Scaffold Depot
MANUFACTURER DIRECT

PROCEDURE FOR FIELD PROOF TESTING OF H42 SCAFFOLD PLANK

This is a field guide on how to test H42 Scaffold Planks using a simple, nondestructive method.

1. Ensure that the plank is free from built-up dirt and debris.
2. Center the plank on a scaffold frame, or similar structure, which has been set up on a level surface. The plank should overhang both sides of the frame roughly 12" to prevent the plank from slipping off the frame during the test.
3. Identify a stationary point of reference (separate from the frame) from which to measure the location of the plank before and after loading. This could be the ground directly below the plank where measurements could be made with a tape measure, or a vertical pole with a measuring tape attached to it that stands up next to the plank.
4. Pre-load the plank with approximately 20 pounds to settle the plank on the frame. Place the load at mid-span and let the plank come to rest. Measure and record the deflection of the plank at mid-span under the pre-load.
5. Leave the pre-load in place and add the test load as given in Table 2. Place the load slowly on the plank at mid-span and let the plank come to rest. Measure and record the deflection of the plank at mid-span under the test load plus the pre-load. Be sure the load above is secure when taking measurements. Do not place your head or body parts beneath the plank during testing.
6. The difference between the first and second measurements (steps 4 and 5) is the deflection of the plank under the test load. Using the moisture content range of the plank from Table 1, if the measured deflection for that range is more than the amount shown in Table 2, **remove the plank from service**.
7. Examine the bottom the plank for face breaks while the plank is loaded. If face breaks can be seen, **remove the plank from service**.
8. If cracking noises can be heard during the test, **remove the plank from service**.
9. Turn the plank over and repeat this procedure.

Table 1 provides guidance for determining the approximate moisture content of the scaffold plank based on the average oven-dry density, adjusted for the stated range of moisture. A hand held moisture meter provides an alternative method of determining the approximate moisture content of the plank. Always follow the manufacturer's usage recommendations and applicable species corrections for Douglas fir (0.50 specific gravity). Measurements should be taken in a few different locations.

Needle probe (resistance type) meters generally do not require correction beyond the species correction. For pinless meters, the Douglas fir reading may have to be multiplied by an additional adjustment factor in the range of 0.57 to compensate for the glue lines. Refer to the

moisture meter manufacturer for additional information as this factor is likely to vary depending on the make and model of the meter. The moisture meter manufacturer may also provide other adjustment factors for temperature (including measurements taken below freezing).

If the meter reading suggests a moisture content above 12%, compare measured deflections to the appropriate column of Table 2 or set the plank aside to dry and retest it.

TABLE 1 – Approximate Weight of H42 Scaffold Plank (plf)

Plank Size	MC ≤ 12 %	12% < MC ≤ 16 %	MC > 16%
1-5/8" x 9-1/2"	Wt. ≤ 4.0 lbs/ft	4.0 lbs/ft < Wt. ≤ 4.2 lbs/ft	Wt. > 4.2 lbs/ft
1-5/8" x 11-3/4"	Wt. ≤ 5.0 lbs/ft	5.0 lbs/ft < Wt. ≤ 5.2 lbs/ft	Wt. > 5.2 lbs/ft

H42 Scaffold Plank has an oven-dry weight of approximately 33.5 pcf.

$$\text{Approx. Plank MC \%} = \left(\frac{\text{Plank Wt. (lbs)}}{\text{length (ft) x thickness (in) x width (in)}} \times \frac{144}{33.5} - 1 \right) \times 100\%$$

TABLE 2 – H42 Scaffold Plank Test Loads

Plank Size	Test Span (ft)	Test Load (lb)	Maximum Deflection (in)		
			MC ≤ 12 %	12% < MC ≤ 16 %	MC > 16%
1-5/8" x 9-1/2"	6	500	11/16	3/4	13/16
	8	375	1-1/4	1-5/16	1-1/2
	10	300	2	2-1/16	2-5/16
	14	250	2-7/8	3	3-3/8
1-5/8" x 11-3/4"	6	625	11/16	3/4	13/16
	8	475	1-5/16	1-3/8	1-9/16
	10	375	2-1/16	2-1/8	2-3/8
	14	325	3	3-1/8	3-1/2

1. Test loads approximate the full design bending stress for dry, untreated planks.
2. Deflection is directly proportional to the Test Load. If the load used is 20% lower than the Test Load shown above, the tabulated maximum deflection should be decreased by 20%.

Refer to the H42 Scaffold Plank Users Guide for additional information on visual inspection and evaluation as well as proper storage and handling recommendations.