

TECHNICAL NOTES

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

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No. B-15

AVERAGE WEIGHTS OF VARIOUS SPECIES OF WOOD

In making the weight determinations given in the following table, the U. S. Forest Products Laboratory used small, clear specimens secured from the top 4 feet of the 16-foot butt logs of typical trees. Wood thus selected probably averages a trifle heavier than the wood in ordinary ties, structural timbers, poles, and posts. Such large pieces usually include the pith, or are taken from top logs where relatively light weight material is frequently encountered.

AVERAGE WEIGHTS OF VARIOUS SPECIES OF WOOD

Species and Locality	Weights			Species and Locality	Weights			
	Kiln-dry : Air-dry : Green				Kiln-dry : Air-dry : Green			
	(1)	(2)	(3)		(1)	(2)	(3)	
Pounds per cubic foot				Pounds per cubic foot				
HARDWOODS				HARDWOODS (Cont.)				
Alder, red	Snobomish Co., Wash.	27	28	46	Oak, tan bark	45	46	46
Asb. Biltmore	Overton Co., Tenn.	38	39	45	Oak, water	45	46	59
" black	Ontonagon Co., Mich.	34	36	53	" white	46	47	61
" blue	Marathon Co., Wis.	34	35	52	" "	46	48	57
" "	Bourbon Co., Ky.	39	41	46	" "	46	47	62
" green	Richland Parish, La.	38	39	47	" "	46	47	62
" "	New Madrid Co., Mo.	40	42	49	" willow	48	48	58
" Oregon	Lane Co., Oregon	37	37	46	" yellow	40	42	48
" pumpkin	New Madrid Co., Mo.	36	37	46	Orange orange	54	56	63
" white	Stone Co., Ark.	41	42	47	" "	48	47	61
" "	Umatilla Co., W. T.	44	48	51	Peanut (hickory)	51	58	68
" "	Sequoia Co., W. Va.	37	38	46	Persimmon	40	39	45
Aspen	Punk Co., Wis.	38	39	47	Rhododendron, erect	37	38	44
" lacinate tooth	Sank Co., Wis.	35	37	45	Sassafras	51	52	64
Beeswood	Potter Co., Pa.	25	27	41	Servicioberry	38	34	42
" "	Marathon Co., Wis.	24	25	41	" "	31	32	44
" "	Hendricks Co., Ind.	43	45	56	" "	39	40	52
Beech	Potter Co., Pa.	41	43	54	Pennsot Co., Mo.	36	36	45
" "	Rust Co., Wis.	37	39	51	Sank Co., Wis.	52	54	61
Birch, paper	Potter Co., Pa.	35	47	59	Hendricks Co., Ind.	54	55	61
" sweet	" "	43	45	56	Savior Co., Tenn.	55	56	65
" yellow	Marathon Co., Wis.	43	44	55	" "	57	57	65
Blackberry, yellow	Savior Co., Tenn.	24	26	49	St. John the Baptist Parish, La.	30	31	47
Blackberry, massive	Lane Co., Oregon	35	35	50	Savior Co., Tenn.	37	39	50
Butternut	Sank Co., Wis.	25	26	45	" "	20	21	31
" "	Savior Co., Tenn.	27	28	47	" "	25	25	31
" "	Potter Co., Pa.	34	36	45	" "	25	27	47
" "	Savior Co., Tenn.	27	28	39	Pennsot Co., Mo.	35	36	47
" "	Baltimore Co., Md.	29	30	53	Savior Co., Tenn.	45	46	59
Chestnut	Savior Co., Tenn.	29	30	56				
Chinquapin, western	Lane Co., Oregon	31	32	51	CONIFERS			
Cottonwood	Pennsot Co., Mo.	28	29	49	Lane Co., Oregon	25	24	49
" black	Snobomish Co., Wash.	25	24	45	Weed, Cal.	30	31	39
Cupress, tree	Savior Co., Tenn.	33	34	60	Douglas Co., Oregon	21	22	24
Dogwood (flowering)	" "	52	54	65	Missoula Co., Mont.	21	22	24
" "	Lane Co., Oregon	45	47	55	Snobomish Co., Wash.	21	21	28
" western	Douglas Co., Oregon	36	37	65	Shawano Co., Wis.	29	29	47
Elm, pale	Marathon Co., Wis.	43	44	58	Pennsot Co., Mo.	35	34	51
Elm, soft	Sank Co., Wis.	43	45	54	St. John the Baptist Parish, La.	28	29	38
" slippery	Hendricks Co., Ind.	42	43	53	Lane Co., Oregon	28	29	38
" "	Sank Co., Wis.	36	37	56	Flume Co., Cal.	30	31	40
" white	Potter Co., Pa.	33	35	53	Humboldt Co., Cal.	31	32	40
Greenheart	Marathon Co., Wis.	60	62	72	Johnson Co., Wyo.	31	32	34
Gum, black	Savior Co., Tenn.	35	36	45	Lane Co., Oregon	35	36	39
" blue	Alameda Co., Cal.	52	54	70	Chehalis Co., Wash.	31	32	36
" red	New Madrid Co., Mo.	35	36	46	Lewis Co., Wash.	38	37	47
" "	Pennsot Co., Mo.	36	37	47	Washington and Oregon	28	29	37
Hackberry	Hendricks Co., Ind.	35	36	47	Missoula Co., Mont.	28	29	37
" "	Sank Co., Wis.	35	36	51	Dee, Oregon	28	29	37
" "	" "	47	49	63	Snobomish Co., Wash.	26	27	36
Haw, pear	" "	47	49	62	Grand Co., Colo.	22	23	28
Hickory, big shellbark	Sardis, Miss.	47	49	62	" balsam	24	25	45
" bittersweet	Napoleon, Ohio	55	57	65	" grand	28	29	37
" mockernut	" "	47	49	62	Douglas Co., Oregon	26	27	32
" "	Sardis, Miss.	47	49	62	" noble	27	28	31
" "	Chester Co., Pa.	55	55	65	" white	26	26	36
" "	Webster Co., W. Va.	42	43	62	Hemlock	24	25	49
" "	Sardis, Miss.	42	43	61	" black	30	32	48
" "	Napoleon, Ohio	48	50	62	" western	28	29	41
" "	" "	51	52	64	Gray's Harbor & Buckley, Wash.	30	31	40
" "	Chester Co., Pa.	52	54	65	Missoula Co., Mont.	27	28	34
" "	Webster Co., W. Va.	42	43	62	Stevens Co., Wash.	33	34	41
" "	Sardis, Miss.	47	49	62	Hassan Co., Fla.	45	45	58
" "	Napoleon, Ohio	51	52	64	" "	29	30	36
" "	Chester Co., Pa.	55	55	65	Barron Co., Wis.	27	28	34
" "	Webster Co., W. Va.	42	43	62	Flume Co., Cal.	27	28	34
" "	Sardis, Miss.	47	49	62	Hassan Co., Fla.	27	28	34
" water	Rusk Co., Wis.	55	56	60	Grand Co., Colo.	27	28	34
Belly, American	Douglas Co., Oregon	38	39	54	Gallatin Co., Mont.	27	28	34
Borohom	" "	47	49	62	" "	29	30	41
Laurel, California	Savior Co., Tenn.	47	49	62	Granite Co., Mont.	29	30	41
" "	Hendricks Co., Ind.	48	49	58	Jefferson Co., Mont.	27	28	37
Locust, black	Hendricks Co., Ind.	48	49	58	Johnson Co., Wyo.	27	28	37
" honey	Pennsot Co., Mo.	44	45	60	Hassan Co., Fla.	43	44	51
" "	Batte Co., Cal.	42	43	56	Rogulosa, La.	41	42	54
Madrone	" "	42	43	56	" "	29	30	36
" "	Douglas Co., Oregon	45	46	59	" "	48	48	48
" "	Snobomish Co., Wash.	32	34	47	" "	39	41	54
" red	Marathon Co., Wis.	37	38	54	" "	38	40	48
" silver	Potter Co., Pa.	34	35	46	" "	35	36	54
" "	Sank Co., Wis.	38	39	46	" "	38	40	49
" sugar	Hendricks Co., Ind.	41	43	54	" Norway	32	34	43
" "	Potter Co., Pa.	42	44	56	" shortleaf	35	36	45
" "	Marathon Co., Wis.	42	44	56	Rogulosa, La.	35	36	45
Magnolia (evergreen)	Winn Parish, La.	34	35	52	Madara Co., Cal.	24	27	30
Oak, bay	Sank Co., Wis.	43	45	61	Savior Co., Tenn.	26	27	34
" "	Batte Co., Cal.	37	38	64	" "	29	30	39
" "	Douglas Co., Oregon	39	40	68	Missoula Co., Mont.	25	26	44
" canyon live	Batte Co., Cal.	34	35	71	Cocconino Co., Arizona	28	29	38
" chestnut	Savior Co., Tenn.	45	46	62	Madara Co., Cal.	28	29	49
" cow	Winn Parish, La.	48	50	65	Douglas Co., Colo.	28	29	38
" "	" "	45	47	58	Stevens Co., Wash.	27	28	34
" laurel	Douglas Co., Oregon	45	46	59	Missoula Co., Mont.	27	28	34
" Pacific post	Stone Co., Ark.	45	47	60	Shawano Co., Wis.	25	26	37
" port	Winn Parish, La.	47	49	60	Humboldt Co., Cal.	25	26	37
" red	Stone Co., Ark.	45	46	56	Hondosine Co., Cal.	22	23	48
" "	Hendricks Co., Ind.	42	44	64	" "	24	25	48
" "	Richland Parish, La.	49	50	67	" "	24	25	30
" "	Savior Co., Tenn.	47	48	61	Grand Co., Colo.	24	25	30
" "	Winn Parish, La.	47	49	62	Ocos Co., W. R.	27	28	38
" Spanish (lowland)	" "	40	42	58	Savior Co., Tenn.	25	26	35
" (highland)	" "	40	42	58	Chehalis Co., Wash.	25	26	35
" swamp white	Hendricks Co., Ind.	50	52	69	Ocos Co., W. R.	29	30	38
" "	" "	45	46	58	Shawano Co., Wis.	27	28	37
" "	" "	45	46	58	Snobomish Co., Wash.	45	46	54

Notes:--(1) About 8 per cent moisture.
 (2) About 15 or 18 per cent moisture - Average condition reached without artificial heating by material sheltered from precipitation - North Central States.
 (3) Average green material.

Any individual lot of lumber in the condition specified in the column headings would probably vary 5 per cent from the figures given with a possible variation of as much as 20 per cent. For example, young, thrifty pines will have a high moisture content when freshly out and will probably weigh 20 per cent above the average given.