



TIMBER PRODUCTS
We Deliver Confidence. ®

To: Building Code Officials and Users of Lumber Produced Under PS-20

From: David H Conner, Timber Products Inspection, Inc. (TP)

Date: November 24, 2020

Subject: Lumber Grademarked with Multiple Species/Regions

The Voluntary Product Standard PS 20 requires lumber grademarks to include an identification or designation of the commercial name of the species from which the lumber was produced.

The American Lumber Standard Committee (ALSC) Board of Review's (BOR) Lumber Enforcement Regulations specify that grademarking of lumber shall be permitted only when the species can be positively identified. When the species cannot be positively identified, grademarking is allowed but only if the grademark includes the lowest stress rated species (or species group). This means that if a mill does not separate production runs by species/region then they must incorporate all of the possible species/regions on their grademarks from which their logs and/or rough lumber comes in order to satisfy this requirement of identifying the lowest stress rated species. This allows the mill to produce lumber from multiple species/regions all stamped with the same grademarks and still be in compliance.

In the US, it is common for sawmills to only list one species (or one species group) on their grademarks, while in Europe it is common for sawmills to list multiple species/regions on their grademarks. The European mills often list multiple species/regions because ALSC's species approvals in Europe (and therefore the associated reference design values) are location specific and often do not include species groupings. These species approvals related to location are typically specific to country but are sometimes specific to region or even to state.

It is not common, but it is not unheard of for a US mill to mix multiple species on their grademarks. As an example, TP has issued grademarks that listed SYP, DFIR, and SPF(S) on the same grademark because the mill's daily process involved remanufacturing a stream of mixed lumber that they were receiving from different suppliers who supplied all of those separate species as originally marked.

So, this begs the question - how does the end user know what reference design values (RDV) to use for lumber that is stamped with multiple species? The answer: each of the individual RDV components (I.E. - Fb, Ft, Fv, Fc-perp, Fc-par, MOE, and G) must be compared on its own merit for each of the species/regions listed on the stamp; the lowest value found is the applicable value to be used for each individual RDV component. This means that you may find a scenario where the lowest Fb value to be used is from one of the species/regions listed, while the lowest Fc-perp value to be used is from a different species/region listed.

The RDVs for the individual species/regions are found in the American Wood Council’s National Design Specification (NDS) Supplement - Design Values for Wood Construction in Tables 4A-4F, with specific reference to table 4F containing the RDVs for the approved species/regions for non-North American visually graded dimension lumber.

As an example, a common European gradestamp might identify the species as NSPR/SCOTP(I)SW. This means that the stamped lumber could either be Norway Spruce or Scots Pine, both from Sweden. The RDVs for these two species are listed in the table below with the lower of the two values for each design attribute highlighted in green.

| | Fb | Ft | Fc-par | Fc-perp | Fv | MOE | G |
|----------------------------|-----|-----|--------|---------|-----|-----|------|
| 2" & wider #2 NSPR (I) SW | 675 | 300 | 925 | 285 | 170 | 1.2 | 0.42 |
| 2" & wider #2 SCOTP (I) SW | 575 | 250 | 825 | 410 | 120 | 1.2 | 0.47 |

(as published in Table 4F of AWC’s 2018 NDS Supplement)

In this specific comparison, the Scots Pine governs for some of the RDV properties, while the Norway Spruce governs for others. It is important for the reader to understand that any of the singular RDV properties, or a combination of them, can control various design checks for an engineered component or structural assembly.

If you have any questions about this, please let me know - DC

David H Conner
 SVP-Operations
 100 Kedron Dr, Peachtree City, GA 30269