

E04 BUILDING (layered materials, layered products in general B32B)**E04D ROOF COVERINGS; SKY-LIGHTS; GUTTERS; ROOF-WORKING TOOLS** (coverings of outer walls by plaster or other porous material E04F 13/00)

In this subclass, the following expression is used with the meaning indicated:

- “roof coverings” includes any similar kind of watertight covering against rain, snow, hail, or the like, for other parts of buildings.

ROOF COVERINGS		Other materials 11/00	
Tiles or slates; slabs or stiff sheets; flexible materials 1/00; 3/00; 5/00, 11/00		SPECIAL ARRANGEMENTS IN CONNECTION WITH ROOF COVERINGS 12/00, 13/00	
Bulk materials, straw or thatch 7/00, 9/00, 11/00		APPARATUS OR TOOLS FOR ROOF WORKING 15/00	
1/00	Roof covering by making use of tiles, slates, shingles, or other small roofing elements (roofing supports E04D 12/00)	3/06	. . of glass or other translucent material; Fixing means therefor (fixing glass panes by means applicable to windows E06B 3/54)
1/02	. Grooved or vaulted roofing elements (E04D 1/28, E04D 1/30 take precedence)	3/08	. . . with metal glazing bars
1/04	. . of ceramics, glass or concrete, with or without reinforcement	3/14	. . . with glazing bars of other material, e.g. of glass
1/06	. . of metal	3/16	. . of metal
1/08	. . of plastics; of fibrous materials	3/18	. . of specified materials, or of combinations of materials, not covered by any of groups E04D 3/04, E04D 3/06 or E04D 3/16
1/10	. . of specified materials, or of combinations of materials, not covered by any one of groups E04D 1/04 E04D 1/08	3/24	. with special cross-section, e.g. with corrugations on both sides, with ribs, flanges, or the like (E04D 3/35 takes precedence)
1/12	. Roofing elements shaped as plain tiles or shingles, i.e. with flat outer surface (E04D 1/28, E04D 1/30 take precedence)	3/26	. . of concrete or ceramics
1/14	. . of slate material, with or without fastening means	3/28	. . of glass
1/16	. . of ceramics, glass or concrete, with or without reinforcement	3/30	. . of metal
1/18	. . of metal	3/32	. . of plastics, fibrous materials, or asbestos cement
1/20	. . of plastics, fibrous materials, or wood	3/34	. . of specified materials, or of combinations of materials, not covered by any one of groups E04D 3/26 E04D 3/32
1/22	. . of specified materials, or of combinations of materials, not covered by any one of groups E04D 1/14 E04D 1/20	3/35	. Roofing slabs or stiff sheets comprising two or more layers, e.g. for insulation
1/24	. Roofing elements with cavities, e.g. hollow tiles (E04D 1/28 takes precedence)	3/36	. Connecting; Fastening
1/26	. Strip-shaped roofing elements appearing as a row of shingles	In groups E04D 3/361 E04D 3/368, additional small fastening elements, e.g. nails, screws, are not to be considered to be separate connecting elements.	
1/28	. Roofing elements comprising two or more layers, e.g. for insulation		
1/30	. Special roof-covering elements, e.g. ridge tiles, gutter tiles, gable tiles, ventilation tiles (E04D 3/40 takes precedence; roof covering aspects of energy collecting devices E04D 13/18)	3/361	. . by specially-profiled marginal portions of the slabs or sheets
1/34	. Fastenings for attaching roof-covering elements to the supporting elements	3/362	. . . by locking the edge of one slab or sheet within the profiled marginal portion of the adjacent slab or sheet, e.g. using separate connecting elements
1/36	. Devices for sealing the spaces or joints between roof-covering elements (sealing joints not restricted to roof covering elements E04B 1/68)	3/363	. . . with snap action [4]
		3/3645	. . . by interference fitting [4]
		3/365	. . by simple overlapping of the marginal portions with use of separate connecting elements, e.g. hooks or bolts for corrugated sheets
3/00	Roof covering by making use of flat or curved slabs or stiff sheets (E04D 1/00 takes precedence; built-up roofs E04D 11/02)	3/366	. . by closing the space between the slabs or sheets by gutters, bulges, or bridging elements, e.g. strips
3/02	. of plane slabs, slates, or sheets, or in which the cross-section is unimportant (E04D 3/35 takes precedence)	3/367	. . by permanent deformation of the marginal portions of adjacent slabs or sheets, e.g. by folding the edges [4]
3/04	. . of concrete or ceramics (of asbestos cement E04D 3/18)		

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- 3/368 . . by forcing together the marginal portions of adjacent slabs or sheets
- 3/369 . . by welding of the marginal portions of adjacent slabs or sheets
- 3/38 . Devices for sealing spaces or joints between roof-covering elements (E04D 3/36 takes precedence; sealing joints not restricted to roof covering elements E04B 1/68)
- 3/40 . Slabs or sheets locally modified for auxiliary purposes, e.g. for resting on walls, for serving as guttering; Elements for particular purposes, e.g. ridge elements, specially designed for use in conjunction with slabs or sheets (roof covering aspects of energy collecting devices E04D 13/18)

5/00 Roof covering by making use of flexible material, e.g. supplied in roll form (using stiff sheets E04D 3/00; gravelling of flat roofs E04D 7/00; built-up roofs E04D 11/02)

Group E04D 5/12 takes precedence over groups E04D 5/02 E04D 5/08.

- 5/02 . of materials impregnated with sealing substances, e.g. roofing felt
- 5/04 . by making use of metal foils
- 5/06 . by making use of plastics
- 5/08 . by making use of other materials
- 5/10 . by making use of compounded or laminated materials, e.g. metal foils or plastic films coated with bitumen (E04D 5/12 takes precedence)
- 5/12 . specially modified, e.g. perforated, with granulated surface, with attached pads
- 5/14 . Fastening means therefor

7/00 Roof covering by sealing masses applied in situ; Gravelling of flat roofs

9/00 Roof covering by using straw, thatch, or like materials (impregnation against incendiary damage B27K)

11/00 Roof covering, as far as not restricted to features covered by only one of groups E04D 1/00 E04D 9/00; Roof covering in ways not provided for by groups E04D 1/00 E04D 9/00

- 11/02 . Built-up roofs, i.e. consisting of two or more layers bonded together in situ, at least one of the layers being of watertight composition (gravelling of flat roofs E04D 7/00; venting or ventilation E04D 13/17)

12/00 Non-structural supports for roofing materials, e.g. battens, boards (E04D 11/02 takes precedence)

13/00 Special arrangements or devices in connection with roof coverings; Roof drainage (ventilation tiles E04D 1/30; ventilation slabs E04D 3/40; internal channels E04F 17/00; roofing elements therefor, see the relevant groups)

- 13/02 . Roof-covering aspects of dormer windows (E04D 13/14 takes precedence; structures therefor E04B 7/18)
- 13/03 . Sky-lights; Domes; Ventilating sky-lights (E04D 13/14 takes precedence; structures therefor E04B 7/18)
- 13/035 . . characterised by having movable parts
- 13/04 . Roof drainage; Drainage fittings in flat roofs (gutter tiles E04D 1/30; gutter slabs E04D 3/40; street gullies E03F 5/04)
- 13/064 . . Gutters [6]
- 13/068 . . . Means for fastening gutter parts together [6]
- 13/072 . . . Hanging means (in combination with means for fastening gutter parts together E04D 13/068) [6]
- 13/076 . . Devices or arrangements for removing snow, ice or debris from gutters or for preventing accumulation thereof [6]
- 13/08 . . Down pipes; Special clamping means therefor (clamping pipes in general F16B, F16L)
- 13/10 . Snow traps
- 13/12 . Devices or arrangements allowing walking on the roof or in the gutter
- 13/14 . Junctions of roof sheathings to chimneys or other parts extending above the roof
- 13/143 . . with ventilating means [6]
- 13/147 . . specially adapted for inclined roofs [6]
- 13/15 . Trimming strips; Edge strips; Fascias (E04D 13/14 takes precedence) [6]
- 13/152 . . with ventilating means [6]
- 13/155 . . retaining the roof sheathing [6]
- 13/158 . . covering the overhang at the eave side, e.g. soffits, or the verge of saddle roofs [6]
- 13/16 . Insulating devices or arrangements in so far as the roof covering is concerned (methods for keeping dry building structures in general E04B 1/70; buildings for extreme climates E04H 9/16) [6]
- 13/17 . Ventilation of roof coverings not otherwise provided for (ventilation of rooms or spaces F24F) [6]
- 13/18 . Roof covering aspects of energy collecting devices, e.g. including solar panels (heat collectors per se F24J, e.g. solar heat collectors F24J 2/02; semiconductor devices for converting solar energy into electrical energy H01L 25/00, H01L 31/00) [4]

15/00 Apparatus or tools for roof working

- 15/02 . for roof coverings comprising tiles, shingles, or like roofing elements
- 15/04 . for roof coverings comprising slabs, sheets or flexible material
- 15/06 . for handling roofing or sealing material in roll form
- 15/07 . for handling roofing or sealing material in bulk form