B CPC

PERFORMING OPERATIONS; TRANSPORTING

NOTES omitted

PRINTING

B41 PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS

B41M PRINTING, DUPLICATING, MARKING, OR COPYING PROCESSES; COLOUR PRINTING, (correction of typographical errors B41J; processes for applying transfer pictures or the like B44C 1/16; fluid media for correction of typographical errors by coating C09D 10/00; printing textiles D06P)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Inking and printing with a printer's forme
1/02 . Letterpress printing, e.g. book printing
1/04 . . Flexographic printing
1/06 . Lithographic printing
1/08 . . Dry printing
1/10 . Intaglio printing {; Gravure printing}
1/12 . Stencil printing; Silk-screen printing
1/125 . . {using a field of force, e.g. an electrostatic field, or an electric current}
1/14 . Multicolour printing
1/16 . . using different inks which flow into one another to produce iridescent effects
1/18 . . Printing one ink over another
1/20 . . by applying differently-coloured inks simultaneously to different parts of the printing surface
1/22 . . Metallic printing; Printing with powdered inks
1/24 . . combined with embossing (printing machines for carrying out printing operations combined with embossing B41F 19/02)
1/26 . Printing on other surfaces than ordinary paper (B41M 1/40 takes precedence)
1/28 . on metals
1/30 . . on organic plastics, horn or similar materials
1/305 . . . {recording sheets having a coating to improve ink, dye or pigment receptivity B41M 5/50; marking or recording on plastic by irradiation with electromagnetic beams, e.g. laser, B41M 5/267}
1/305 . . . {using mechanical, physical or chemical means, e.g. corona discharge, etching or organic solvents, to improve ink retention}
1/32 . on rubber
1/34 . . on glass or ceramic surfaces {(ink-jet printing on glass or ceramic surfaces B41M 5/00)
1/36 . . on pretreated paper, e.g. parchment, oiled paper, paper for registration purposes (B41M 5/50 takes precedence)
1/38 . . on wooden surfaces, leather, or linoleum (printing on matches or match boxes when combined with match manufacture C06F 1/18)
1/40 . Printing on bodies of particular shapes, e.g. golf balls, candles, wine corks {(sublimation or volatilisation of pre-printed design B41M 5/035)
1/42 . Printing without contact between forme and surface to be printed, e.g. by using electrostatic fields {using a stencil or screen B41M 1/125)
3/00 Printing processes to produce particular kinds of printed work, e.g. patterns (special designs or pictures per se B44F; printing apparatus or machines of special type or for particular purposes B41F 17/00; manufacturing organic semiconductor devices using printing techniques H01L 51/004); manufacturing printed circuits using printing techniques H05K 3/12)
3/001 . {using chemical colour-formers or chemical reactions, e.g. leuco dyes or acids}
3/003 . . on optical devices, e.g. lens elements; for the production of optical devices (production by thermal imaging means B41M 5/265)
3/005 . . {Colour cards; Painting supports; Latent or hidden images, e.g. for games; Time delayed images}
3/006 . . {Patterns of chemical products used for a specific purpose, e.g. pesticides, perfumes, adhesive patterns; use of microencapsulated material; Printing on smoking articles}
3/008 . . {Sequential or multiple printing, e.g. on previously printed background; Mirror printing; Recto-verso printing; using a combination of different printing techniques; Printing of patterns visible in reflection and by transparency; by superposing printed artifacts}
3/02 . Maps; Sea or meteorological charts
3/04 . Music
3/06 . Veined printings; Fluorescent printings; Stereoscopic images; Imitated patterns, e.g. tissues, textiles
3/10 . Watermarks
3/12 . Transfer pictures or the like, e.g. decalcomanias (processes for producing decorative surface effects B44C 100B; B41M 5/0256 takes precedence)
repeatedly usable boards or tablets for writing or
G03
for use therein
Duplicating or marking methods; Sheet materials
{ ; electrography, magnetography G03G }
by transferring ink from the master sheet
B41M
5/0356
5/0355
5/0353
using heat shrinkable film material;
Thermotransfer combined with the shaping of the
workpiece; Recto-verso printing; Image
correction
characterised by the macromolecular coating or
impregnation used to obtain dye receptive
properties
characterised by the inks used for printing the
pattern on the temporary support or additives
therefor, e.g. dyes, transferable compounds,
binders or transfer promoting additives
characterised by the mechanisms or artifacts
to obtain the transfer, e.g. the heating means,
the pressure means or the transport means
using solvent-soluble dyestuffs on the master
sheets, e.g. alcohol-soluble
using master sheets coated with jelly-like
materials, e.g. gelatin
Sheet materials therefor
by using carbon paper or the like
using pressure to make a masked colour visible,
e.g. to make a coloured support visible, to create
an opaque or transparent pattern, or to form colour
by uniting colour-forming components
[Inert particulate additives, e.g. protective stilt
materials]
[Application of the layer, e.g. by printing]
[Desensitisers; Compositions for fault correction,
detection or identification of the layers]
Chemical colour-forming components; Additives
or binders therefor
Organic colour formers, e.g. leuco dyes
Leuco dyes forming a complex with a metal
cation
[characterised solely by tri (aryl or
hetaryl)methane derivatives (B41M 5/1363
takes precedence)]
with a lactone or lactam ring
[characterised by fluoran compounds]
Spiro-pyrans
Colour-developing components, e.g. acidic
compounds; Additives or binders therefor;
Layers containing such colour-developing
components, additives or binders
[Inorganic mineral developers, e.g. clays]
characterised by the use of microcapsules; Special
solvents for incorporating the ingredients
[Solvents]
using electric current (B41M 5/24 takes precedence
[; processes in which the current is transformed into
a heat pattern for obtaining transfer to a receptor
sheet B41M 5/382; electro-coagulable or electro-
 adhesive printing or recording B41C 1/105])
[and an eroding electrode]
Ablative recording, e.g. by burning marks; Spark
recording [(marking by high energetic means, e.g.
by laser otherwise than burning or ablative removal
B41M 5/26; materials or methods for recording or
reproduction by optical means G11B 7/00)]
[Electroerosion or spark recording]
means, e.g. laser otherwise than by burning, and precedence ) ; { Marking by high energetic Thermography ( B41M 5/20 ); B41M 5/24 take precedence}; [Marking by high energetic means, e.g. laser otherwise than by burning, and characterised by the material used ( B23K takes precedence; thermographic or photothermographic systems using noble metal compounds G03C 1/494 )]

{recording or marking of inorganic surfaces or materials, e.g. glass, metal, or ceramics ( marking of plastic artifacts with inorganic additives B41M 5/267 )}

{for the production of optical filters or electrical components}

{Marking of plastic artifacts, e.g. with laser}

using thermochromic compounds or layers containing liquid crystals, microcapsules, bleachable dyes or heat- decomposable compounds, e.g. gas- liberating ( {B41M 5/38271 takes precedence} )

{using liquid crystals only}

{using thermochromic compounds}

{Inorganic thermochromic compounds}

{Organic thermochromic compounds}

{Polycytophelenes}

{using compounds undergoing unimolecular fragmentation to obtain colour shift, e.g. bleachable dyes}

{using microcapsules or microspheres only}

{using gas liberating compounds, e.g. to obtain vesicular or blow-up images ( B41M 3/16, B41M 9/04 take precedence; thermography printing B41M 7/02) }

{using chemical colour formers ( B41M 5/34 takes precedence) }

{with reversible electron-donor electron-acceptor compositons}

one component being a heavy metal compound, {e.g. lead or iron}

Organic colour formers, e.g. leuco dyes

with a lactone or lactam ring

{Fluoran compounds}

{Macromolecular compounds}

{Non-macromolecular compounds}

{Compounds containing phenolic or carboxylic acid groups or metal salts thereof}

{Sulphur compounds, e.g. sulfoamines, sulﬁdes, sulfoxamides}

{Inorganic compounds}

{Additives; Binders ( {B41M 5/46 takes precedence} )}

{Macromolecular compounds}

{Non-macromolecular compounds}

{Inorganic compounds, e.g. metal salts of organic acids}

Multicolour thermography

{by thermal transfer of dyes or pigments}
5/392 . . . Additives, other than colour forming substances, dyes or pigments, e.g. sensitisers, transfer promoting agents
5/395 . . . Macromolecular additives, e.g. binders
5/398 . . . Processes based on the production of stickiness patterns using powders
5/40 . . . characterised by the base [backcoat], intermediate, or covering layers, [e.g. for thermal transfer dye-donor or dye-receiver sheets]; Heat, radiation filtering or absorbing means or layers; combined with other image registration layers or compositions; Special originals for reproduction by thermography ((macromolecular ink- or dye-receptive coatings B41M 5/52))
5/405 . . . [characterised by layers cured by radiation (layers cured after recording B41M 7/0072)]
5/41 . . . Base layers [supports or substrates]
5/42 . . . Intermediate, [backcoat], or covering layers ((B41M 5/405 takes precedence; multilayer thermal transfer systems in general B41M 5/38214))

**NOTE**

When the invention information lies in the combination of features covered by more than one of the subgroups of B41M 5/42, classification is made in B41M 5/42, using the corresponding indexing codes of its subgroups to identify the individual features

5/423 . . . [characterised by non-macromolecular compounds, e.g. waxes]
5/426 . . . [characterised by inorganic compounds, e.g. metals, metal salts, metal complexes]
5/44 . . . characterised by the macromolecular compounds
5/443 . . . . . . [Silicon-containing polymers, e.g. silicones, siloxanes]
5/446 . . . . . . [Fluorine-containing polymers]
5/46 . . . . . . characterised by the light-to-heat converting means; characterised by the heat or radiation filtering or absorbing means or layers
5/465 . . . . . . [Infra-red radiation-absorbing materials, e.g. dyes, metals, silicates, C black]
5/48 . . . . . . combined with other image registration layers or compositions; Special originals for reproduction by thermography
5/50 . . . Recording sheets characterised by the coating used to improve ink, dye or pigment receptivity, e.g. for ink-jet or thermal dye transfer recording ((printing on organic plastics using a printer's form B41M 1/30; printing on pre-treated paper with a printer's form B41M 1/36))
5/502 . . . [characterised by structural details, e.g. multilayer materials (supports, backcoats or intermediate layers for thermal dye transfer donor and receiver sheets B41M 5/41, B41M 5/42)]
5/504 . . . [Backcoats]
5/506 . . . [Intermediate layers]
5/508 . . . [Supports]
5/52 . . . Macromolecular coatings

**NOTE**

( In this group, when the invention information lies in a combination of features covered by more than one of its subgroups, classification is made in B41M 5/52, using the corresponding indexing codes of its subgroups to identify the individual features )

5/5209 . . . [Coatings prepared by radiation-curing, e.g. using photopolymerisable compositions]
5/5218 . . . [characterised by inorganic additives, e.g. pigments, clays]
5/5227 . . . [characterised by organic non-macromolecular additives, e.g. UV-absorbers, plasticisers, surfactants]
5/5236 . . . [characterised by the use of natural gums, of proteins, e.g. gelatins, or of macromolecular carbohydrates, e.g. cellulose]
5/5245 . . . [characterised by the use of polymers containing cationic or anionic groups, e.g. mordants]
5/5254 . . . [characterised by the use of polymers obtained by reactions only involving carbon-to-carbon unsaturated bonds, e.g. vinyl polymers]
5/5263 . . . [characterised by the use of polymers obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds]
5/5272 . . . . . . [Polyesters; Polycarbonates]
5/5281 . . . . . . [Polyurethanes or polyureas]
5/529 . . . [characterised by the use of fluoride- or silicon-containing organic compounds]

7/00 After-treatment of prints, e.g. heating, irradiating, [setting of the ink, protection of the printed stock (pre-treatment or treatment during printing B41M 5/0011; printers for treating or overcoating copy materials before, during or after printing B41M 11/0015)]
7/0009 . . . [Obliterating the printed matter; Non-destructive removal of the ink pattern, e.g. for repetitive use of the support]
7/0018 . . . [using ink-fixing material, e.g. mordant, precipitating agent, after printing, e.g. by ink-jet printing, coating or spraying]
7/0027 . . . [using protective coatings or layers by lamination or by fusion of the coatings or layers]
7/0036 . . . [using protective coatings or layers dried without curing]
7/0045 . . . [using protective coatings or film forming compositions cured by mechanical wave energy, e.g. ultrasonics, cured by electromagnetic radiation or waves, e.g. ultraviolet radiation, electron beams, or cured by magnetic or electric fields, e.g. electric discharge, plasma]
7/0054 . . . [using protective coatings or film forming compositions cured by thermal means, e.g. infrared radiation, heat]
7/0063 . . . [Preservation or restoration of currency, books or archival material, e.g. by deacidifying]
7/0072 . . . [using mechanical wave energy, e.g. ultrasonics; using magnetic or electric fields, e.g. electric discharge, plasma]
7/0081 . . . [using electromagnetic radiation or waves, e.g. ultraviolet radiation, electron beams]
7/009 . . . [using thermal means, e.g. infrared radiation, heat]
Dusting (e.g. with an anti-offset powder for obtaining raised printing such as by thermogravure (B41M 7/0027, B41M 7/0036, B41M 7/0045, B41M 7/0054, B41M 7/0072, B41M 7/0081, B41M 7/009 take precedence); Varnishing (devices for treating the surfaces of sheets, webs, or other articles in connection with printing B41F 23/00, B41L 23/00))

Processes wherein make-ready devices are used (make-ready devices per se B41N 6/00)

Relief make-readies

photomechanical

Subject matter not provided for in other groups of this subclass

Printing methods or features related to printing methods: Location or type of the layers

Dye diffusion thermal transfer printing (D2T2)

Direct thermal recording (DTR)

relating to melt (thermal) mass transfer

Ablative thermal transfer, i.e. the exposed transfer medium is propelled from the donor to a receptor by generation of a gas

Post-imaging transfer of imaged layer; transfer of the whole imaged layer

Preparation of material for subsequent imaging, e.g. corona treatment, simultaneous coating, pre-treatments

Production or use of a mask

Correction processes or materials

Erasure; Erasable marking; Non-permanent marking

Stability against chemicals, e.g. grease

improving gradation of image

Reactive compound reacting in image receiving layer other than leuco dyes or mordants

Donor or receiver with registry means

Storage stability; Improved self life

Thermal donors, e.g. thermal ribbons

Thermal receivers

Both sides of a layer or material are treated, e.g. coated

Backcoats; Back layers

Intermediate layers; Layers between substrate and imaging layer

Cover layers; Layers separated from substrate by imaging layer; Protective layers; Layers applied before imaging (protective layers applied after imaging B41M 7/00)

Multiple imaging layers