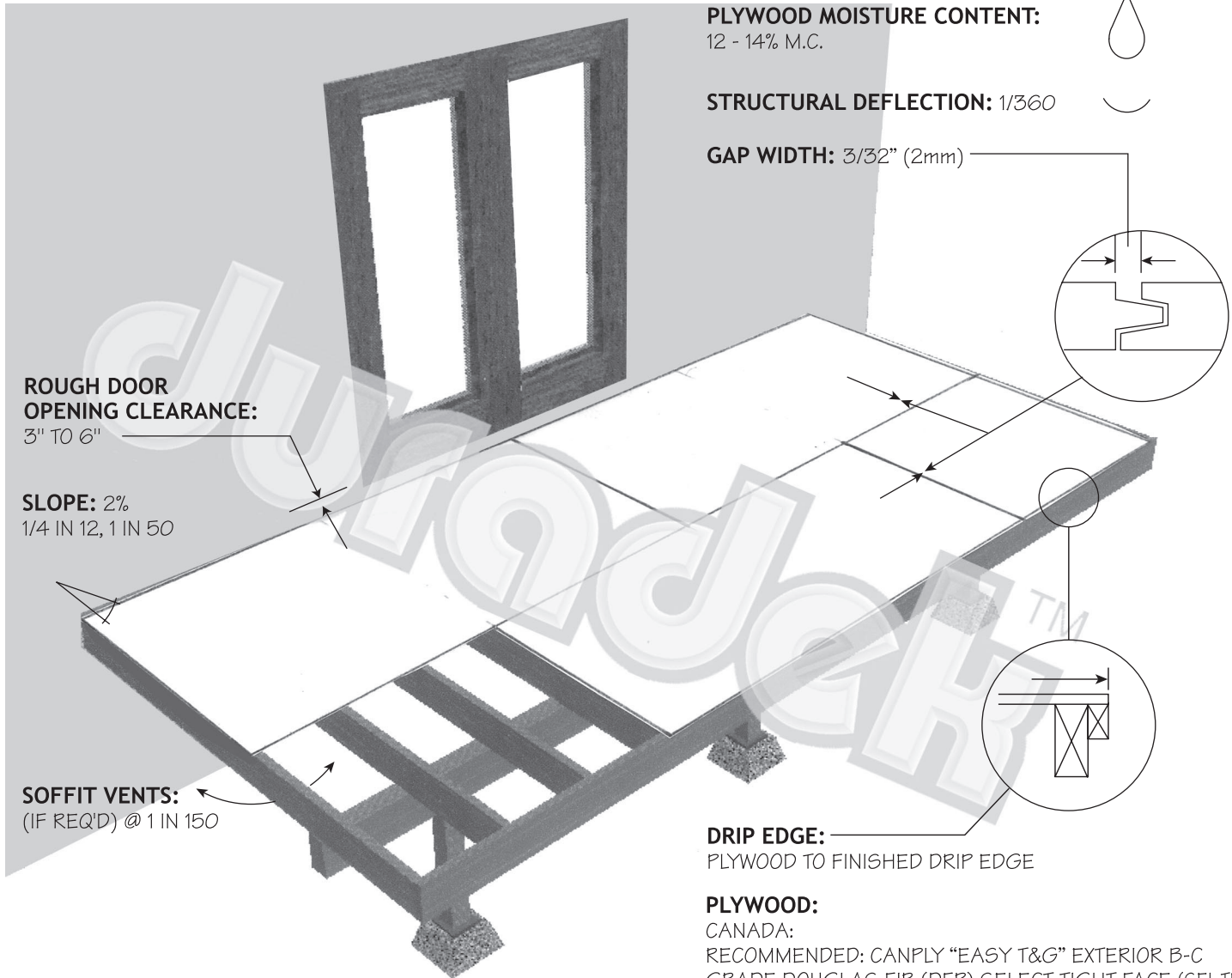


Plywood Deck Construction Recommendations

Revised November 2007



**ROUGH DOOR
OPENING CLEARANCE:**
3" TO 6"

SLOPE: 2%
1/4 IN 12, 1 IN 50

SOFFIT VENTS:
(IF REQ'D) @ 1 IN 150

PLYWOOD MOISTURE CONTENT:
12 - 14% M.C.

STRUCTURAL DEFLECTION: 1/360

GAP WIDTH: 3/32" (2mm)

DRIP EDGE:
PLYWOOD TO FINISHED DRIP EDGE

FASTENERS:

RECOMMENDED: 2" #10 STAINLESS STEEL OR COATED EXTERIOR WOOD DECK SCREWS.
ACCEPTABLE: 2 1/2" HOT DIPPED GALVANIZED SPIRAL OR RING THREAD NAILS.
6" O.C. @ PERIMETER
8" O.C. ALONG INTERMEDIATE SUPPORTS

SURFACE PREPARATION:

SPOT FILL ALL KNOTHOLES, DEPRESSIONS, DAMAGED AREAS & FASTENER HEADS.
DO NOT FILL PLYWOOD GAPS 1/16" OR LESS.
IF PLYWOOD MOISTURE CONTENT IS 12% OR HIGHER: DO NOT FILL GAPS 1/16" OR LESS. DOUBLE FILL GAPS 3/32" OR MORE.
IF PLYWOOD MC IS LESS THAN 12%: DO NOT FILL ANY GAPS. NOTE MEMBRANE COULD SETTLE INTO GAPS LARGER THAN 3/32" WHICH COULD SHOW UNDER SOME LIGHTING CONDITIONS.

PLYWOOD:

CANADA:
RECOMMENDED: CANPLY "EASY T&G" EXTERIOR B-C GRADE DOUGLAS FIR (DFP) SELECT TIGHT FACE (SEL TF).
ACCEPTABLE: SPRUCE-PINE-FIR (SPF), SELECT (SEL)
USA:
RECOMMENDED: APA T&G "STURD-I-FLOOR" EXTERIOR APA B-C GRADE DOUGLAS FIR (DFP) GROUP 1.
ACCEPTABLE: DOUGLAS FIR (DFP) GROUP II, SPRUCE-PINE-FIR (SPF) GROUP II.

THICKNESS:

RECOMMENDED: 3/4" WITH JOISTS @ 16" O.C.
ACCEPTABLE: 3/4" WITH JOISTS TO 24" O.C. OR 5/8" WITH JOISTS TO 20" O.C.

PLYWOOD PATCHES:

WOOD PATCHES ONLY, SYNTHETIC PATCHES MUST BE REMOVED & FILLED OR SEALED

FOR MORE INFORMATION REFER TO REVERSE SIDE

PLYWOOD DECK CONSTRUCTION RECOMMENDATIONS

General Note: Duradek does not supply framing & sheathing products. Always refer to manufacturer's written instructions & the requirements of authority having jurisdiction before building or altering a deck.

Delivery/storage/handling: Avoid damaging plywood panels especially edge surfaces when handling. Store panels in a sheltered place, stacked, separated & with no direct contact with the ground.

Moisture Content: Ideal moisture content of plywood is 12-14% @ 70% relative humidity / 20 deg. c. To achieve desired MC for new plywood, store panels for 7 days or a minimum of 48 hours as noted above.

Deck Design & Construction

Framing Lumber: Install Kiln-dried lumber with crown sides up.

Deflection: Roof decks must have a maximum allowable deflection of 1/360 (as an expressed ratio of the clear span).

Joist Spacing: 16" o.c. Recommended

Slope: Maximum slope of 1/4" in 12, 2%, or 1 in 50 is recommended. A minimum slope of 1/8 in 12, 1% or 1 in 100 can be used if; the deck is not over living area, the structural deck is existing & all shrinkage, deflection etc., has occurred.

Door Openings: Sill of rough door openings to be 3" to 6" above elevation of finished deck.

Venting: If underside of deck has a closed soffit or ceiling, venting is required to reduce moisture build up. Vent at a ratio of 1 in 150 of ceiling area. Try to vent both ends of joist runs or use purlins above to allow for cross ventilation.

Drains: If required, place drain(s) at points of maximum deflection, not over columns, beams etc..

Plywood requirements

Canada:

Trademark: CANPLY: Indicates manufacturer is member of the Canadian Plywood Association.

Profile: Easy T&G

Grade: B-C Grade. Recommended: Select Tight Face (SEL TF). Acceptable: Select (SEL).

Exposure durability: Exterior

Species: Recommended: Douglas Fir (DFP). Acceptable: Spruce-Pine-Fir (SPF).

Standard: CSA standard which govern manufacture: CSA O121-M1978 Douglas Fir Plywood (DFP) & CSA O151-M1978 Canadian Softwood Plywood (CSP), (SPF) would be classed in this category.

United States:

Trademark: APA: Indicates Manufacturer is member of The Engineered Wood Association.

Profile: T&G Sturd-I-Floor

Grade: APA B – C

Exposure Durability: Exterior

Species - Group: Recommended: Douglas Fir (DFP) Group 1. Acceptable: Douglas Fir (DFP) Group II or Spruce-Pine-Fir (SPF) Group II.

Standard: Voluntary Product Standard PS 1-95 for Construction & Industrial Plywood.

Thickness

Recommended: 3/4" (18.5mm) with joist spacing of 16" (400 mm). Acceptable 5/8" (15.5mm) for joist spacing to 20" (500mm) & 3/4" (18.5mm) plywood for joist spacing to 24" (600mm) oc.

Underlayments not recommended: Poplar plywood, Orientated Strand Board (OSB), Particle Board, Treated plywood (ie: fire treated, pressure treated or panels with field and/or edge sealants) either factory or field applied.

Regardless of the type of substrate panel or other products used under Duradek membranes, the responsibility for warranties and/or performance guarantees for these products rest solely with their manufacturer and/or supplier and not with Duradek. They are responsible for assuring the compatibility of their product when used with Duradek vinyl membranes.

Underlayment Requirements for Two Layer Subfloor System

Two-layer subfloor system is only recommended when covering an existing panel that is not a suitable substrate or when creating a Class "A" rated roof assembly. Do not apply new top layer panel over an existing waterproofed/sealed base layer panel. Waterproofing membrane/sealer to be removed or base layer to be replaced with recommended plywood as noted above.

Recommended: Top Plywood layer as noted above for single layer sub floor system.

For Fire Rated Class "A" assembly use 5/16" cement board as outlined in Duradek ICC Legacy Report # ER-5128.

Plywood installation

Placement: Plywood panels to be installed with the surface grain at right angles to the joists. Install first row of plywood at building side with the "tongue" facing the building. Remove the tongue for tight fit. End joints shall be supported over 2" wood joists. At unsupported joints install 2" x 4" blocking securely nailed between framing members. Nail or screw plywood in place. Tap second row of panels into place by using a block to protect edges. Stagger end joints in each succeeding row. Center panels over load bearing beams, walls etc to reduce ridding. Panels to span 3 joists min. At outside drip edge extend plywood to finished line of deck including trims, fascia boards, etc.

Gap: 3/32" (2mm) @ side & end joints of panels.

Fasteners: Recommend 2" #10 exterior wood deck screw either stainless steel or coated with non-staining finish. 2 1/2" hot dipped galvanized ring thread or spiral nails acceptable for 5/8" & 3/4" panels.

Fastener Spacing: Space fasteners 6" (150mm) o.c. along edges & 8" (200mm) o.c. along intermediate supports. Drive nails on slight angle. Slightly recess all heads.

Two Layer Subfloor System: Base layer to be installed as per single layer subfloor instructions as noted above. Top layer to be installed parallel to base layer but offset 1/2 panel in both directions. Fasteners, types as noted above, to be of sufficient length to penetrate deck framing at least 1".

Note: Top layer of two layer subfloor to be 5/8" (min) plywood as specified above. Half inch (1/2") plywood is not available with T&G profile, which means fastening at side of 1/2" top panel would be predominately into the base layer not into deck framing. Panel deflection & fastener back out could occur due to panel to panel fastening.

Surface preparation: Spot fill all knotholes, depressions, damaged areas and at flashing trims with either gypsum or concrete based fast setting floor patch. Add acrylic bonding agent for better performance. If plywood moisture content is 12% or higher: do not fill gaps 1/16" or less. Double fill gaps 3/32" or more. If plywood mc is less than 12%: do not fill any gaps. Note membrane could settle into gaps larger than 3/32" which could show under some lighting conditions.

Patches/sealers: Only wood patches are acceptable. Synthetic patches must be removed & filled with floor patch or painted with 2 coats of Duradek Deck Seal. Pitch pockets & Pitch streaks must also be sealed with 2 coats of Duradek Deck Seal.

Inspection: Use a whiskbroom or powered blower to clean off all debris. Do a final inspection to ensure the deck is suitable for the application of the Duradek membrane. The deck is accepted as being suitable once the membrane installation commences.

Protection: Installed Spruce-Pine-Fir (SPF) panels should be waterproofed immediately as they are more prone to face checking when left exposed to the elements. Protect plywood from rain & snow after installation to prevent moisture pickup. Do not place tarps directly on wood. Use sleepers under tarps to allow for air movement.

Panel Adhesive: Do not apply panel adhesive at plywood joints or between panels in two-layer subfloor system.