups]
29/26 . . . . . . [Amino phenols]
29/28 . . . . . . [Amino naphthols]
29/30 . . . . . . [Amino naphtholsulfonic acid]
29/32 . . . . . . [from coupling components containing a reactive methylene group]
29/322 . . . . . . [containing acid groups, e.g. COOH, SO$_3$H, PO$_2$H$_2$, OPO$_2$H$_2$; Salts thereof]
29/325 . . . . . . [free of acid groups]
29/327 . . . . . . [containing NCCH$_2$CON-aryl, NCOCH$_2$CON-aryl, ROC-CH$_2$CON-aryl]
29/33 . . . . . . [Aceto- or benzoylectylarylides]
29/331 . . . . . . [containing acid groups, e.g. COOH, SO$_3$H, PO$_2$H$_2$, OPO$_2$H$_2$; OPO$_2$H$_2$; Salts thereof]
29/332 . . . . . . [Carboxylic arylides]
29/334 . . . . . . [Heterocyclic arylides, e.g. acetoacetylamino benzimidazolone]
29/335 . . . . . . [of free acid groups]
29/337 . . . . . . [Carboxylic arylides]
29/338 . . . . . . [Heterocyclic arylides, e.g. acetoacetylamino benzimidazolone]
29/34 . . . . . . [from other coupling components]
29/36 . . . . . . [from heterocyclic compounds]
29/3604 . . . . . . [containing only a nitrogen as heteroatom]
29/3608 . . . . . . [containing a five-membered heterocyclic ring with only one nitrogen as heteroatom]
29/3613 . . . . . . [from an indole]
29/3617 . . . . . . [containing a six-membered heterocyclic ring with only one nitrogen as heteroatom]
29/3621 . . . . . . [from a pyridine ring]
29/3626 . . . . . . [from a pyridine ring containing one or more hydroxyl groups (or = O)]
29/363 . . . . . . [from diazotized amino carbocyclic rings]
29/3634 . . . . . . [from diazotized heterocyclic rings]
29/369 . . . . . . [from a pyridine ring containing one or more amino groups]
29/3643 . . . . . . [from quinolines or hydrogenated quinolines]
29/3647 . . . . . . [containing a five-membered ring with two nitrogen atoms as heteroatoms]
29/3652 . . . . . . [containing a 1,2-diazoles or hydrogenated 1,2-diazoles]
29/3656 . . . . . . [containing amino-1,2-diazoles]
Azo dyes

Disazo and polyazo dyes of the type A->B->C, A->B->C->D, or the like, prepared by diazotising and coupling

31/02 . Disazo dyes
31/04 . from a coupling component “C” containing a directive amino group
31/06 . from a coupling component “C” containing a directive hydroxyl group
31/08 . from a coupling component “C” containing directive hydroxy and amino groups
31/10 . from a coupling component “C” containing reactive methylene groups
31/12 . from other coupling components “C”
31/28 . . Heterocyclic compounds
31/30 . . Other polyazo dyes

33/00 Disazo and polyazo dyes of the types A->K->B, A->B->K->C, or the like, prepared by diazotising and coupling
33/02 . Disazo dyes
33/04 . in which the coupling component is a dihydroxy or polyhydroxy compound
33/05 . the coupling component being a bis-phenol
33/06 . the coupling component being a bis-naphthol
33/07 . the coupling component being a bis-(naphthol-
33/06 . the coupling component being a bis-(naphthol-
33/07 . the coupling component being a bis-(naphthol-
33/08 . in which the coupling component is a diaminor polyamine
33/09 . in which the coupling component is a hydroxy-
33/10 . in which the coupling component is an amino naphthol
33/11 . in which the coupling component is a heterocyclic compound
33/12 . in which the coupling component is a heterocyclic compound
33/13 . in which the coupling component is a bis-(hydroxy-
33/14 . in which the coupling component is a bis-(aceto-
33/15 . from other coupling components
33/16 . Trisazo or higher polyazo dyes
33/18 . Trisazo or higher polyazo dyes
33/20 . . Tetrazo dyes of the type A->B->C->K->D
33/22 . . Tetrazo dyes of the type A->B->D->C
33/24 . . Tetrazo dyes of the type

35/00 Disazo and polyazo dyes of the type A<-D->B prepared by diazotising and coupling
35/02 . Disazo dyes
35/03 . characterised by two coupling components of the same type
35/04 . in which the coupling component is a hydroxy or polyhydroxy compound

Azo dyes
Azo dyes

Trisazo dyes of the type diamino-azo-aryl compound

D is benzene

35/025 . . . in which the coupling component is an amine or polyamine
35/027 . . . in which the coupling component is a hydroxy-amino compound
35/029 . . . Amino naphthol
35/03 . . . in which the coupling component is a heterocyclic compound
35/031 . . . containing a six membered ring with one nitrogen atom as the only ring hetero atom
35/033 . . . in which the coupling component is an arylamide of an o-hydroxy-carboxylic acid or of a beta-keto-carboxylic acid
35/035 . . . in which the coupling component containing an activated methane group
35/037 . . . characterised by two coupling components of different types
35/039 . . . characterised by the tetrazo component
35/04 . . . the tetrazo component being a benzene derivative
35/06 . . . the tetrazo component being a naphthalene derivative
35/08 . . . the tetrazo component being a derivative of biphenyl
35/10 . . . from two coupling components of the same type
35/105 . . . [from two coupling components with reactive methylene groups]
35/12 . . . from amines
35/14 . . . from hydroxy compounds
35/16 . . . from hydroxy-amines
35/18 . . . from heterocyclic compounds
35/185 . . . [from pyridine or pyridone components]
35/20 . . . from two coupling compounds of different types
35/205 . . . the tetrazo component being a derivative of a diaryl- or triaryl- alkane or-alkene
35/21 . . . of diarylmethane or triarylmethane
35/215 . . . of diarylethane or diarylethene (other stilbene-azo dyes, C09B 56/04, C09B 56/06)
35/22 . . . the tetrazo component being a derivative of a diaryl ether
35/227 . . . the tetrazo component being a derivative of a diaryl sulfide or a diaryl polysulfide
35/233 . . . the tetrazo component being a derivative of a diaryl ketone or benzil
35/24 . . . the tetrazo component being a derivative of a diaryl amine
35/26 . . . the tetrazo component containing two aryl nuclei linked by at least one of the groups —CON<, —SO2N<, —SO2—, or —SO2—O—
35/30 . . . from two identical coupling components
35/32 . . . from two different coupling components
35/34 . . . the tetrazo component being heterocyclic
35/35 . . . Trisazo dyes in which the tetrazo component is a diamino-azo-aryl compound
35/36 . . . Trisazo dyes of the type
35/37 . . . D is diarylmethane
35/38 . . . D is diphenyl
35/39 . . . D is diarylsulfide or a diarylpolysulfide
35/40 . . . D is naphthalene
35/42 . . . D is diarylurea
35/44 . . . D contains two aryl nuclei linked by at least one of the groups —CON<, —SO2N<, —SO2—, or —SO2—O—
35/46 . . . D is a heterocyclic compound
35/48 . . . D is heterocyclic
35/50 . . . Tetrazo dyes
35/52 . . . of the type
35/54 . . . of the type
35/56 . . . of the type
35/58 . . . of the type
35/60 . . . of the type
35/62 . . . of the type
35/64 . . . D is diaminobenzene
35/66 . . . D is diaminodiphenyl
35/68 . . . D being derived from diaminodiaryl ketone
35/69 . . . D being derived from heterocyclic diame
Azo dyes

37/00  Azo dyes prepared by coupling the diazotised amine with itself

39/00  Other azo dyes prepared by diazotising and coupling

41/00  Special methods of performing the coupling reaction [{reaction of mixtures of diazo and coupling components, C09B 67/0033}]

43/00  Preparation of azo dyes from other azo compounds

43/...  with formation of cyclic imides of ortho- or peri-dicarboxylic acids
43/15  with di- or poly-isocyanates
43/16  linking amino-azo or cyanuric acid residues
43/18  by acylation of hydroxyl group {or of mercapto group: (OPO3H2 and OP(X)(XR)2 with X=O,S,NH and R being hydrocarbon, C09B 69/007)}
43/20  with monoozoxy acids, carboxamic acid esters or halides, mono-isocyanates or haloformal acid esters
43/202  {Aliphatic, cycloaliphatic, araliphatic carboxylic acids}
43/204  {Heterocyclic monocarboxylic acids}
43/206  {with formation of OCXN or OSO2N group}
43/208  {with formation of OCXH or OCXXR and R being hydrocarbon}
43/22  having the carboxylic group directly attached to an aromatic carboxylic ring
43/24  with formation of —O—SO2R or —O—SO3H radicals
43/26  with polyfunctional acylating agents
43/263  {Polycarboxylic acids}
43/266  {Di-or polyisocyanates}
43/28  by etherification of hydroxyl groups
43/30  by esterification of —COOH or —SO3H groups
43/32  by reacting carboxylic or sulfonic groups, or derivatives thereof, with amines; by reacting ketogroups with amines
43/325  {by reacting sulfonic acids with amines}
43/34  by reacting ortho- or peri-dicarboxylic dyes
43/36  with amino-anthracene or amino-anthraquinone dyes
43/38  by reacting two or more ortho-hydroxy naphthoic acid dyes with polyamines
43/40  by substituting hetero atoms by radicals containing other hetero atoms
43/405  {by substituting radicals containing hetero atoms for —SO2R radicals and R being hydrocarbon}
43/42  by substituting radicals containing hetero atoms for —CN radicals
43/44  by substituting amine groups for hydroxyl groups or hydroxyl groups for amine groups; Desacylation of amino-acyl groups; Deaminating

44/00  Azo dyes containing onium groups

44/005  {Special process features in the quaternization reaction}
44/02  containing ammonium groups not directly attached to an azo group
44/04  from coupling components containing amino as the only directing group
44/06  from coupling components containing hydroxyl as the only directing group
44/08  from coupling components containing heterocyclic rings
44/10  containing cyclammonium groups attached to an azo group by a carbon atom of the ring system
44/101  {characterised by the coupling component having an amino directing group}
44/102  {characterised by the coupling component having a reactive methylene group}
44/103  {characterised by the coupling component being a heterocyclic compound}
44/105  {derived from pyridine, pyridone}
Azo dyes

47/00 **Complex metal compounds of azo dyes**

47/01 . . . characterised by the method of metallisation

47/02 . . . Preparation from dyes containing in o'-position a hydroxy group and in o'-position hydroxy, alkoxy, carboxyl, amino or keto groups

47/025 . . . (of azo-pyridone series)

47/04 . . . Azo compounds in general

47/06 . . . Chromium compounds

47/08 . . . Copper compounds

47/10 . . . Cobalt compounds

47/12 . . . other metal compounds

47/14 . . . Monoazo compounds

47/16 . . . containing chromium

47/18 . . . containing copper

47/20 . . . containing cobalt

47/22 . . . containing other metals

47/24 . . . Disazo or polyazo compounds

47/26 . . . containing chromium

47/28 . . . containing copper

47/30 . . . containing cobalt

47/32 . . . containing other metals

47/34 . . . Preparation from o-monohydroxy azo compounds having in the o'-position an atom or functional group other than hydroxyl, alkoxy, carboxyl, amino or keto groups

47/36 . . . by oxidation of hydrogen in o'-position

47/38 . . . Preparation from compounds with —OH and —COOH adjacent in the same ring or in peri position

47/40 . . . Chromium compounds

47/42 . . . Copper compounds

47/44 . . . Cobalt compounds

47/46 . . . Other metal compounds

47/48 . . . Preparation from other complex metal compounds of azo dyes

47/482 . . . (Chromium complexes)

47/485 . . . (Copper complexes)

47/487 . . . (Cobalt complexes)

47/00 **Porphines; Azaporphines**

47/04 . . . Phthalocyanines {abbreviation: Pc}

47/045 . . . [Special non-pigmentary uses, e.g. catalyst, photosensitisers of phthalocyanine dyes or pigments]

47/06 . . . Preparation from carboxylic acids or derivatives thereof, e.g. anhydrides, amides, mononitriles, phthalimide, o-cyanobenzamide

47/061 . . . [having halogen atoms linked directly to the Pc skeleton]

47/062 . . . [having alkyl radicals linked directly to the Pc skeleton; having carboxylic groups directly linked to the skeleton, e.g. phenyl]

47/063 . . . [having oxygen or sulfur atom(s) linked directly to the skeleton]

47/064 . . . [having nitrogen atom(s) directly linked to the skeleton]

47/065 . . . [having —COOH or —SO$_3$H radicals or derivatives thereof, directly linked to the skeleton]

47/067 . . . from phthalodinitriles [naphthalenedinitriles, aromatic dinitriles prepared in situ, hydrogenated phthalodinitrile]

47/0671 . . . [having halogen atoms linked directly to the Pc skeleton]

47/0673 . . . [having alkyl radicals linked directly to the Pc skeleton; having carboxylic groups linked directly to the skeleton]

47/0675 . . . [having oxygen or sulfur linked directly to the skeleton]

47/0676 . . . [having nitrogen atom(s) linked directly to the skeleton]

47/0678 . . . [having—COOH or—SO$_3$H radicals or derivatives thereof directly linked to the skeleton]

47/073 . . . Preparation from isoindolenines, e.g. pyrrolineines

47/073 . . . Preparation from other phthalocyanine compounds, e.g. cobaltphthalocyanineamine complex

47/085 . . . (substituting the central metal atom)

47/10 . . . Obtaining compounds having halogen atoms directly bound to the phthalocyanine skeleton

47/12 . . . Obtaining compounds having alkyl radicals, or alkyl radicals substituted by hetero atoms, bound to the phthalocyanine skeleton

47/14 . . . having alkyl radicals substituted by halogen atoms

47/16 . . . having alkyl radicals substituted by nitrogen atoms

47/18 . . . obtaining compounds having oxygen atoms directly bound to the phthalocyanine skeleton

47/20 . . . obtaining compounds having sulfur atoms directly bound to the phthalocyanine skeleton

47/22 . . . obtaining compounds having nitrogen atoms directly bound to the phthalocyanine skeleton

47/24 . . . obtaining compounds having —COOH or —SO$_3$H radicals, or derivatives thereof, directly bound to the phthalocyanine radical

47/26 . . . Amide radicals

47/28 . . . Phthalocyanine dyes containing —S—SO$_3$H radicals

47/30 . . . Metal-free phthalocyanines

47/305 . . . [prepared by demetallizing metal Pc compounds]
Azo dyes

47/32 . Cationic phthalocyanine dyes

48/00 Quinacridones

49/00 Sulfur dyes
49/02 . from nitro compounds of the benzene, naphthalene or anthracene series
49/04 . from amino compounds of the benzene, naphthalene or anthracene series
49/06 . from azines, oxazines, thiazines or thiazoles
49/08 . from urea derivatives
49/10 . from diphenylamines, indamines, or indophenols (e.g. p-aminophenols or leucoindophenols)
49/12 . from other compounds (e.g. other heterocyclic compounds)
49/122 . . (from phthalocyanine compounds)
49/124 . . (from polycyclic aromatic compounds)
49/126 . . (from triarylmethane compounds)
49/128 . . (from hydroxy compounds of the benzene or naphthalene series)

50/00 Formazine dyes; Tetrazolium dyes
50/02 . Tetrazolium dyes
50/04 . Metal-free formazan dyes
50/06 . Bis-formazan dyes
50/08 . Meso-acyl formazan dyes
50/10 . Cationic formazan dyes

51/00 Nitro or nitroso dyes
51/005 . [Nitroso dyes]

53/00 Quinone imides
53/02 . Indamines; Indophenols

55/00 Azomethine dyes
55/001 . [Azomethine dyes forming a 1,2 complex metal compound, e.g. with Co or Cr; with an other dye, e.g. with an azo or azomethine dye (for 1,1 complexes with other ligands, C09B 55/00)]
55/002 . [Monoazomethine dyes]
55/003 . . (with the -C=N- group attached to an heteroring)
55/004 . . . (with the -C=N- group between two heterorings)
55/005 . [Disazomethine dyes]
55/006 . . . (containing at least one heteroring)
55/007 . . . (containing only carbocyclic rings)
55/008 . [Tri or polyazomethine dyes]
55/009 . [Azomethine dyes, the C-atom of the group -C=N-being part of a ring (Image)]

56/00 Azo dyes containing other chromophoric systems
56/005 . [Azo-nitro dyes]
56/02 . Azomethine-azo dyes ([1,2-Complex dyes of AZOMETHINE and AZO dyes, C09B 55/001])
56/04 . Stilbene-azo dyes ([disazo dyes from dianinostilbene, C09B 35/215])
56/06 . . Bis- or polystilbene azo dyes
56/08 . Styril-azo dyes
56/10 . Formazan-azo dyes
56/12 . Anthraquinone-azo dyes ([from diazotised aminoanthracene C09B 29/0022, azo dyes containing hydroxyl groups acylated with polyfunctional anthraquinone derivatives C09B 43/26])
56/14 . Phthalocyanine-azo dyes
56/16 . Methine- or polymethine-azo dyes
56/18 . Hydrazone-azo dyes
56/20 . Triazene-azo dyes

57/00 Other synthetic dyes of known constitution
57/001 . [Pyrene dyes]
57/002 . [Aminoketone dyes, e.g. arylaminoketone dyes (C09B 13/00 takes precedence)]
57/004 . [Diketopyrrolopyrrole dyes]
57/005 . [Pyrococline; Phthalocyaninepyrococline dyes]
57/007 . [Squaraine dyes]
57/008 . [Triarylmethane dyes containing no other chromophores]
57/02 . Coumarine dyes
57/04 . Isoindoline dyes
57/06 . Naphthoacramid dyes
57/08 . Naphthalimide dyes; Phthalimide dyes
57/10 . Metal complexes of organic compounds not being dyes in uncomplexed form
57/12 . . Perinones, i.e. naphthylene-aryl-imidazoles
57/14 . Benzoxanthenes; Benzothioxanthenes

59/00 Artificial dyes of unknown constitution

61/00 Dyes of natural origin prepared from natural sources (e.g. vegetable sources)
62/00 Reactive dyes, i.e. dyes which form covalent bonds with the substrates or which polymerise with themselves
62/002 . . with the linkage of the reactive group being alternatively specified (not used)
62/0025 . . . (Specific dyes not provided for in groups C09B 62/004 - C09B 62/018)
62/004 . . . Anthracene dyes (C09B 62/0068 takes precedence)]
62/006 . . . Azo dyes
62/0061 . . . . [with coupling components containing an amino directing group]
62/0062 . . . . [with coupling components containing a hydroxyl directing group]
62/0064 . . . . [with coupling components containing both hydroxyl and amino groups as directing groups]
62/0065 . . . . [with coupling components containing a reactive methylene group]
62/0067 . . . . [with heterocyclic compound as coupling component]
62/0068 . . . . [dyes containing in the molecule at least one amino group and at least one other chromophore group]
62/008 . . . Monoazo dyes
62/0081 . . . . [with coupling components containing an amino directing group]
62/0083 . . . . [with coupling components containing a hydroxyl directing group]
62/0085 . . . . [with coupling components containing both hydroxyl and amino groups as directing groups]
62/0086 . . . . [with coupling component containing a reactive methylene group]
62/0088 . . . . [with heterocyclic compound as coupling component]
62/008 . . . . Disazo or polyaazo dyes
62/0012 . . . . Metal complex azo dyes
62/014 . Nitro dyes
Azo dyes

62/016 . . . Porphines; Azaporphines
62/018 . . . Formazane dyes
62/02 . . . with the reactive group directly attached to a heterocyclic ring
62/021 . . . [Specific dyes not provided for in groups C09B 62/024 - C09B 62/038]
62/022 . . . the heterocyclic ring being alternatively specified [not used]
62/024 . . . Anthracene dyes
62/026 . . . Azo dyes
62/0265 . . . [Dyes containing in the molecule at least one azo group and at least one other chromophore group]
62/028 . . . Monoazo dyes
62/03 . . . Disazo or polyazo dyes
62/032 . . . Metal complex azo dyes
62/034 . . . Nitro dyes
62/036 . . . Porphines; Azaporphines
62/038 . . . Formazane dyes
62/04 . . . to a triazine ring
62/043 . . . [containing two or more triazine rings linked together by a non-chromophoric link]
62/046 . . . [Specific dyes not provided for in group C09B 62/06 - C09B 62/10]
62/06 . . . Anthracene dyes
62/08 . . . Azo dyes
62/082 . . . [dyes containing in the molecule at least one azo group and at least one other chromophore group]
62/085 . . . Monoazo dyes
62/09 . . . Disazo or polyazo dyes
62/095 . . . Metal complex azo dyes
62/10 . . . Porphines; Azaporphines
62/12 . . . to a pyridazine ring
62/125 . . . [Specific dyes not provided for in groups C09B 62/14 - C09B 62/18]
62/14 . . . Anthracene dyes [C09B 62/162 takes precedence]
62/16 . . . Azo dyes
62/162 . . . [Dyes containing in the molecule at least one azo group and at least one other chromophore group]
62/165 . . . Monoazo dyes
62/17 . . . Disazo or polyazo dyes
62/175 . . . Metal complex azo dyes
62/18 . . . Porphyrins; Porphyrazins [C09B 62/162 takes precedence]
62/20 . . . to a pyrimidine ring
62/205 . . . [Specific dyes not provided for in groups C09B 62/22 - C09B 62/26]
62/22 . . . Anthracene dyes [C09B 62/242 takes precedence]
62/24 . . . Azo dyes
62/242 . . . [Dyes containing in the molecule at least one azo group and at least one other chromophore group]
62/245 . . . Monoazo dyes
62/25 . . . Disazo or polyazo dyes
62/255 . . . Metal complex azo dyes
62/26 . . . Porphyrins; Porphyrazins [C09B 62/242 takes precedence]
62/28 . . . to a pyrazine ring

62/285 . . . [Specific dyes not provided for in groups C09B 62/30 - C09B 62/34]
62/30 . . . Anthracene dyes [C09B 62/322 takes precedence]
62/32 . . . Azo dyes
62/322 . . . [Dyes containing in the molecule at least one azo group and at least one other chromophore group]
62/325 . . . Monoazo dyes
62/33 . . . Disazo or polyazo dyes
62/335 . . . Metal complex azo dyes
62/34 . . . Porphyrins; Porphyrazins [C09B 62/322 takes precedence]
62/343 . . . to a five membered ring
62/3435 . . . [Specific dyes not provided for in groups C09B 62/345 - C09B 62/357]
62/345 . . . Anthracene dyes
62/347 . . . Azo dyes
62/35 . . . Monoazo dyes
62/353 . . . Disazo or polyazo dyes
62/355 . . . Metal complex azo dyes
62/357 . . . Porphyrins; Azaporphines
62/36 . . . to some other heterocyclic ring
62/365 . . . [Specific dyes not provided for in groups C09B 62/38 - C09B 62/42]
62/38 . . . Anthracene dyes
62/40 . . . Azo dyes
62/405 . . . Monoazo dyes
62/41 . . . Disazo or polyazo dyes
62/415 . . . Metal complex azo dyes
62/42 . . . Porphyrins; Azaporphines
62/44 . . . with the reactive group not directly attached to a heterocyclic ring
62/4401 . . . [with two or more reactive groups at least one of them being directly attached to a heterocyclic system and at least one of them being directly attached to a non-heterocyclic system]
62/4403 . . . [the heterocyclic system being a triazine ring]
62/4405 . . . [Dioxazine dyes]
62/4407 . . . [Formazane dyes]
62/4409 . . . [Anthracene dyes]
62/4411 . . . [Azo dyes]
62/4413 . . . [Non-metallized monoazo dyes]
62/4415 . . . [Disazo or polyazo dyes]
62/4416 . . . [Metal complex azo dyes]
62/4418 . . . [Porphyrins; Azaporphines]
62/442 . . . [the heterocyclic system being a pyridazine ring]
62/4422 . . . [the heterocyclic system being a pyrimidine ring]
62/4424 . . . [Azo dyes]
62/4426 . . . [the heterocyclic system being a pyrazine]
62/4428 . . . [the heterocyclic system being a five membered ring]
62/443 . . . the reactive group being alternatively specified
62/445 . . . Anthracene dyes
62/447 . . . Azo dyes
62/45 . . . Monoazo dyes
62/453 . . . Disazo or polyazo dyes
62/455 . . . Metal complex azo dyes
62/457 . . . Porphyrins; Azaporphines
62/463 . . . Formazane dyes
62/465 . . . the reactive group being an acryloyl group, a quaternised or non-quaternised aminooalkyl carbonyl group or a (—N) —CO—A—O—X or (—N) —CO—A—Hal group, wherein A is an alkylene or alkylidene group, X is hydrogen or an acyl radical of an organic or inorganic acid. Hal is a halogen atom, and n is 0 or 1

62/467 . . . Anthracene dyes
62/47 . . . Azo dyes
62/473 . . . Monoazo dyes
62/475 . . . Disazo or polyazo dyes
62/477 . . . Metal complex azo dyes
62/483 . . . Porphines; Azaporphines
62/485 . . . the reactive group being a halo-cyclobutyl-carbonyl, halo-cyclobutyl-vinyl-carbonyl, or halo-cyclobutenyl-carbonyl group

62/487 . . . Anthracene dyes
62/489 . . . Azo dyes
62/491 . . . Monoazo dyes
62/493 . . . Disazo or polyazo dyes
62/495 . . . Metal complex azo dyes
62/497 . . . Porphines; Azaporphines
62/503 . . . the reactive group being an esterified or non-esterified hydroxyalkyl sulfonyl or mercaptoalkyl sulfonlf group, a quaternised or non-quaternised aminoalkyl sulfonlf group, a heterylemercapto alkyl sulfonlf group, a vinyl sulfonyl or a substituted vinyl sulfonlf group, or a thiophene-dioxide group

62/5033 . . . {Dioxazine dyes}
62/5036 . . . {Formazane dyes}
62/505 . . . Anthracene dyes {C09B 62/5033, C09B 62/5036 take precedence}
62/507 . . . Azo dyes {C09B 62/5033, C09B 62/5036 take precedence}
62/51 . . . Monoazo dyes
62/513 . . . Disazo or polyazo dyes
62/515 . . . Metal complex azo dyes
62/517 . . . Porphines; Azaporphines {C09B 62/5033, C09B 62/5036 take precedence}
62/523 . . . the reactive group being an esterified or non-esterified hydroxyalkyl sulfonyl amido or hydroxyalkyl amino sulfonlf group, a quaternised or non-quaternised amino alkyl sulfonyl amido group, or a substituted amino sulfonlf group, or a halogen alkyl sulfonyl amido group, or a halogen alkyl amino sulfonlf group or a vinyl sulfonylamido or a substituted vinyl sulfonamido group

62/525 . . . Anthracene dyes
62/527 . . . Azo dyes
62/53 . . . Monoazo dyes
62/533 . . . Disazo or polyazo dyes
62/535 . . . Metal complex azo dyes
62/537 . . . Porphines; Azaporphines
62/54 . . . the reactive group being an epoxy or halohydrin group

62/56 . . . Anthracene dyes
62/58 . . . Azo dyes
62/585 . . . Monoazo dyes
62/59 . . . Disazo or polyazo dyes
62/595 . . . Metal complex azo dyes
62/60 . . . Porphines; Azaporphines

62/62 . . . the reactive group being an ethylenimino or N—acylated ethylenimino group or a —CO—NH —CH—CH—X group, wherein X is a halogen atom, a quaternary ammonium group or O—acyl and acyl is derived from an organic or inorganic acid, or a beta—substituted ethylamine group

62/64 . . . Anthracene dyes
62/66 . . . Azo dyes
62/665 . . . Monoazo dyes
62/67 . . . Disazo or polyazo dyes
62/675 . . . Metal complex azo dyes
62/68 . . . Porphines; Azaporphines
62/763 . . . the reactive group being a N-methylol group or an O-derivative thereof

62/765 . . . Anthracene dyes
62/767 . . . Azo dyes
62/77 . . . Monoazo dyes
62/773 . . . Disazo or polyazo dyes
62/775 . . . Metal complex azo dyes
62/777 . . . Porphines; Azaporphines
62/78 . . . with other reactive groups
62/80 . . . Anthracene dyes
62/82 . . . Azo dyes
62/825 . . . Monoazo dyes
62/83 . . . Disazo or polyazo dyes
62/835 . . . Metal complex azo dyes
62/84 . . . Porphines; Azaporphines

Lakes: Mordants; Dyestuff preparations

63/00 Lakes
63/005 . . . [Metal lakes of dyes (complex metal compounds of azo dyes C09B 45/00, metal complexes of colourless compounds C09B 57/10)]

65/00 Compositions containing mordants

67/00 Influencing the physical, e.g. the dyeing or printing properties of dyestuffs without chemical reactions, e.g. by treating with solvents [grinding or grinding assistants, coating of pigments or dyes]; Process features in the making of dyestuff preparations; Dyestuff preparations of a special physical nature, e.g. tablets, films

67/0001 . . . [Post-treatment of organic pigments or dyes]
67/0002 . . . [Grinding; Milling with solid grinding or milling assistants]
67/0003 . . . [Drying, e.g. spray drying; Sublimation of the solvent]
67/0004 . . . [Coated particulate pigments or dyes]
67/0005 . . . [the pigments being nanoparticles]
67/0007 . . . [with inorganic coatings]
67/0008 . . . [with organic coatings]
67/0009 . . . [containing organic acid derivatives]
67/0001 . . . [containing resinic acid derivatives]
67/0011 . . . [containing amine derivatives, e.g. polyamines]
67/0013 . . . [with polymeric coatings]
67/0014 . . . [Influencing the physical properties by treatment with a liquid, e.g. solvents]
67/0015 . . . [of azoic pigments]
67/0016 . . . [of phthalocyanines]
67/0017 . . . [Influencing the physical properties by treatment with an acid, H2SO4]
Lakes; Mordants; Dyestuff preparations

[67/0019] . . . [of phthalocyanines]

[67/002] . . . [Influencing the physical properties by treatment with an amine]

[67/0021] . . . [Flushing of pigments]

[67/0022] . . . [Wet grinding of pigments]

[67/0023] . . . [of phthalocyanines]

[67/0025] . . . [Crystal modifications; Special X-ray patterns]

[67/0026] . . . [of phthalocyanine pigments]

[67/0027] . . . [of quinacridones]

[67/0028] . . . [of azo compounds]

[67/0029] . . . [of monoazo compounds]

[67/003] . . . [of diketopyrrolopyrrole]

[67/0032] . . . [Treatment of phthalocyanine pigments (C09B 67/0016, C09B 67/0019 take precedence)]

[67/0033] . . . [Blends of pigments; Mixed crystals; Solid solutions]

[67/0034] . . . [Mixtures of two or more pigments or dyes of the same type]

[67/0035] . . . [Mixtures of phthalocyanines]

[67/0036] . . . [Mixtures of quinacridones]

[67/0038] . . . [Mixtures of anthraquinones]

[67/0039] . . . [Mixtures of diketopyrrolopyrroles]

[67/004] . . . [Mixtures of two or more reactive dyes]

[67/0041] . . . [mixtures containing one azo dye]

[67/0042] . . . [Mixtures containing two reactive dyes one of them being an azo dye]

[67/0044] . . . . . . . . . . . [both having the reactive group directly attached to a heterocyclic system]

[67/0045] . . . . . . . . . . . [both having the reactive group not directly attached to a heterocyclic system]

[67/0046] . . . . . [Mixtures of two or more azo dyes]

[67/0047] . . . . . [Mixtures of two or more reactive azo dyes]

[67/0048] . . . . . [all the reactive groups being directly attached to a heterocyclic system]

[67/005] . . . . . . . . [all the reactive groups being not directly attached to a heterocyclic system]

[67/0051] . . . . . [mixture of two or more monoazo dyes]

[67/0052] . . . . . [Mixtures of two or more reactive monoazo dyes]

[67/0053] . . . . . [all the reactive groups being directly attached to a heterocyclic system]

[67/0054] . . . . . [all the reactive groups not being directly attached to a heterocyclic system]

[67/0055] . . . . . [Mixtures of two or more disazo dyes]

[67/0057] . . . . . [Mixtures of two or more reactive disazo dyes]

[67/0058] . . . . . [all the reactive groups are directly attached to a heterocyclic system]

[67/0059] . . . . . [all the reactive groups are not directly attached to a heterocyclic system]

[67/006] . . . . [Preparation of organic pigments]

[67/0061] . . . . [by grinding a dyed resin]

[67/0063] . . . . [of organic pigments with only macromolecular substances]

[67/0064] . . . . [of phthalocyanines with only macromolecular substances]

[67/0065] . . . . [of organic pigments with only non-macromolecular compounds]

[67/0066] . . . . [Aqueous dispersions of pigments containing only dispersing agents]

[67/0067] . . . . [Aqueous dispersions of phthalocyanine pigments containing only dispersing agents]

[67/0069] . . . . [Non aqueous dispersions of pigments containing only a solvent and a dispersing agent]

[67/007] . . . . [Non aqueous dispersions of phthalocyanines containing only a solvent and a dispersing agent]

[67/0071] . . . . [Process features in the making of dyestuff preparations; Dehydrating agents; Dispersing agents; Dustfree compositions]

[67/0072] . . . . [Preparations with anionic dyes or reactive dyes]

[67/0073] . . . . [Preparations of acid or reactive dyes in liquid form]

[67/0075] . . . . [Preparations with cationic dyes]

[67/0076] . . . . [Preparations of cationic or basic dyes in liquid form]

[67/0077] . . . . [Preparations with possibly reduced vat, sulfur or indigo dyes]

[67/0078] . . . . [Preparations of vat, sulfur or indigo dyes in liquid form]

[67/0079] . . . . [Azoic dyestuff preparations]

[67/008] . . . . [Preparations of disperse dyes or solvent dyes]

[67/0082] . . . . [in liquid form]

[67/0083] . . . . [Solutions of dyes]

[67/0084] . . . . [Dispersions of dyes]

[67/0085] . . . . [Non common dispersing agents]

[67/0086] . . . . [anionic dispersing agents]

[67/0088] . . . . [cationic dispersing agents]

[67/0089] . . . . [non ionic dispersing agent, e.g. EO or PO addition products]

[67/009] . . . . [polymeric dispersing agent]

[67/0091] . . . . [Process features in the making of dispersions, e.g. ultrasonics]

[67/0092] . . . . [Dyes in solid form]

[67/0094] . . . . [Treatment of powders, e.g. antidusting]

[67/0095] . . . . [Process features in the making of granulates]

[67/0096] . . . . [Purification; Precipitation; Filtration]

[67/0097] . . . . [Dye preparations of special physical nature; Tablets, films, extrusion, microcapsules, sheets, pads, bags with dyes]

[67/0098] . . . . [Organic pigments exhibiting interference colours, e.g. nacreous pigments]

[68/00] [Organic pigments surface-modified by grafting, e.g. by establishing covalent or complex bonds, in order to improve the pigment properties, e.g. dispersibility or rheology]

[68/00] [characterised by the process features]

[68/22] . . . . [Acid treatment (for acid pasting C09B 67/0015)]

[68/24] . . . . [Azo-coupling]

[68/26] . . . . [Oxidation]

[68/28] . . . . [Complexing]

[68/40] . . . . [characterised by the chemical nature of the attached groups]

[68/41] . . . . [Polymers attached to the pigment surface (C09B 68/444, C09B 68/446 take precedence)]

[68/42] . . . . [Ionic groups, e.g. free aci]d

[68/423] . . . . [Cationic groups]

[68/4235] . . . . [Ammonium groups or derivatives thereof]

[68/425] . . . . [Anionic groups]

[68/4253] . . . . [Sulfonic acid groups]

[68/4257] . . . . [Carboxylic acid groups]

[68/427] . . . . [Ionic groups and at least one triazine ring present at the same time]

[68/44] . . . . [Non-ionic groups, e.g. halogen, OH or SH]
Lakes; Mordants; Dyestuff preparations

68/441 . . . [Sulphonic acid derivatives, e.g. sulphonic acid
amides or sulphonic acid esters]
68/443 . . . [Carboxylic acid derivatives, e.g. carboxylic
acid amides, carboxylic acid esters or CN
groups]
68/444 . . . [Polyether]
68/446 . . . [Amines or polyamines, e.g. aminopropyl,
1,3,4-triamino-pentyl or polyethylene imine]
68/447 . . . [Alkyl groups]
68/4475 . . . . [Substituted alkyl groups]
68/449 . . . [Unsaturated carbohydrates groups, e.g.
alkenyl or alkynyl]
68/4495 . . . . [Substituted unsaturated carbohydrates
groups]
68/46 . . [Aromatic cyclic groups]
68/463 . . [Substituted aromatic groups]
68/467 . . . [Heteroaromatic groups]
68/4673 . . . . [5-Membered rings]
68/4677 . . . . [6-Membered rings]
68/46775 . . . . [Triazine (C09B 68/427 takes
precedence)]
68/48 . . [Non-aromatic cyclic groups]
68/485 . . . [Substituted non-aromatic cyclic groups]

69/00 Dyes not provided for by a single group of this
subclass

69/001 . . [Dyes containing an onium group attached to the
dye skeleton via a bridge]
69/002 . . . [Hydrazinium group]
69/004 . . . [Sulfonium group]
69/005 . . [Isothiuronium group]
69/007 . . [Dye-stuffs containing phosphonic or phosphinic
acid groups and derivatives]
69/008 . . . . . [Dyes containing a substituent, which contains a
silicium atom]
69/02 . . . Dye-stuff salts, e.g. salts of acid dyes with basic dyes
(for Na, K or NH\textsubscript{4} salts or for chlorides, sul- 
fates or chlorozincates, see the relevant dye groups)
69/04 . . . . . . [Dyes containing anion containing
compounds]
69/045 . . . . . [of anionic azo dyes]
69/06 . . . . . . of cationic dyes with organic acids {or with
inorganic complex acids}
69/065 . . . . . [of cationic azo dyes]
69/08 . . Dyes containing a splittable water solubilising
 group ([dyes containing an onium group attached to
 the dye molecule via a bridge are to be considered
 as cationic dyes and are classified with the
 respective dyes such as C09B 44/02 - C09B 44/08;
 C09B 69/001 - C09B 69/005])
69/10 . . Polymeric dyes; Reaction products of dyes with
 monomers or with macromolecular compounds
{(addition products of alkylene oxide to dyes,
 C09B 69/00; dyeing with polymeric dyes
D06P 1/0056)}
69/101 . . . . [containing an anthracene dye]
69/102 . . . . [containing a perylene dye]
69/103 . . . . [containing a diaryl- or triarylmethane dye]
69/104 . . . . [containing an indole dye, including melanine
derivates]
69/105 . . . . [containing a methine or polymethine dye]
69/106 . . . . [containing an azo dye]
69/107 . . . . [containing an azomethine dye]
69/108 . . . . [containing a phthalocyanine dye]