OTTAWA CONCRETE PROS

Pouring, Curing & the Code

The 2024 Ontario Building Code's concrete rules, cold-weather pours, curing and when new concrete can be used

5 Expert Answers from Concrete Pro IQ

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Q1

How long does new concrete take to cure in Ottawa?

The 2024 Ontario Building Code requires that when the air temperature is below 5 °C, freshly placed concrete be kept at not less than 10 °C for 72 hours after placing. Beyond that protection window, the Code measures concrete strength at 28 days, which is a strength benchmark, not a declaration that curing is complete.

For practical guidance on when to use a new slab, the Ready Mixed Concrete Association of Ontario advises keeping vehicles off freshly placed concrete for at least 7 days, and waiting a minimum of 30 days before sealing to allow the surface to air dry. We found no published source for when foot traffic is safe; follow whatever instructions the contractor puts in writing.

A few things shape how the curing period goes on any given Ottawa job. The air temperature at the time of the pour matters: the Code's cold-weather rules kick in below 5 °C, and the Code requires that no frozen material or ice be used in the mix. The concrete mix itself matters: the Code sets a minimum compressive strength of 32 MPa for exterior flatwork and garage floors, and a maximum water-to-cementing-materials ratio of 0.45 for those same applications. The Code's appendix notes that adding water to concrete on site may reduce strength and increase the tendency to shrink and crack. How the surface is finished also matters: the National Research Council's Canadian Building Digest 116 notes that over-vibration and excessive trowelling affect entrained air adversely, and that air entrainment has a "remarkable effect" in improving frost resistance.

What to ask before the pour starts:

- What is the specified compressive strength and water-to-cementing-materials ratio for this mix?
- What cold-weather or rain protection is included, and how is it described in the contract?
- When can foot traffic begin, and when does the contractor recommend sealing?
- Are those timelines written into the specification?

The Consumer Protection Act, 2002 requires that a direct agreement over $50 be in writing, signed by both parties, and delivered to you, and gives you 10 days to cancel after receiving it. Getting the curing plan in the written contract means you have something to refer back to if the surface shows problems later.
Before hiring, ask the contractor to show you their City of Ottawa hardscaping contractor licence and then confirm the name against the City's published list of licensed contractors yourself.

Q2

Does the Code set a curing time for patios in Ontario?

Only for cold-weather work does Ontario's 2024 Building Code set a time: when the air temperature is below 5 °C, concrete must be kept at not less than 10 °C for 72 hours after placing. Outside of that cold-weather trigger, we found no curing time in the Code for a patio, walkway or any exterior flatwork.

The Code does specify that compressive strength is measured at 28 days, and its appendix note warns that adding water to concrete on site can reduce strength and increase the likelihood of shrinkage cracking. Those are the only time figures we found in the Code for exterior concrete. We found no statement in the Code on whether those provisions legally bind a patio built without a permit; 32 MPa is the Code standard for exterior flatwork.

For practical curing guidance, the Ready Mixed Concrete Association of Ontario, an industry association, recommends maintaining a satisfactory moisture content and temperature for a minimum of 7 days. That is industry guidance, not law. We found no published source for when foot traffic is safe; the contractor's written instructions govern that.

A few things worth putting in writing before the pour:

- the curing method and duration the contractor will follow
- what protection is planned if the air temperature drops below 5 °C during or after the pour
- what happens if rain falls on the fresh surface (we found no published rule; the protection plan belongs in the specification)
- the concrete strength specified (32 MPa for exterior flatwork is the Code standard)

If the patio project involves any digging for a base or footings, whoever digs is the excavator under the Ontario Underground Infrastructure Notification System Act, 2012, and a locate request must go through Ontario Dig Authority at least 5 business days before the ground is broken, so confirm with your contractor who will be submitting that request before work starts.

Q3

Does rain right after a pour hurt Ottawa concrete?

We found no Building Code clause or neutral source that says how rain affects a fresh pour, so the protection plan belongs in your contractor's written specification. What the 2024 Ontario Building Code does say is related: its appendix note to 9.3.1.7 says adding water to concrete on site may make it easier to place but can reduce strength and increase porosity and the propensity to shrinkage cracking, and the Code caps the water-to-cementing-materials ratio at 0.45 for exterior flatwork and garage floors.

The Ready Mixed Concrete Association of Ontario's driveway maintenance guidance (industry guidance, not law) describes curing as maintaining a satisfactory moisture content and temperature for a minimum of 7 days. When the air is below 5 °C, the Code requires the concrete to be kept at not less than 10 °C for 72 hours after placing, and the National Research Council's Canadian Building Digest 116 says freezing of concrete in the plastic state usually results in permanent damage, even with a single cycle.

A few things are worth confirming with the contractor before the pour:

- what protection the contractor will have on site if rain arrives during or soon after the pour
- what the plan is if the air temperature drops below 5 °C during or after the pour
- that no dry cement will be added to the surface to absorb surplus water, which the Code (section 9.16.4.1) prohibits for floors-on-ground
- that the concrete strength for exterior flatwork meets the Code's 32 MPa minimum at 28 days

The contractor doing the work is required to hold a City of Ottawa hardscaping contractor licence for concrete patios, walkways, steps and pads on private property. Ask to see a copy of the licence and confirm the contractor appears on the City's published list of licensed hardscaping contractors before work begins.

Q4

Pouring concrete on frozen ground in Ottawa: allowed?

Two clauses of Ontario's 2024 Building Code bear on this. Section 9.3.1.9 says no frozen material or ice shall be used in concrete, and that when the air temperature is below 5 °C, concrete must be kept at not less than 10 °C and not more than 25 °C while being mixed and placed, then maintained at not less than 10 °C for 72 hours after placing.

The Code's concern is the concrete itself, not just the air. The National Research Council's Canadian Building Digest 116 notes that freezing concrete in the plastic state usually results in permanent damage, even with a single freeze-thaw cycle. Frozen ground beneath a fresh pour is a separate problem: the 2024 Code, at section 9.12.1.3, requires that the bottom of excavations be kept from freezing throughout construction. We found no Code clause written for a patio slab placed on frozen ground, so ask your contractor and, for anything structural, the City's Building Code Services.

For a cold-weather pour the contractor has to meet those temperatures and the 72-hour period; the Code does not say how. Ask the contractor to describe in writing exactly how they will meet the 9.3.1.9 requirements for your pour date, including how the subgrade will be prepared and how the concrete will be protected afterward.

A few other points worth confirming before work starts:

- The concrete strength for exterior flatwork and garage floors is not less than 32 MPa at 28 days under section 9.3.1.6(1). Ask for this in the written specification.
- The maximum water-to-cementing-materials ratio for exterior flatwork and garage floors is 0.45 under section 9.3.1.7(1). The Code's appendix notes that adding water on site can reduce strength and increase the risk of shrinkage cracking.
- Since March 1, 2026 the City of Ottawa has required a hardscaping contractor licence for businesses installing concrete pads, patios, walkways, steps or retaining walls on private property. The City publishes a list of licensed contractors; ask to see the licence before signing.
- Whoever digs for footings or a base is an excavator under the Ontario Underground Infrastructure Notification System Act, 2012, and must submit a locate request before breaking ground.

Before committing to a winter pour date, ask the contractor to confirm in writing what temperature the subgrade will be at when the concrete is placed, and how they will verify it.

Q5

What is the strength rule for Ontario garage floors versus patios?

The 2024 Ontario Building Code sets a minimum compressive strength of 32 MPa at 28 days for garage floors, carport floors and all exterior flatwork. Interior floors other than garages and carports need only 20 MPa, and all other applications need 15 MPa. These figures come from section 9.3.1.6(1) of the Code.

The difference between a garage slab and a backyard patio is where the Code clearly applies. A garage floor is part of a building. For a free-standing backyard patio, 32 MPa is the Building Code standard for exterior flatwork; we found no statement on whether it binds a patio built without a permit. Steps that serve a house entrance and a garage slab are clearly within the Code's reach. For those, 32 MPa is the floor, not a suggestion.

The water-to-cementing-materials ratio matters alongside strength. Section 9.3.1.7(1) sets a maximum ratio of 0.45 for garage floors, carport floors and exterior flatwork, and 0.65 for interior floors other than garages and carports. The Code's appendix note to that section says adding water to concrete on site may make it easier to place, but can reduce strength and increase porosity and the tendency to shrink and crack. For a garage slab, ask your contractor to confirm the specified strength and the water-to-cementing-materials ratio in writing before the pour.

Air entrainment is a related point. Section 9.3.1.6(2) sets an air content of 5 to 8 per cent for site-batched concrete used in garage floors, carport floors and exterior flatwork. For ready-mix concrete, the Code references CSA A23.1 for air content requirements rather than quoting a percentage directly, so the figure for a ready-mix pour comes from that standard, not from 9.3.1.6(2).

A few things to confirm with any contractor quoting a garage slab or exterior concrete:

- the specified compressive strength (32 MPa for a garage floor or exterior flatwork)
- the maximum water-to-cementing-materials ratio (0.45 for those applications)
- whether the mix is ready-mix or site-batched, and how air entrainment is specified
- the base preparation, since section 9.16.2.1 requires not less than 100 mm of coarse clean granular material beneath floors-on-ground, though that article says it need not be installed under slabs in garages, carports or accessory buildings
- cold-weather protection if the pour happens when the air is below 5 °C, since section 9.3.1.9 requires concrete to be kept at not less than 10 °C for 72 hours after placing

If replacing a garage floor slab is part of the plan, we found no City statement on whether that work needs a building permit. Ask the City's Building Code Services before the old floor comes out, and if any digging is involved, submit a locate request through Ontario Dig Authority before breaking ground.

Disclaimer: This guide is provided for informational purposes only by Ottawa Concrete Pros. It does not constitute professional advice. Always consult qualified contractors and your local building authority (the City of Ottawa) before starting any concrete

project, and request utility locates before anyone digs. Concrete work in Ontario must meet the 2024 Ontario Building Code (O. Reg. 163/24) where it applies. Information is current as of November 15, 2026 and may change. Visit **ottawaconcretepros.ca** for the latest answers.