

## ECLA EUROPEAN CLASSIFICATION

**B24D TOOLS FOR GRINDING, BUFFING, OR SHARPENING** (tools for grinding or polishing optical surfaces on lenses or surfaces of similar shape [B24B13/01](#); grinding heads [B24B41/00](#); manufacture of abrasive or friction articles or shaped materials containing macromolecular substances [C08J5/14](#); polishing compositions [C09G1/00](#); abrasives [C09K3/14](#))

### Notes

1. This subclass covers grinding tools for working on any material
2. Tools for grinding, buffing or sharpening, specially designed for a particular purpose, which purpose is provided for in a single other place, are classified in that place, e.g. [B23F21/02](#)

- B24D3/00 Physical features of abrasive bodies, or sheets, e.g. abrasive surfaces of special nature; Abrasive bodies or sheets characterised by their constituents** ([composition of friction linings F16D69/02](#))
- B24D3/00B . [N: the constituent being used as supporting member]
  - B24D3/00B2 . . [N: Flexible supporting members, e.g. paper, woven, plastic materials]
  - B24D3/00B2C . . . [N: with special coatings]
  - B24D3/00C . [N: the constituent being used during pre- or after-treatment ([B24D3/34D takes precedence](#))]
  - B24D3/00D . [N: the constituent being used as bonding agent between different parts of an abrasive tool]
  - B24D3/00E . [N: Abrasive bodies without external bonding agent]
  - B24D3/02 . the constituent being used as bonding agent
  - B24D3/04 . . and being essentially inorganic
  - B24D3/06 . . . metallic [N: or mixture of metals with ceramic materials, e.g. hard metals, "cermets", cements]
  - B24D3/08 . . . . for close-grained structure, e.g. using metal with low melting point
  - B24D3/10 . . . . for porous or cellular structure, e.g. for use with diamonds as abrasives
  - B24D3/12 . . . water-setting, e.g. concrete
  - B24D3/14 . . . ceramic, i.e. vitrified bondings [N: ([mixture with metals B24D3/06](#))]
  - B24D3/16 . . . . for close-grained structure, i.e. of high density
  - B24D3/18 . . . . for porous or cellular structure
  - B24D3/20 . . and being essentially organic
  - B24D3/22 . . . Rubbers [N: synthetic or natural]
  - B24D3/24 . . . . for close-grained structure [N: ([B24D3/00B2 takes precedence](#))]
  - B24D3/26 . . . . for porous or cellular structure
  - B24D3/28 . . . Resins [N: or natural or synthetic macromolecular compounds ([B24D3/22 takes](#)

- precedence)]
- B24D3/28B . . . . [N: Reaction products obtained from aldehydes or ketones]
  - B24D3/30 . . . . for close-grained structure
  - B24D3/32 . . . . for porous or cellular structure
  - B24D3/34 . characterised by additives enhancing special physical properties, e.g. wear resistance, electric conductivity, self-cleaning properties
  - B24D3/34B . . [N: incorporated in the bonding agent]
  - B24D3/34B2 . . . [N: the bonding agent being organic]
  - B24D3/34C . . [N: utilised during polishing, or grinding operation]
  - B24D3/34D . . [N: utilised as impregnating agent for porous abrasive bodies (after-treatments in general [B24D3/00C](#))]

**Guide heading:**      **Bonded abrasive wheels**

**B24D5/00**                      **Bonded abrasive wheels, or wheels with inserted abrasive blocks, designed for acting only by their periphery; Bushings or mountings therefor**

- B24D5/02 . Wheels in one piece
- B24D5/04 . . with reinforcing means
- B24D5/06 . with inserted abrasive blocks, e.g. segmental ([zonally graded B24D5/14](#))
- B24D5/06B . . [N: with segments embedded in a matrix which is rubbed away during the grinding process] [C9610]
- B24D5/06C . . [N: with segments mounted axially one against the other]
- B24D5/08 . . with reinforcing means
- B24D5/10 . with cooling provisions, e.g. with radial slots
- B24D5/12 . Cut-off wheels
- B24D5/12B . . [N: having different cutting segments]
- B24D5/12C . . [N: having an internal cutting edge]
- B24D5/14 . Zonally-graded wheels; Composite wheels comprising different abrasives
- B24D5/16 . Bushings; Mountings
- B24D5/16B . . [N: Balancing means]

**B24D7/00**                      **Bonded abrasive wheels, or wheels with inserted abrasive blocks, designed for acting otherwise than only by their periphery, e.g. by the front face; Bushings or mountings therefor**

- B24D7/00C . [N: for cutting spherical surfaces]
- B24D7/02 . Wheels in one piece
- B24D7/04 . . with reinforcing means
- B24D7/06 . with inserted abrasive blocks, e.g. segmental ([zonally-graded B24D7/14](#))

- B24D7/06B . . [N: with segments embedded in a matrix which is rubbed away during the grinding process]
- B24D7/06C . . [N: Grinding blocks; their mountings or supports]
- B24D7/08 . . with reinforcing means
- B24D7/10 . with cooling provisions
- B24D7/12 . with apertures for inspecting the surface to be abraded
- B24D7/14 . Zonally-graded wheels; Composite wheels comprising different abrasives
- B24D7/16 . Bushings; Mountings
- B24D7/18 . Wheels of special form (if specially designed for a particular purpose provided for in a single other class, that class takes precedence; [N: saw cylinders having their cutting rim equipped with abrasive particles for working stone or glass [B28D1/04A](#)])
  
- B24D9/00** **Wheels or drums supporting in exchangeable arrangement a layer of flexible abrasive material, e.g. sandpaper (wheels or drums as machine elements [F16](#))**
- B24D9/00B . [N: Wheels having flaps of flexible abrasive material supported by a flexible material]
- B24D9/00C . [N: Tools consisting of a rolled strip of flexible material]
- B24D9/02 . Expansible drums for carrying flexible material in tubular form, e.g. expanded by centrifugal force
- B24D9/04 . Rigid drums for carrying flexible material
- B24D9/06 . . able to be stripped-off from a built-in delivery spool
- B24D9/08 . Circular back-plates for carrying flexible material
- B24D9/08B . . [N: Devices for mounting sheets on a backing plate]
- B24D9/10 . . with suction means for securing the material
  
- B24D11/00** **Constructional features of flexible abrasive materials; Special features in the manufacture of such materials**
- B24D11/00B . [N: Manufacture of flexible abrasive materials]
- B24D11/00B2 . . [N: without embedded abrasive particles ([B24D11/00B3](#) takes precedence)]
- B24D11/00B3 . . [N: Making abrasive webs]
- B24D11/00B3B . . . [N: without embedded abrasive particles]
- B24D11/00C . [N: Finishing manufactured abrasive sheets, e.g. cutting, deforming]
- B24D11/02 . Backings, e.g. foils, webs, mesh fabrics
- B24D11/04 . Zonally-graded surfaces
- B24D11/06 . Connecting the ends of materials, e.g. for making abrasive belts

- B24D11/06B . . [N: Treatment of the ends of flexible abrasive materials before connecting them]
- B24D11/08 . Equipment for after-treatment of the coated backings, e.g. for flexing the coating
- B24D13/00** **Wheels having flexibly-acting working parts, e.g. buffing wheels; Mountings therefor**
- B24D13/02 . acting by their periphery
- B24D13/04 . . comprising a plurality of flaps or strips arranged around the axis
- B24D13/04B . . . [N: comprising flaps not covering the entire periphery of the wheel]
- B24D13/06 . . the flaps or strips being individually attached
- B24D13/08 . . comprising annular or circular sheets packed side by side
- B24D13/08B . . . [N: comprising flaps with a circular sheet on each side]
- B24D13/10 . . comprising assemblies of brushes
- B24D13/12 . . comprising assemblies of felted or spongy material, e.g. felt, steel wool, foamed latex
- B24D13/14 . acting by the front face
- B24D13/14B . . [N: Wheels of special form] [C9610]
- B24D13/14C . . [N: having a brush-like working surface]
- B24D13/14D . . [N: comprising assemblies of felted or spongy material; comprising pads surrounded by a flexible material]
- B24D13/16 . . comprising pleated flaps or strips
- B24D13/18 . with cooling provisions
- B24D13/20 . Mountings for the wheels
- B24D15/00** **Hand tools or other devices for non-rotary grinding, polishing, or stropping**
- B24D15/02 . rigid; with rigidly-supported operative surface
- B24D15/02B . . [N: using in exchangeable arrangement a layer of flexible material]
- B24D15/02B1 . . . [N: able to be stripped-off from a built-in delivery spool]
- B24D15/04 . resilient; with resiliently-mounted operative surface
- B24D15/04B . . [N: Glove-shaped abrasive devices] [N1204]
- B24D15/06 . specially designed for sharpening cutting edges
- B24D15/06B . . [N: for electric shaving blades]
- B24D15/06C . . [N: for grinding shears, scissors]
- B24D15/06D . . [N: for sharpening both knives and scissors]
- B24D15/06E . . [N: for sharpening skate blades, i.e. blades having two sharp edges defined by three surfaces intersecting in pairs at an angle of substantially 90°]
- B24D15/06F . . [N: for sharpening ski edges, i.e. sharp edges defined by two surfaces intersecting at an angle of substantially 90°]
- B24D15/08 . . of knives; of razors

- B24D15/08B . . . [N: with sharpening elements in interengaging or in mutual contact]
- B24D15/08B1 . . . . [N: the elements being rotatable]
- B24D15/08C . . . [N: the sharpening elements being fitted to knife sheaths, holders or handles]
- B24D15/08E . . . [N: with reciprocating whetstones] [N1204]
- B24D15/08E2 . . . . [N: having a crank handle] [N1204]
- B24D15/08I . . . [N: with whetting leather] [N1204]
- B24D15/10 . . of safety-razor blades (devices with mechanically-operated parts [B24B3/50](#))
- B24D15/10B . . . [N: Holders therefor]

**B24D18/00** **Manufacture of grinding tools** [N: or other grinding devices], e.g. wheels, not otherwise provided for

- B24D18/00B . [N: using moulds or presses]
- B24D18/00C . [N: by electrolytic deposition]
- B24D18/00D . [N: by impregnation]
- B24D18/00E . [N: by winding up abrasive bands]
- B24D18/00F . [N: by stacking sheets of abrasive material]
- B24D18/00G . [N: by impressing abrasive powder in a matrix]
- B24D18/00H . [N: by extrusion]
- B24D18/00M . [N: using adhesives for bonding abrasive particles or grinding elements to a support, e.g. by gluing] [C1205]
- B24D18/00P . [N: of wire-reinforced grinding tools] [C1205]
- B24D18/00R . [N: Tools not otherwise provided for] [N1204]

**B24D99/00** **Subject matter not provided for in other groups of this subclass** [N: ([B28D1/12C](#) takes precedence)] [N1008]

- B24D99/00B . [N: Segments of abrasive wheels] [N1008]