

E01C

CONSTRUCTION OF, OR SURFACES FOR, ROADS, SPORTS GROUNDS, OR THE LIKE; MACHINES OR AUXILIARY TOOLS FOR CONSTRUCTION OR REPAIR (forming roads or like surfaces by compacting or grading snow or ice E01H)

Definition statement

This subclass/group covers:

Outdoor pavements and their foundations:

- General design or layout of roads;
- Paving made of prefabricated single units;
- Coherent paving made in situ;
- Special paving;
- Details of paving;
- Paving or foundation specially adapted for playgrounds or sports grounds;
- Paving specially adapted for footpaths, sidewalks or cycle tracks;
- Pavements lights.

Machines and methods for making, placing, working or repairing road surfacing and its foundations.

References relevant to classification in this subclass

This subclass/group does not cover:

Bridges	E01D
Equipments for roads; traffic islands; drainage of the sub-base of roads	E01F
Forming roads or like surfaces by compacting or grading snow or ice	E01H

Informative references

Attention is drawn to the following places, which may be of interest for search:

Foundations in general	E02D
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Indoor flooring	E04F
Dredging; Soil shifting	E02F

Special rules of classification within this subclass

Further details of paving elements not covered by the groups [E01C 5/00](#), [E01C 9/00](#) and [E01C 11/00](#), e.g. spacing features, interlocking, joining or drainage details are additionally classified in [E01C 2201/00](#).

Further machine characteristics, parts or accessories not covered by the groups [E01C 19/00](#), [E01C 21/00](#), [E01C 23/00](#), i.e. feeding devices for pavers, heated screeds, extendable screeds, screed or paver accessories and cabin details are additionally classified in [E01C 2301/00](#).

Outdoor paving surfaces made of, or comprising synthetic grass are always classified in [E01C 13/08](#), even when not disclosed as being adapted for sports.

E01C 1/00

Design or layout of roads, e.g. for noise abatement, for gas absorption (design or layout of sports grounds A63C19/00; design or layout of airfields B64F, [N: of helicopter landing stages E01F3/00])

Definition statement

This subclass/group covers:

General layout of roads incl.

- street systems and cross-sections of roads, as well as
- special road design for noise abatement or for compelling drivers to slow down,
- arrangements for gas absorption and
- road crossings.

References relevant to classification in this group

This subclass/group does not cover:

Design or layout of sports grounds	A63C 19/00
Design or layout of airfields	B64F

Construction of traffic islands	E01F 1/00
Design or layout of helicopter landing stages	E01F 3/00

E01C 1/002

[N: Design or lay-out of roads, e.g. street systems, cross-sections (E01C1/005, E01C1/007 take precedence; of footpaths, sidewalks, berms, hard shoulders or cycle tracks E01C15/00); Design for noise abatement, e.g. sunken road (reducing transmission of structure-born noise E01C3/06; arrangement of means for absorbing surfacings see the groups for the respective surfacings; other arrangements for absorbing or reflecting air transmitted road traffic noise, e.g. barriers E01F8/00)]

References relevant to classification in this group

This subclass/group does not cover:

Arrangements for absorbing or reflecting air transmitted road traffic noise, e.g. barriers	E01F 8/00
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E01C 1/005

[N: Means permanently installed along the road for removing or neutralising exhaust gases (collecting exhaust gases with central suction systems, e.g. in workshops or tunnels, B08B15/002)]

References relevant to classification in this group

This subclass/group does not cover:

Ventilation of tunnels	E21F 1/00
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E01C 1/007

[N: Design or auxiliary structures for compelling drivers to

slow down or to proceed with caution, e.g. tortuous carriageway; Arrangements for discouraging high-speed or non-resident traffic (decelerating or arresting surfacings E01C9/007; road surface configuring or surface arrangements for enforcing reduced speed or required caution, e.g. speed-control humps E01F9/047)]

References relevant to classification in this group

This subclass/group does not cover:

Speed bumps	E01F 9/047
Vehicle decelerating or arresting surfacings	E01C 9/007

E01C 3/00

Foundations for pavings (specially adapted for playgrounds or sports grounds E01C13/02 ; foundations in general E02D)

Definition statement

This subclass/group covers:

Arrangements of foundations; Use of special materials for building up the foundation layers of the road; Protecting foundations from destructive influences.

References relevant to classification in this group

This subclass/group does not cover:

Prefabricated foundation elements for prefabricated paving elements	E01C 5/001 , E01C 5/085 , E01C 5/223
Foundations specially adapted for playgrounds or sports grounds	E01C 13/02
Draining the subbase of roads	E01F 5/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Foundations in general	E02D
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Apparatus or processes for surface stabilisation for road building	E01C21
Soil-conditioning or soil-stabilising materials	C09K 17/00
Stabilising soil under existing surfacing	E01C 23/10

Special rules of classification within this group

[E01C 3/02](#) is not used.

E01C 5/00

Pavings made of prefabricated single units (specially adapted for playgrounds or sports grounds E01C13/04, for footpaths, sidewalks or cycle tracks E01C15/00 ; making artificial stones C04B; building stones E04C; flooring E04F)

Definition statement

This subclass/group covers:

The covering of roads or sidewalks consisting of prefabricated single units:

- paving units characterised by their materials;
- reinforced paving units;
- paving units characterised by the material used for beds or joints or characterised by the way of laying.

Prefabricated foundation elements and individual couplings for these paving units.

Relationship between large subject matter areas

Prefabricated paving units for sidewalk are generally classified here if they concern paving slabs for forming the surface covering the sidewalk; if they concern special paving elements or sets for forming the sidewalk itself, then they should be classified in [E01C 15/00](#).

References relevant to classification in this group

This subclass/group does not cover:

Prefabricated paving units specially adapted for playgrounds or sports grounds	E01C 13/04
Prefabricated pavings specially adapted for footpaths, sidewalks or cycle tracks and not being simple paving slabs (for example prefabricated elements for forming elevated sidewalks).	E01C 15/00
Gratings	E01C 9/10

Informative references

Attention is drawn to the following places, which may be of interest for search:

Shaping cementitious materials incl. moulds	B28B
Shaping plastic materials incl. moulds	B29C
Working stone	B28D
Making artificial stones	C04B
Indoor flooring	E04F 15/00
Structural elements for building incl. building blocks or building slabs	E04C
Special paving	E01C 9/00

Special rules of classification within this group

Paving elements consisting of material not defined or consisting of several possible different materials should be classified in [E01C 5/00](#).

Paving elements consisting of at least two different materials in one element, e.g. rubber topping over concrete layer, should be classified in [E01C 5/22](#).

Details within the paving unit itself concerning special surface design, special paving arrangements, drainage or interconnection should also be classified in [E01C 2201/00](#).

E01C 7/00

Coherent pavings made in situ (specially adapted for playgrounds or sports grounds E01C13/06; for footpaths, sidewalks or cycle tracks E01C15/00)

Definition statement

This subclass/group covers:

Roads surfaces incl. road toppings, consisting of coherent paving made at the place of use, the road surfaces being made of road-metal with or without binders or by subjecting soil to stabilisation.

Repairing of concrete or bituminous roads.

Relationship between large subject matter areas

Foundations for paving made in situ are usually classified in [E01C 3/00](#), except of concrete base foundation for bituminous paving, which is classified in [E01C 7/32](#) and in the relevant sub-groups of [E01C 7/08](#).

If the chemical aspect of the composition of the concrete or bituminous paving layer is relevant it should normally belong to [C04B](#) or [C08L 95/00](#) and not to [E01C 7/00](#).

References relevant to classification in this group

This subclass/group does not cover:

Coherent pavings made in situ specially adapted for playgrounds or sports grounds	E01C 13/06
Coherent pavings made in situ specially adapted for footpaths, sidewalks or cycle tracks	E01C 15/00
Individual units made from concrete cast in situ	E01C 9/001
Foundations for roads	E01C 3/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Methods or material for repairing	E01C 11/00
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pavings in general	
Devices for preparing or distributing paving materials, for working the placed materials, or for forming, consolidating, or finishing the paving	E01C19
Auxiliary devices for constructing, repairing, reconditioning, or taking-up road surfaces	E01C23
Apparatus or processes for surface stabilisation for road building	E01C21
Reinforcements in roads	E01C 11/16 , E01C 11/18
Cement like composition	C04B
Bituminous composition	C08L 95/00
Soil stabilising materials	C09K 17/00
Foundations made by soil stabilisation	E01C 3/04

Special rules of classification within this group

Classes [E01C 7/20](#), [E01C 7/22](#) and [E01C 7/24](#) are not used.

If the coherent paving is made of courses of different kind made in situ, it should be classified in [E01C 7/32](#), except for thin intermediate or thin surface layers such as surface dressing, which should be classified in the relevant sub-groups of [E01C 7/35](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Road-metal	Aggregate
Coherent paving	Paving made of a mass of cohering material

E01C 9/00

Special pavings (specially adapted for playgrounds or sports grounds E01C13/00, for footpaths, sidewalks or cycle tracks E01C15/00); Pavings for special parts of roads or airfields (pavement lights E01C17/00; manhole or like covers or frames E02D29/14)

Definition statement

This subclass/group covers:

Paving elements poured in situ.

Coverings, the surface of which consists partly of prefabricated units and partly of sections made in situ.

Pavings for special parts of roads or with special functionality, incl.:

- pavings specially adapted for allowing vegetation,
- vehicle decelerating or arresting surfacings,
- paving take-off areas for vertically starting aircraft,
- wheel tracks,
- pavings for railroad level-crossings,
- pavings adjacent tramways rails,
- temporary pavings or
- steel gratings.

Relationship between large subject matter areas

Details of special paving should also be classified in the relevant sub-groups of [E01C 5/00](#), [E01C 11/00](#) and/or [E01C 2201/00](#).

References relevant to classification in this group

This subclass/group does not cover:

Paving specially adapted for playgrounds or sports grounds	E01C 13/00
Paving specially adapted for footpaths, sidewalks or cycle tracks	E01C 15/00

Pavement lights	E01C 17/00
Removable forms or shutterings for road-building purposes	E01C 19/50
Bridge deck gratings	E01D 19/125
Speed control bumps	E01F 9/047
Manhole or like covers or frames	E02D 29/14
Gully gratings	E03F 5/06

Informative references

Attention is drawn to the following places, which may be of interest for search:

Protecting plants (trees) in general	A01G 13/00
Machines or methods for applying material to surfaces to form a permanent layer thereon	B28B 19/00
Moulds and cores for cementitious compositions	B28B7
Arresting surface arrangements for aircrafts	B64F 1/02
Rail tracks for guiding vehicles	E01B 25/28
Landing platform for helicopters	E01F 3/00
Revetment of banks, dams, water-courses	E02B 3/12
Indoor flooring	E04F 15/00
Foot scrapers	E04F 19/10

E01C 11/00

Details of pavings [N: (E01C1/005, E01C5/003, E01C5/005, E01C7/145, E01C7/185, E01C7/325 take precedence)]

Definition statement

This subclass/group covers:

Methods or materials for repairing paving.

Details of paving incl.:

- joint constructions,
- reinforcements,
- gutters and kerbs and
- methods for preventing slipperiness on roads, including permanently installed heating devices.

Relationship between large subject matter areas

Gutters for roads are normally classified in the relevant sub-groups of [E01C 11/22](#), but if the invention relates to gully gratings, gullies adapted to be used with kerbs or interconnections of pipes with gutters, then it should be classified in [E03F](#).

Methods or arrangements for preventing slipperiness or protecting against influences of the weather are normally classified in [E01C 11/24](#) if they concern methods or arrangements applying within the paving itself, such as use of special additives to the paving material or permanently installed heating elements. If they concern methods or arrangements applying on the surface such as spreading gripping or thawing materials, then they should be classified in [E01H10](#) or in [E01C 19/20](#) if they concern spreading machines for wintry services, which are not specially adapted for treating wintry roads but could also be used for spreading other materials.

References relevant to classification in this group

This subclass/group does not cover:

Tactile arrangements on paving surface for the visually impaired	A61H 3/066
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E01C 11/005

[N: Methods or materials for repairing pavings (E01C7/35 takes precedence; for concrete coverings E01C7/147; for bituminous coverings E01C7/187; devices for repair

works E01C23/06; repairing bridge floorings E01D22/00)]

References relevant to classification in this group

This subclass/group does not cover:

Methods or materials for repairing specific concrete paving	E01C 7/147
Methods or materials for repairing specific bituminous paving	E01C 7/187
Repairing bridge floorings	E01D 22/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for repairing the surface of roads	E01C 23/06
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E01C 11/02

Arrangement or construction of joints [N: (for pavings consisting of prefabricated units E01C5/00)]; Methods of making joints [N: (machines therefor E01C23/02, E01C23/09; removable joint shutterings E01C23/021)]; Packing for joints (sealing joints not restricted to road or airfield paving E04B1/68)

References relevant to classification in this group

This subclass/group does not cover:

Prefabricated paving characterised by the material used for joints	E01C 5/003
Bridge joints	E01D 19/06

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sealing joints for buildings and the	E04B 1/68
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like	
Machines for making joints	E01C 23/02 , E01C 23/09
Removable joint shuttering	E01C 23/021

E01C 11/16

Reinforcements ([N: as anchoring elements between layers E01C7/145, E01C7/185, E01C7/325]; for building in general E04C)

References relevant to classification in this group

This subclass/group does not cover:

Reinforced paving elements	E01C 5/08 , E01C 5/10
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Removable holder for dowel	E01C 23/045
Reinforcements for building in general	E04C 5/00
Bituminated textile webs	E01C 5/12

E01C 11/22

Gutters; [N: Surface drainage of streets, roads or like traffic areas (for sports grounds E01C13/00)]; Kerbs [N: or like edging members (for sports grounds E01C13/00)]

References relevant to classification in this group

This subclass/group does not cover:

Preformed sidewalk paving with integral kerb	E01C 15/00
Kerbs for guiding traffic or for display purposes	E01F 9/053

Kerbs specially adapted for traffic islands	E01F 1/00
Kerbs for sport grounds	E01C 13/00
Draining the sub-base of roads	E01F 5/00
Sewers and surface drainage in general, incl. pipe connections in sewer systems	E03F 5/04 , E03F 3/00
Surface drainage of bridges	E01D 19/086
Gully gratings	E03F 5/06

Informative references

Attention is drawn to the following places, which may be of interest for search:

Edging for beds, lawns, e.g. using tiles	A01G 1/08
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E01C 11/24

Methods or arrangements for preventing slipperiness or protecting against influences of the weather [N: (measures taken in connection with the foundation E01C3/06; paving elements with anti-slip inlays E01C5/22; aggregates resisting to grinding E01C7/085, E01C7/142, E01C7/182; specially for surface layers E01C7/35; reinforcements extending up to the surface E01C11/16, E01C11/18, E01C11/185; drainage E01C11/22; windscreens E01F7/02; snow fences E01F7/02; combating fog E01H13/00)]

References relevant to classification in this group

This subclass/group does not cover:

Improving gripping of ice bound or other slippery traffic surfaces by spreading gritting or thawing materials on the surface of the road	E01H 10/00
Spreading machines for wintry	E01C 19/20

services, if they are not specially adapted for treating wintry roads but could also be used for spreading other materials	
Thawing materials in general	C09K 3/18

E01C 13/00

Pavings or foundations specially adapted for playgrounds or sports grounds; [N: Drainage, irrigation or heating of sports grounds] (general layout A63C19/00)

Definition statement

This subclass/group covers:

Pavings for playgrounds or sports grounds (made of prefabricated single units or in situ) and their foundations, also incl.

- construction of rinks or tracks for roller skating or the like;
- construction of grass surfaces (natural grown or synthetic);
- artificial surfaces for outdoor or indoor practice of snow or ice sports.

Relationship between large subject matter areas

Details of paving should also be classified in the relevant sub-groups of [E01C 5/00](#), [E01C 11/00](#) and/or [E01C 2201/00](#), if necessary.

References relevant to classification in this group

This subclass/group does not cover:

General layout of sport grounds	A63C 19/00
Race tracks	A63K 1/00
Golf courses	A63B 69/3691
Mechanical ski trails	A63C 19/10

Informative references

Attention is drawn to the following places, which may be of interest for search:

Indoor sport flooring	E04F 15/00
Yarns or threads	D02G 3/44
Drainage of soil in general	E02B 11/00
Materials for simulating ice or snow	C09K 3/24
Layered products in general	B32B

E01C 15/00

Pavings specially adapted for footpaths, sidewalks or cycle tracks

Definition statement

This subclass/group covers:

Specially adapted paving elements or systems for footpaths, sidewalks or cycle tracks, such as:

a walkway or cycle track in the countryside, see for example US4176982:

a set of paving elements for constructing an elevated walkway, see for example WO2008025201:

or a tactile walk path, see for example US2009162143:

E01C 17/00

Pavements lights, i.e translucent constructions forming part of the surface (blocks specially designed for marking roads E01F9/04)

Definition statement

This subclass/group covers:

Lamp constructions incorporated in pavings or paving elements, e.g. paving block or tile.

References relevant to classification in this group

This subclass/group does not cover:

Blocks specially designed for marking roads	E01F 9/04
Illuminated advertising or display means on roads	G09F 19/22

Informative references

Attention is drawn to the following places, which may be of interest for search:

Lamp or lighting constructions in general	F21S , F21V
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E01C 19/00

Machines, tools or auxiliary devices for preparing or distributing paving materials, for working the placed materials, or for forming, consolidating, or finishing the paving (surface stabilisation E01C21/00; apparatus specially adapted for reconditioning or repairing paving E01C23/00)

Definition statement

This subclass/group covers:

Devices or methods for preparing and/or applying paving material, and/or consolidating and/or finishing the road surface.

Devices for guiding or controlling the machines along a predetermined path.

Removable forms or shutterings for road-building purposes.

Devices or arrangements for forming individual paving elements, e.g. kerbs or by sectioning a freshly laid slab, in situ.

Apparatus for laying individual preformed surfacing elements.

Relationship between large subject matter areas

The devices or methods for placing paving material treat paving material as such and not joint material, curing means, prefabricated underlays, reinforcing elements or traffic markings, which are classified in the relevant sub-groups of [E01C 23/00](#).

The devices or methods for finishing the road surface are devices for

smoothing, roughening or patterning freshly laid paving. Devices for working existing road surfaces are classified in [E01C 23/06](#). Devices for making grooves or like channels in not-yet-hardened paving, or for curing, heating or drying paving are classified in the relevant sub-groups of [E01C 23/00](#).

Spreaders for gripping or thawing materials are also classified in the relevant sub-groups of [E01C 19/20](#), if they concern spreaders for wintry services, which are not specially adapted for treating wintry roads but could also be used for spreading other materials. If they are specially adapted for that use, they are classified in [E01H10](#).

References relevant to classification in this group

This subclass/group does not cover:

Devices for setting-out or checking the configuration of new surfacing	E01C 23/01
Producing hydraulic cement concrete in general	B28C 5/00 to B28C 9/00
Stationarily-arranged melting boiler for tar or asphalt	C10C 3/12
Smoothing tools for mass made in situ for indoor paving	E04F 21/24
Apparatus or process for surface stabilisation for road building	E01C 21/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fertiliser distributors	A01C 15/00 , A01C 17/00
Crushing, pulverising or disintegrating in general	B02C
Apparatus for generating vibrations in general	B06B
Apparatus specially adapted for reconditioning or repairing paving	E01C 23/06 , E01C 23/065
Spreaders specially adapted for treating wintry roads	E01H 10/00

Compacting soil in general	E02D3
Drives or control devices for graders	E02F 3/84
Drives or control devices for other soil-shifting machines	E02F 9/20H

Special rules of classification within this group

Only the sub-groups of [E01C 19/50](#) are used, [E01C 19/50](#) itself is not used.

[E01C 19/20](#) and its lower groups are subdivided by way of spreading. Classifying additional information in [E01C 19/20](#).

E01C 21/00

Apparatus or processes for surface [N: soil] stabilisation for road building or like purposes, e.g. mixing local aggregate with binder ([N: recycling in place or on the road involving soil stabilisation E01C23/065]; stabilising soil under existing surfacing E01C23/10; soil-conditioning or soil-stabilising materials C09K17/00; soil consolidation in general E02D3/12)

References relevant to classification in this group

This subclass/group does not cover:

Recycling in place or on the road involving soil stabilisation	E01C 23/065
Stabilising soil under existing surfacing	E01C 23/10

Informative references

Attention is drawn to the following places, which may be of interest for search:

Soil-conditioning or soil-stabilising materials	C09K 17/00
Soil consolidation in general	E02D 3/12
Road surfaces made by soil stabilisation	E01C 7/36

Foundations made by soil stabilisation	E01C 3/04
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E01C 23/00

Auxiliary devices or arrangements for constructing, repairing, reconditioning, or taking-up road or like surfaces (apparatus for reconditioning of salvaged non-hydraulic compositions [N: for- in plant recycling of salvaged bituminous mixtures] E01C19/10)

Definition statement

This subclass/group covers:

Apparatus or methods focussed on work carried out on existing surfaces, like roughening, cutting, reconditioning or marking out.

Devices for setting-out or checking the configuration of new surfacing; Applications of apparatus for measuring, indicating, or recording the surface configuration of existing surfacing.

Devices for making, treating or filling grooves in not-yet-hardened paving; Devices for introducing inserts or removable insert-supports in not-yet-hardened paving.

Arrangements for curing paving; Devices for applying curing means; Devices for laying prefabricated underlay; Protecting paving under construction or while curing.

Devices for laying reinforcing elements or dowel bars; Removable support for reinforcing elements; Devices for making essentially horizontal ducts in paving.

Devices for installing or removing forms.

Devices for heating or drying foundation, paving, or materials thereon.

Relationship between large subject matter areas

Devices for working existing road surfaces are classified in the relevant sub-groups of [E01C 23/06](#). Devices for smoothing, roughening or patterning freshly laid paving are classified in [E01C 19/42](#) to [E01C 19/44](#).

Milling drums for working road surfaces are classified in [E01C 23/088](#); however, if the invention concerns the cutter bits as such, then it should be classified in [B28D 1/186](#).

References relevant to classification in this group

This subclass/group does not cover:

Marking out playing courts	A63C 19/06
Apparatus for reconditioning of salvaged non-hydraulic compositions for in plant recycling of salvaged bituminous mixtures	E01C 19/10
Removing matter not bonded to the road surface	E01H 1/00
Roughening or detaching ice	E01H 5/12

Informative references

Attention is drawn to the following places, which may be of interest for search:

Working stone or stone-like materials by milling	B28D 1/18
In plant recycling	E01C 19/1004 , E01C 19/1036
Road surface markings per se	E01F 9/04
Hydraulic cleaning	E01H 1/101
Measuring in general	G01B

Special rules of classification within this group

Filling potholes is classified in [E01C 23/06](#) if the potholes are filled with new material, and in [E01C 23/065](#) if the potholes are filled with material which has been reprocessed in place.