2 Concrete

General and Basements

2.1 Efflorescence (a whitish crystalline powder) is present on concrete surfaces.

Acceptable Performance Condition:

Efflorescence commonly occurs on concrete surfaces.

Warranty Coverage:

This is not a defect.

Claim Response:

None.

Remarks:

Efflorescence is a white deposit on concrete surfaces caused by a combination of soluble salts, moisture, and hydrostatic pressure, and can present itself in localized areas.

Efflorescence is an indication of the normal condition of moisture moving through the material to the surface.

Efflorescence is usually harmless and can be removed with a stiff brush and water.

See Also:

3.1 Efflorescence (a whitish crystalline powder) is present on masonry surfaces.

7.18 Efflorescence (a whitish crystalline powder) is present on exterior surfaces.

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2.2 Interior concrete surfaces are powdery.

Acceptable Performance Condition:

Concrete surfaces shall be sufficiently hardened in order to prevent powdering such that the original cannot be readily scratched away to a depth of 1/16 inch (1.5 mm).

Minor dusting of the concrete surface may occur. However, the condition is considered excessive where the aggregate becomes exposed.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Concrete surfaces not meeting the acceptable performance condition shall be rectified.

Remarks:

Surface deterioration due to homeowner applied substances or improper maintenance is not a defect.

Powdering may be due to cement carbonization from gas-fired space heaters. Space heaters should be indirect-fired furnace-type heat exchangers which produce clean hot air with no exhaust fumes.

If a local repair is involved, the colour and texture of a repaired concrete area may not match the surrounding, original concrete.

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2.3 Exposed concrete foundation wall has holes in the surface.

Acceptable Performance Condition:

Minor surface imperfections and voids in concrete are normal. However, the exterior portion of foundation walls exposed to view shall have no holes (including honeycombing) that expose reinforcing or result in water leakage.

Warranty Coverage:

1 year for defects in materials and labour.

5 years for defects in the building envelope.

Claim Response:

Walls with holes exceeding the acceptable performance condition shall be rectified.

Remarks:

The colour and texture of a repaired area may not match the surrounding concrete.

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2.4 Foundation wall leaks.

Acceptable Performance Condition:

Foundation walls shall not allow water penetration.

Warranty Coverage:

1 year for defects in materials and labour.

5 years for defects in the building envelope.

Claim Response:

Water penetration through a basement foundation wall shall be rectified.

Remarks:

Dampness caused by condensation is not covered under warranty, but actual water penetration through the foundation wall is covered. In the event of a water leak through a foundation wall, the homeowner has an obligation to mitigate damages and report the issue to the builder immediately. Consequential damage to personal property or any personal injury from the water penetration is excluded from the warranty.

Water leaks can often be attributed to the eavestrough downspout extensions not being in place, or the extensions not being lowered to properly direct rainwater away from the foundation wall. Proper positioning of the down pipe extensions and grade maintenance are the responsibility of the homeowner.

Surface grades altered by the homeowner may void warranty coverage.

See Also:

14.16 Eavestroughs or downspouts leak.

14.17 Eavestroughs overflow during rainfall.

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2.5 Cast-in-place concrete foundation wall is cracked.

Acceptable Performance Condition:

Minor cracks resulting from normal shrinkage are acceptable. Cracks in excess of 1/8 inch (3 mm) in width are considered excessive.

Warranty Coverage:

1 year for defects in materials and labour.

10 years for structural defects.

Claim Response:

Concrete walls exceeding the acceptable performance condition shall be rectified.

Remarks:

Concrete walls naturally crack due to shrinkage during the curing process. If water penetration is not an issue, a cosmetic repair for cracks exceeding the acceptable performance condition is acceptable. Where excessive cracking and/or lateral or vertical movement is evident, further investigation may be required to determine if a structural defect exists. The colour and texture of a rectified area may not match the surrounding concrete.

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2.6 Water is leaking in through the basement floor slab.

Acceptable Performance Condition:

Basement floor slabs shall not allow water penetration.

Warranty Coverage

1 year for defects in materials and labour.

5 years for defects in the building envelope.

Claim Response:

Defects resulting in water penetration through the basement floor slab shall be rectified. A subsurface investigation may be required.

Remarks:

Dampness caused by condensation is not warrantable.

Crawlspace topping is not considered a basement floor slab.

If a sump system is installed, failure by the homeowner to maintain the system may void warranty coverage.

Water leakage resulting from improper maintenance, exterior grade alterations made by the homeowner, an act of nature, or a failure of municipal services or other utilities, is excluded from the warranty.

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2.7 Concrete basement floor is cracked.

Acceptable Performance Condition:

Random cracks resulting from normal shrinkage are acceptable. Cracks greater than 1/8 inch (3 mm) horizontal or vertical displacement are considered excessive.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Cracks in excess of the acceptable performance condition shall be rectified.

Consideration should be given to the length of the crack that exceeds the acceptable performance condition and the ability of cracks to retain repair material.

Remarks:

Concrete floors dehydrate during the curing process, often resulting in surface cracks. Actual crack widths shall be determined by measuring inside the crack at its widest point, exclusive of chipped areas.

Where repairs are necessary, colour and/or texture of the repair may not match the surrounding concrete. Caulking material is considered an acceptable repair.

Contraction along the perimeter of a concrete floor is a normal occurrence and not considered a crack.

A slab on grade is not considered a structural element.

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2.8 Concrete basement floor (without builder-applied finished flooring) deviates from the specified plane of the floor.

Acceptable Performance Condition:

Within the general surface of the floor, a line represented by a 4-foot straight edge resting over a localized undulation in relation to the plane of the floor, shall not permit the passage (beneath) of a sphere measuring 3/8 inch (10 mm) in diameter.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Uneven floors exceeding the acceptable performance condition shall be rectified.

Remarks:

Sloped floor areas designed to provide drainage to floor drains are not considered uneven. Sloped floor areas near floor drains, footings, and plumbing protrusions are acceptable.

Repairs may include grinding or applying a topping. The colour and texture of a rectified area may not match the surrounding concrete; this is acceptable.

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2.9 The plane of the concrete basement floor has settled or heaved.

Acceptable Performance Condition:

Heaving or subsiding of the concrete floor slab greater than 1 inch over 10 feet (25 mm in 3.078 meters) within 1 year of commencement of warranty is excessive.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Areas of the floor that have risen or subsided excessively within one year of the date of commencement of warranty shall be rectified.

Remarks:

Repairs may include grinding or applying a topping. The colour and texture of a rectified area may not match the surrounding concrete; this is acceptable.

Areas of the basement floors sloped to direct water to a floor drain are acceptable.

Changes in moisture content of the soil may contribute to movement of the basement floor. This may be a result of inadequate surface water management.

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2.10 Basement floor feels damp.

Acceptable Performance Condition:

Dampness on basement concrete floor surfaces caused by condensation or capillary transport is a normal process when water vapour meets a sufficiently cool surface.

Warranty Coverage:

This is not a defect.

Claim Response:

None.

Remarks:

Basements are the coolest part of a home and the relative humidity along a concrete surface will be naturally higher.

During the first year of a new home, concrete surfaces expel water that was required during the cement curing process. Storage of items directly on the basement floor in the first year should be avoided.

A basement laundry area can be responsible for producing significant amounts of moisture which can condense on a concrete floor surface.

Crawlspace topping is not considered a basement floor.

Dampness can be reduced by using a dehumidifier or by increasing the amount of ventilation to the area.

See also:

2.5 Cast-in-place concrete foundation wall is cracked.

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Garages

2.11 Garage concrete floor has heaved or settled.

Acceptable Performance Condition:

Cast-in-place concrete garage floors, supported by grade, shall not heave or subside to produce a negative slope inward from the overhead door. Heaving or subsiding of the concrete floor slab greater than 1 inch over 10 feet (25 mm in 3.078 meters) within 1 year of commencement of warranty is excessive.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

The concrete floor slab shall be rectified to drain water away from the home.

Remarks:

Consideration should be given to the amount of frost in the ground when making a determination.

Where a floor drain is installed consideration shall be given to the drainage design.

The colour and texture of a rectified area may not match the surrounding concrete; this is acceptable.

Detached garages may be excluded from coverage.

See Also:

2.13 Water is accumulating on the garage floor.

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2.12 Garage concrete floor is cracked.

Acceptable Performance Condition:

Cracks resulting from normal shrinkage are acceptable. Cracks that exceed 1/8 inch (3mm) are considered excessive. Vertical displacement at a crack exceeding 1/4 inch (6 mm) is considered excessive.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Cracks or displacement not meeting the acceptable performance condition shall be rectified. Consideration should be given to the ability of cracks to retain repair material as well as the length of the crack that exceeds the acceptable performance condition.

Remarks:

Concrete floors naturally dehydrate during the curing process often resulting in surface cracks.

Actual crack widths shall be determined by measuring inside the crack at its widest point, exclusive of the chipped area.

Where repairs are necessary, colour and/or texture of the repair may not match the surrounding concrete; this is acceptable.

Caulking material is considered an acceptable repair.

Contraction along the perimeter of a concrete floor is a normal occurrence and not considered a defect.

Cracks occurring at control joints and materials such as “zip strips” used for crack control are acceptable.

See Also:

2.13 Water is accumulating on the garage floor.

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2.13 Water is accumulating on the garage floor.

Acceptable Performance Condition:

Minor variations in the surface of the floor may impede immediate drainage; this is considered acceptable provided that the garage floor is sloped to drain to the exterior.

Incidental water ponding from vehicle run-off into traffic areas that exceeds 4 square feet (0.37 square meters) in area and to a depth greater than 1/4 inch (6mm), remaining in excess of 30 minutes, is considered excessive.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Concrete floor slabs not meeting the acceptable performance condition shall be rectified to reduce ponding.

Remarks:

Consideration should be given to the amount of frost in the ground when making a determination.

Closed overhead doors may impede drainage to the exterior.

The colour and texture of a rectified area may not match the surrounding concrete; this is acceptable.

Providing drain holes in the area of ponding, which directs water underneath the slab may cause sensitive soils to expand or contract creating additional problems, and is not recommended.

See Also:

2.11 Garage concrete floor has heaved or settled.

2.12 Garage concrete floor is cracked.

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Exterior Concrete

2.14 Exterior concrete flatwork surface is deteriorating.

Acceptable Performance Condition:

Surface deterioration on concrete flatwork, to the extent that the aggregate is exposed, shall not exceed 10% of the affected panel(s) under normal conditions of weathering and use.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Where concrete surface deterioration exceeds 10% of the affected panel(s), the concrete surface shall be rectified.

Remarks:

Cleaning concrete of road salts and application of appropriate concrete sealer is part of homeowner maintenance. Homeowner applied salts and de-icers applied either intentionally, for ice melting, or unintentionally, from road slush, can stress concrete surfaces leading to deterioration. Damage from such sources is not considered a defect.

Consideration must be given to the prevailing performance of concrete that represents the industry standard for concrete within that geographic area.

Sandblasting of the surface or replacement of the affected panel is considered an acceptable repair.

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2.15 Crazing has occurred on surface of exterior concrete flatwork.

Acceptable Performance Condition:

Concrete flatwork displays random cracks or fissures, usually visible when the surface has been wet and it is beginning to dry out.

Warranty Coverage:

This is not a defect.

Claim Response:

None.

Remarks:

Concrete crazing is the development of a network of random cracks or fissures on the surface of concrete or mortar caused by shrinkage of the surface layer. Generally, crazing cracks develop at an early age and are apparent the day after placement or at least by the end of the first week. Often they are not readily visible until the surface has been wet and it is beginning to dry out.

Crazing is an aesthetic issue that occurs as a result of normal shrinkage. Crazing cracks do not affect the structural integrity of concrete and rarely do they affect durability or wear resistance.

Cleaning concrete of road salts and application of appropriate concrete sealer is part of homeowner maintenance. Homeowner applied salts and de-icers applied either intentionally, for ice melting, or unintentionally, from road slush, can stress concrete surfaces leading to deterioration. Damage from such sources is not considered a defect.

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2.16 Exterior concrete driveway or walkway is cracked.

Acceptable Performance Condition:

Where caused by subsidence, cracks in excess of 1/4 inch (6 mm), excluding chips, in vertical or horizontal displacement are considered excessive.

Warranty Coverage:

1 year for defects in materials and labour**.**

Claim Response:

Concrete driveways or walkways not meeting the acceptable performance condition shall be rectified.

Remarks:

Consideration should be given to the amount of frost in the ground when making a determination.

Minor cracks developing in driveways due to the following are not covered:

- Frost heave/erosion,
- heavy loads from large vehicles, or
- normal shrinkage of the asphalt or concrete.

Delivery trucks and large vehicles can exert excessive force and should not be permitted on residential driveways.

Rectified areas may be a different colour; this is acceptable.

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2.17 Exterior concrete driveway or walkway has heaved.

Acceptable Performance Condition:

This is not a defect.

Warranty Coverage:

None.

Claim Response:

None.

Remarks:

Surface water management is the responsibility of the homeowner. Water should not be directed beneath a driveway slab.

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2.18 Exterior stairs or landings forming part of a walkway have settled.

Acceptable Performance Condition:

Exterior stairs and landings forming part of a walkway shall not separate from the foundation more than 3/4 inch (19 mm) as a result of settling.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Stairs and landings not meeting the acceptable performance condition shall be rectified.

Remarks:

Small stair assemblies not attached to the building and not attached to a supporting foundation are often affected by the settlement of supporting backfill and seasonal conditions. This condition is not a defect.

Consideration shall be given to the original construction.

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2.19 Water is ponding on concrete walkway (includes stairs or landings).

Acceptable Performance Condition:

Where caused by subsidence, ponding exceeding ¼ inch (6 mm) in depth and remaining in excess of 30 minutes is considered excessive provided walkways are sloped.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Concrete walkways not meeting the acceptable performance condition shall be rectified.

Remarks:

Concrete walkways should be designed and installed so that rain and snowmelt does not accumulate on these surfaces.

Consideration should be given to the amount of frost in the ground when assessing this performance condition.

As part of the homeowner's responsibility for surface water management, water should not be directed beneath a walkway.

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2.20 A void exists under a driveway or walkway.

Acceptable Performance Condition:

Voids under concrete flatwork are acceptable.

Warranty Coverage:

This is not a defect.

Claim Response:

None.

Remarks:

Voids under driveways or walkways are common. Reinforced concrete has the ability to span voids to a certain degree. Voids become a concern when they result in the slab settling.

Homeowners are responsible for mitigation of damages due to water movement created by improper surface water management. Water movement, from downspouts, flowing along a house can find its way under a garage slab or walkway causing voids under the walkway or a driveway. Over time the size of the void can exceed the concrete's ability to span the void. Surface water must be directed away from the edge of the driveway or walkway.

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2.21 Driveway or walkway has subsided.

Acceptable Performance Condition:

Driveways or walkways shall not subside in excess of 2 inches (50 mm) over 10 feet (3 meters) measured from a specified plane. Consideration should be given to the original design grades.

Warranty Coverage:

1 year for defects in materials and labour.

Claim Response:

Concrete flatwork that exceeds the acceptable performance condition shall be rectified.

Remarks:

Minor movement of concrete flatwork is expected and acceptable.

Consideration should be given to the amount of frost in the ground when making a determination.

Delivery trucks and large vehicles can exert excessive forces on concrete driveways. Delivery vehicles should not be permitted on residential driveways.

Homeowners are responsible for mitigation of damages due to water movement created by improper surface water management. Water movement, from downspouts, flowing along a house can find its way under a driveway or walkway causing voids. Surface water must be directed away from the edge of the driveway or walkway.

Rectified areas may be a different colour; this is acceptable.

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2.22 An area with a readily apparent colour variation exists within a large area of concrete flatwork (such as a walkway or driveway).

Acceptable Performance Condition:

The composition, placement, finishing or curing of concrete flatwork should not result in readily apparent shaded or coloured patches within a larger area of concrete such as a walkway or driveway.

Warranty Coverage:

This is not a defect.

Claim Response:

None.

Remarks:

Staining caused by iron stone or coal inclusions in the aggregate used in the concrete may occur.

Discolouration may be caused by materials spilled on the concrete.

Sections or panels of concrete may exhibit dye lot or aggregate colour variations if poured at different times.

An area of discolouration does not usually impair the performance of the concrete.

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