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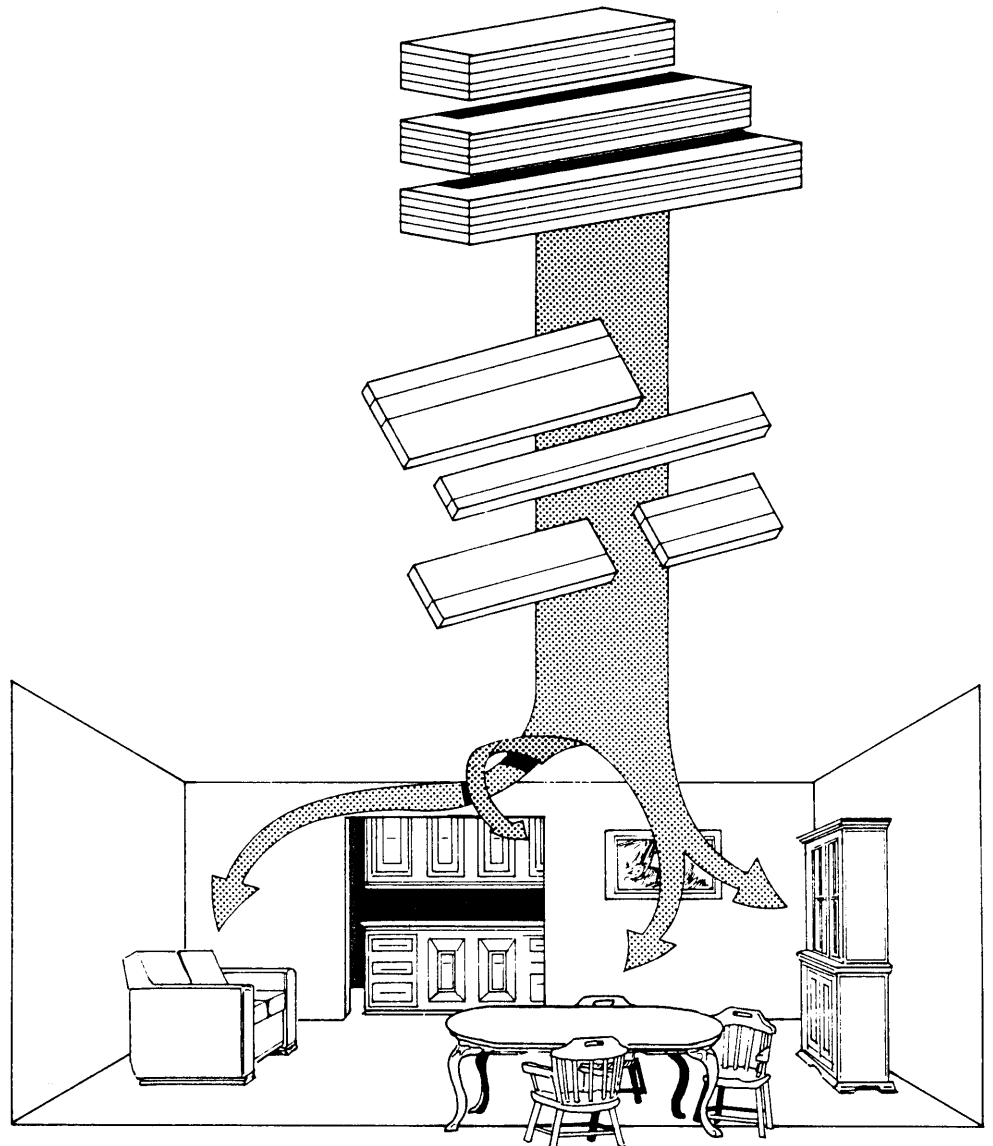
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Meeting the Solid Wood Needs of the Furniture and Cabinet Industries: Standard-size Hardwood Blanks

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Abstract

Standard-size, kiln-dried hardwood blanks (panels) of specified lengths, widths, thicknesses, and qualities can be used instead of lumber to produce rough dimension furniture parts. Standard sizes were determined by analyzing thousands of part requirements from 20 furniture and 12 kitchen cabinet companies. The International Woodworking Machinery and Furniture Supply Fair-USA collected the data and supported the analysis. Recommended blank sizes and examples of rough dimension parts for furniture and cabinets made from blanks are included.

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Introduction

The actual needs for parts by the furniture and kitchen cabinet industries have never been completely known. The multiplicity of products within and among firms has made strict definition impossible. Each firm believes it is unique, but different pieces of similar furniture have about the same sizes and shapes. Knowing the qualities and quantities, sizes and shapes, of the parts used to make these similar pieces would allow more efficient use of wood resources.

To determine the overall needs of the industry, we worked with data compiled from a sample of major furniture and kitchen cabinet companies by the International Woodworking Machinery and Furniture Supply Fair-USA (The Louisville Fair). Twenty furniture makers and 12 kitchen cabinet makers provided data for the analysis. Parts information was collected for (1) solid furniture, (2) veneered furniture, (3) upholstered furniture, (4) recliners, and (5) kitchen cabinets.

Thousands of individual part sizes were analyzed and grouped by length, width, thickness, and quality. We used this information to develop a new "standard blank" concept. Kiln-dried blanks of standard sizes can be manufactured from low-grade lumber and small-diameter low-grade logs. These standard blanks can then be processed into the individual parts desired by any manufacturer with only small end-trim losses. There may be other uses for the data, but simple knowledge of what is needed will make processing more efficient all the way back to the tree.

Determining Product Part Requirements

Parts requirements survey

For data collection, we divided our cooperators along major product lines: (1) furniture or case goods (solid and veneered); (2) upholstered furniture and recliners; and (3)

kitchen cabinets. Because of the large number of different items in a furniture style grouping (beds, dressers, tables, chairs, etc. made with the same primary species and one basic style) and the large number of different styles made by a single company, data were collected only on those styles that were in greatest demand. The furniture companies provided specific information on rough parts requirements for the most frequently produced pieces of bedroom, dining room, and living room furniture. Along with length and width data, the manufacturers provided information on lumber thickness, parts grade or quality, and number of rough pieces per article. On the average, 37 pieces of furniture were reported on per group (or suite) by 13 companies. Data were collected on 25 groups of furniture.

In similar fashion, five manufacturers of upholstered furniture supplied data on an average of 22 different pieces each. Three manufacturers of recliners provided information on about 20 recliner frames each.

The 12 kitchen cabinet makers were able to provide almost total information on their lines. Information included the rough size and quality for each part as well as the part type (such as parts for doors, drawers, or frames).

Method of analysis

Because the sizes of the different segments of the furniture industry are not precisely known, data were separated by product type: solid wood furniture, veneered furniture, upholstered furniture, recliners, and kitchen cabinets. Within product type classifications, parts were separated according to their quality and dimensions (length, width, and thickness).

The names given grades of parts sometimes differ among different product types. We used the grade definitions developed by the Hardwood Dimension Manu-

facturer's Association (1961) with one exception: CI F and C2F (clear one face and clear two faces) were combined into a single clear grade. The breakdown between CI F and C2F can be made available upon request.

The sound frame grade of the upholstered furniture and recliner manufacturers is the same as the sound interior grade of the case goods and cabinet makers. For convenience, we have included both terms.

The grades and their definitions are as follows:

C/ear-CI F and C2F.

CI F (clear one face) —This material shall be clear on one face, both edges, and both ends, and shall otherwise comply with the clear-two-faces quality, except that the reverse face may contain defects of sound quality.

C2F (clear two faces) —This material shall be clear on both faces, the edges, and the ends, except that sapwood, slight streaks, and small burls or swirls and light stain shall be permitted.

Core —This material shall be sound on both faces admitting tight sound knots, small worm holes, slight surface checks, or their equivalent.

Sound interior — This material may contain any defects that will not materially impair the strength of the individual piece for the use intended.

Sound frame — Same as sound interior.

A major question was how to sort the data into meaningful length and width groups that reflected the actual needs of the industry. Computer analysis showed that there was a greater demand for certain nominal lengths than for others. Grouping by arbitrary equal-length increments would not reflect this demand. Further, a great percentage of the needed parts were less than 36 inches long.

Consequently, we decided to let the needs of the industries dictate the length groupings thus: if from within a length classification, say 33.01 to 38 inches long, we were to manufacture all the needed lengths from stock that was 38 inches long, there would be a certain amount of end-trim loss. The length categories in this report reflect an average end-trim loss of no more than 10 percent. That is, all parts for each thickness and quality classification could be made from stock of the maximum length in each length grouping with no more than an average 10 percent end-trim loss. To this 10 percent rule we added the constraint that length groups had to be at least 2 inches apart. And we hoped each group would contain around 10 percent of the part needs.

Two comments need to be made about the actual length groupings shown in the results section. First, the upper limit of a length group such as 22.01 to 26 inches (Table 2) is generally selected because most of the pieces are near 26 inches in length. Second, within a product type classification, the length groupings vary from one thickness and quality to another. But regardless of product type, all parts of the same thickness and quality have the same length groupings. We did this to facilitate application of this information; it will be discussed more thoroughly in the section dealing with standard-size blanks.

Results by product type

The rough dimension part requirements for solid, veneered, and upholstered furniture, recliners, and kitchen cabinets are listed in Tables 1 through 36. Tables 1 (solid furniture), 8 (veneered furniture), 17 (upholstered furniture), 25 (recliners), and 32 (kitchen cabinets) summarize the tables that follow. Each shows the distribution of total parts requirements by nominal thickness and part quality, expressed as a percentage of the total surface area. For example,

about 80 percent of the area of parts in solid wood furniture (Table 1) are in thicknesses of 5/4 or thinner, and at least 80 percent of it is in the clear grades.

The veneered wood furniture summary (Table 8) shows a greater variability in part quality than that for solid wood furniture (Table 1). Core grade makes up almost 30 percent of the total; sound grade another 10 percent. Most of the remaining 60 percent is in the clear grades. Clear grades comprise at least 80 percent of the needs in the solid wood product, and at least 57 percent of the veneer wood furniture requirements. The clear grade percentage for veneer wood furniture should increase as more and more composite panels are used for cores.

For upholstered furniture (Table 17), most (87 percent) of the parts requirements are in the sound frame quality category. This is not surprising, as these frame parts will be covered with fabric and their main purpose is strength. About 80 percent of the total need for upholstered furniture is for 5/4 or thinner parts.

Almost all of the wood used by manufacturers of recliners is used for frames (Table 25). Only 5.6 percent is clear (C1 F and C2F). Eighty percent of all the frame parts needed are 5/4 or thinner.

Kitchen cabinet parts requirements (Table 32) are quite different. The nominal thickness is 5/4 or thinner for more than 98 percent of all cabinet parts. Ninety-five percent of all parts are in the clear grades.

Tables of length-width distributions for each product type follow the overview tables. There are tables for each combination of part thickness and quality. The total area of parts for each length-width grouping in a table is given as a percentage of the total surface area needed in that particular part thickness and quality.

It is important to understand how these data can and cannot be used. They provide an accurate picture of the demands for parts within a segment of the industry (solid wood furniture, for example). However, determining the relative sizes of various segments (solid wood furniture versus kitchen cabinets, for example) is beyond the scope of this study. Therefore, requirements cannot be summed across segments.

The information in Tables 1 through 36 can help suppliers decide whether their particular circumstances make supplying more than one product type manufacturer desirable. For example, a supplier whose raw material mix contains a lot of low-grade lumber might well want to supply parts to upholstered furniture and recliner manufacturers as well as to solid or veneered wood makers. In this way, he could use more of his raw material more efficiently than if he were to supply clear parts only. Another manufacturer may decide, because of factors such as equipment and raw material availability, to concentrate on supplying parts that are 5/4 or thinner. In any event, for the first time, the needs of the various wood-using industries are clearly presented.

The Standard Blank Concept

Development of standard-size blanks

Tables 1 through 36 show an enormous number of different parts when length, width, thickness, part quality, and product type are separately considered. From a supply point of view, this number is impractically high. One solution is to reduce the number of different sizes; another solution is to combine the needs of the various product types; and yet another is to describe the most commonly needed parts regardless of product type. We have combined all of these

solutions in creating the concept of standard blanks.

“Standard blanks” are defined as pieces of solid wood (which may be of edge-glued construction) of a predetermined size and quality (Fig. 1). From these standard sizes, manufacturers can cut the pieces for their own products (Fig. 2). Standard-size blanks in no way imply standardized furniture.

The success of any plan for standardizing blank sizes depends on the choice of the blank lengths and widths. We based our length specifications on the most-needed parts, allowing an additional 1/2 inch or so for trim.

While all intermediate lengths between two specified lengths must be resawed from the longest length,

waste is controlled by the use of the 10 percent rule. Simply put, the specified or target blank lengths were acceptable if the production of all needed parts for a given combination of part thickness and part quality could be achieved with no more than an average 10 percent end-trim loss. As a result, length classes sometimes differ for parts of the same quality but different thicknesses.

Eleven width groupings were used in the analysis of parts of Tables 1 through 36. Because the most frequently needed parts were narrower than 4 inches, a 1/2 inch width increment was used for parts between 1-1/2 inch and 4 inches

Standard Blanks

Rough dimension material with specific:

Lengths

Widths

Thicknesses

Qualities

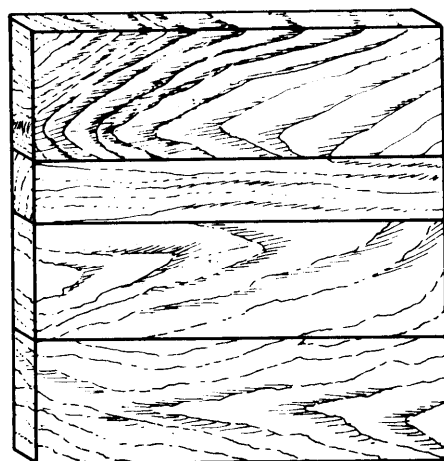
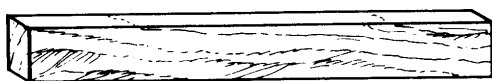
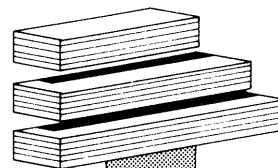
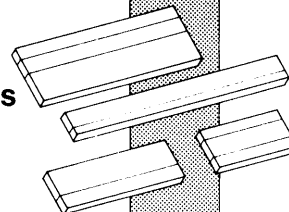


Figure 1.—Standard blanks—rough kiln-dried dimension material with specific length, width, thickness, and quality.

**Standard-size
Blanks or Panels**



**Rough
Dimension Parts**



**Furniture and
Cabinets**

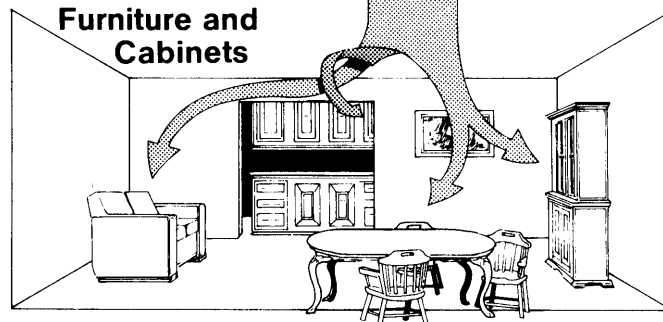


Figure 2.—The standard blank concept—standard-size blanks are processed to rough dimension parts that are used to make furniture and cabinets.

wide; from 4 to 6 inches, a 1-inch increment was used. Width increments of 6 inches or more were used above that.

We chose one width of blank for each quality for all product types. The width was equal to the largest part width needed.¹ All other widths can be produced by ripping the wide blank to narrower pieces. Odd pieces left over can be reglued and ripped again. Our recommended blank widths are:

Clear quality	26 inches wide
Core quality	26 inches wide
Sound frame quality (upholstered)	20 inches wide
Sound interior quality (case goods)	20 inches wide

Although other widths can be used, the widths given will provide all needed parts and have significant production and inventory advantages.

The recommended standard sizes for furniture and cabinet manufacturers are given in Table 37. Nominal part thicknesses are usually 1/4 inch or more thicker than the intended thickness of the finished product. Our experience in manufacturing standard blanks for subsequent processing by major furniture makers shows that actual blank thickness needs to be only 1/8 inch over finished part requirement. All three thicknesses are listed in Table 37.

Examples of Standard-Size Blank Use

The overall value of standard blanks to manufacturers will depend mainly on how efficiently the needed parts can be ripped from these panels. We have included an illustration for each of four major product types: kitchen cabinets (Table 38), solid furniture (Table 39), veneered

furniture (Table 40), and upholstered furniture (Table 41).

In each example:

- The product chosen was considered representative of that product type.
- The rough part needs were grouped by species, thickness, and quality.
- The proper standard-size blanks were selected from Table 37. In some cases, to improve the yield, parts were made in double lengths.
- The number of blanks needed per standard length was determined by calculating the best ripping combinations to satisfy part requirements and minimize edge trim. A 1/8-inch ripping kerf was used in the calculations.
- Strips left over after ripping, 1 inch in width or wider, were reglued.
- The yield from the blanks (percentage used), the amount of reusable strips (percentage reglable), and the amount of waste were calculated. Waste included strips less than 1 inch wide, saw kerfs, and end trimmings.

Blanks to provide front frame, door insert, door frame, and drawer front parts for 50 sets of typical kitchen cabinets are given in Table 38. Choice of blank sizes were straightforward except for the 12-3/8- and 9-7/8-inch-long parts, which were cut double length to increase the material utilization. The overall yield of parts from the blanks was 90 percent. Leftover material that could be reglued and reused was 3 percent.

The blanks to produce the parts for 100 solid dining room servers are shown in Table 39. Clear quality 4/4 and 5/4 red oak, sound interior 4/4 yellow-poplar, and core quality 4/4 yellow-poplar blanks were needed. Yield of parts from the blanks was 82 percent, with 12 per-

cent left over in 1 inch or wider material for regluing and reuse. Six percent was lost.

Blanks to satisfy part requirements for 100 veneered tables and 400 chairs are listed in Table 40. Clear quality 6/4 and 8/4 oak blanks and 4/4 core quality yellow-poplar blanks are needed. Yield of parts from the blanks was 87 percent; 4 percent was leftover material suitable for regluing and reuse.

Standard-size blank requirements to produce 50 sets of frame parts for an upholstered love seat are shown in Table 41. Sound frame-grade 4/4 mixed hardwood blanks were needed for the parts. Two 8-inch-long parts were double cut from 17-inch-long blanks to increase material utilization. Overall, 86 percent of the blank material was used with 6 percent left over for regluing and reuse. Eight percent was wasted.

The overall yield in parts for the four examples ranged from 82 to 90 percent. Yield in reglable pieces to make additional blanks for subsequent use ranged from 3 to 12 percent. Although percent waste for each blank size ranged from 3 to 14 percent, the total waste for each product was under 10 percent. Most of the waste occurred as end trim and saw kerf.

Eight manufacturers have used standard-size blanks successfully in trial runs. The blanks were made from small diameter, low-grade red oak, white oak, and black cherry bolts harvested on National Forests. A report on these trial runs is being prepared. Other tests are in the planning stages.

Literature Cited

Hardwood Dimension Manufacturers Association. Rules for measurement and inspection of hardwood dimension parts, hardwood interior trim and moldings, hardwood stair treads and risers. 5th ed. Nashville: Hardwood Dimension Manufacturers Association; 1961:6-8.

¹A few solid wood dining room tables were found to require parts wider than 26 inches, but these were produced in such limited quantities that the parts data for these tables were removed from the analysis.

Table 1.—Overview of rough part requirements for solid wood furniture

Nominal thickness (inches)	Part quality	Percent of requirement ^a
5/8	Clear(C1F and C2F)	5.5
4/4	Clear (C1F and C2F)	44.5
4/4	Sound interior	14.9
5/4	Clear (C1F and C2F)	16.0
6/4	Clear(C1F and C2F)	6.7
8/4	Clear (C1F and C2F)	6.7
All other combinations		5.7
		100.0

^aPercentage of total surface area of required rough parts.

Table 2.— Length/width distribution' (in percent) of 5/8 nominal thickness, clear (C1F and C2F) quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0 - 1.5	1.51- 2.0	2.01- 2.5	2.51- 3.0	3.01- 3.5	3.51- 4.0	4.01- 5.0	5.01- 6.0	6.01- 14.0	14.01- 20.0	20.01 - 26.0	
0-13	--	--	0.4	--	0.2	0.9	0.8	0.2	1.7	--	--	4.2
13.01-15	--	0.1	--	--	--	--	.6	--	1.8	--	--	2.6
15.01-17	--	--	.1	--	.1	4.9	2.5	7.5	20.5	--	--	35.6
17.01-18	--	--	--	--	--	4.2	--	7.9	9.6	--	--	21.6
18.01-22	--	--	--	--	--	1.2	.4	.5	4.5	--	--	6.6
22.01-26	--	--	--	--	--	.6	1.3	1.9	7.9	--	--	11.8
26.01-31	.4	--	--	--	--	--	--	7.1	8.5	--	--	16.0
31.01-36	--	--	--	--	--	--	--	--	1.3	--	--	1.3
36.01-42	--	--	--	--	--	.3	--	--	--	--	--	.3
Percent of total	0.4	0.1	0.5	--	0.4	12.2	5.6	24.9	55.9	--	--	100.0

^aPercentage of total surface area of required rough parts,

Table 3.—Length/width distribution^a (in percent) of 4/4 nominal thickness, clear (C1 F and C2F) quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)											Percent Of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.()	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01 - 26.0	
0-15	0.2	0.7	0.7	0.3	0.2	0.2	0.3	0.3	1.1	1.8	0.5	6.3
15.01-18	.3	1.1	1.0	.4	.4	.2	.5	.1	1.6	3.1	1.1	9.7
18.01-21	.4	.5	.5	.4	.2	.1	.3	.3	2.1	3.5	1.6	9.8
21.01-25	.2	.4	.9	.4	.3	.1	.2	.2	1.7	4.4	1.1	9.8
25.01-29	.3	.3	.2	.3	--	.1	.1	.1	1.6	5.6	1.2	9.7
29.01-33	.1	.6	.2	.2	.1	.3	.3	.2	2.7	5.0	.8	10.4
33.01-38	.1	.4	.2	.2	.2	.2	.3	.3	2.5	4.5		9.9
38.01-45	.1	.4	.2	.4	.1	.1	.1	--	1.4	7.8	2.7	13.4
45.01-50	.1	.1	.2	--	--	.1	.1	.1	.5	1.4	.2	2.7
50.01-60	--	.4	.1	.4	.1	--	--	.1	2.0	2.9	1.2	7.2
60.01-75	.1	.4	.3	.2	.2	.1	.2	.1	.5	3.6	.9	6.5
75.01-100	.1	.1	.1	--	.1	.2	--	.1	1.8	--	2.1	4.6
Percent of total	2.0	5.4	4.4	3.2	2.0	1.6	2.3	1.7	19.4	43.5	14.5	100.0

^a Percentage of total surface area of required rough parts.

Table 4.—Length/width distribution ^a(in percent) of 4/4 nominal thickness, sound interior quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01 - 3.5	3.51-4.0	4.01-5.0	5.01 - 6.0	6.01-14.0	14.01-20.0	20.01 - 26.0	
0-15	3.2	2.6	2.4	1.6	1.3	0.9	0.2	--	0.8	6.9	0.7	20.7
15.01-18	3.4	6.4	5.6	2.7	3.3	--	.5	--	.2	12.7	--	34.9
18.01-21	1.0	1.3	3.7	.2	--	--	.4	--	--	2.2	.8	9.5
21.01-25	.6	3.0	.7	--	.3	--	--	0.1	--	1.5	.2	6.5
25.01-29	.6	.9	.1	--	--	--	--	--	--	1.6	--	3.2
29.01-34	.4	.2	.2	.6	--	--	--	--	.7	2.0	.3	4.5
34.01-40	.3	2.2	1.8	.3	--	--	--	--	.8	1.8	.3	7.5
40.01-50	.8	1.0	.5	--	--	--	--	--	--	--	--	2.3
50.01-60	.2	2.2	1.7	.3	--	--	--	--	--	--	1.4	5.8
60.01-70	--	1.6	2.0	--	--	--	--	--	--	.4	.4	4.4
70.01-95	--	.7	--	--	--	--	--	--	--	--	--	.7
Percent of total	10.6	22.1	18.7	5.7	5.0	1.0	1.1	0.2	2.5	29.0	4.1	100.0

^a Percentage of total surface area of required rough parts.

Table 5.—Length/width distribution^a(in percent) of 5/4 nominal thickness, clear (C1F and C2F) quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.3	0.1	0.7	0.5	0.7	0.8	0.3	0.1	0.6	1.1	0.4	5.7
15.01-18	.2	.4	.5	1.1	.4	.9	.6	.7	2.2	3.9	.4	11.4
18.01-21	.2	.2	.6	.5	.3	--	.4	.5	.8	2.1	5.1	10.7
21.01-25	.1	.7	.2	.6	2.2	--	.7	.1	.7	1.8	.9	8.0
25.01-29	.1	.4	.6	.2	1.1	.3	--	--	.9	2.3	.1	5.8
29.01-33	--	.9	.1	1.0	.1	.1	.3	--	2.3	3.8	.5	9.2
33.01-38	--	.3	.5	.3	.2	.5	--	.2	.7	5.6	1.2	9.5
38.01-45	.1	.5	1.3	.3	.9	.7	.9	.1	1.7	5.8	2.3	14.4
45.01-50	--	--	1.0	.1	.3	--	1.0	--	.7	1.6	.3	5.0
50.01-60	.1	.5	.1	.5	--	.4	.5	--	.8	1.6	0.4	4.9
60.01-75	--	.1	.2	.8	.3	3.0	.3	.2	1.6	4.6	3.5	14.6
75.01-100	--	--	--	--	--	--	--	--	--	.7	.1	.8
Percent of total	1.1	4.2	5.7	5.8	6.7	6.8	5.1	1.8	12.9	34.9	15.0	100.0

^aPercentage of total surface area of required rough parts.

Table 6.— Length/width distribution^a(in percent) of 6/4 nominal thickness, clear (C1F and C2F) quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)											Percent Of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	1.0	0.8	--	0.7	0.8	0.3	0.5	0.3	0.4	1.4	0.2	6.4
15.01-18	.2	.5	.3	1.0	.6	.2	.1	--	--	4.1	.9	8.0
18.01-21	.9	.7	.3	.7	.5	.2	.7	.4	1.3	2.1	2.6	10.4
21.01-25	.3	.1	--	.8	--	--	.3	--	2.8	5.5	6.1	15.9
25.01-28	.2	.3	.3	.5	.4	--	.6	--	1.6	1.1	.9	5.8
28.01-32	.1	.1	--	.9	--	.3	2.6	--	1.4	.5	--	5.8
32.01-35	--	--	.7	1.0	.6	.2	.4	.1	2.6	1.8	.9	8.3
35.01-40	--	.2	.3	.5	.5	.4	--	2.0	--	.8	--	4.7
40.01-45	--	--	.4	.7	.6	--	--	--	4.2	.7	3.5	10.0
45.01-50	--	.1	--	--	.4	--	--	1.0	--	2.7	3.5	7.8
50.01-60	--	--	.3	1.2	--	--	--	--	--	--	1.6	3.1
60.01-70	.1	.4	--	.3	--	--	--	--	2.3	2.6	5.6	11.3
70.01-85	--	--	--	--	--	--	.4	--	--	--	2.1	2.5
Percent of total	2.9	3.2	2.7	8.3	4.3	1.6	5.5	3.8	16.6	23.3	27.8	100.0

^aPercentage of total surface area of required rough parts.

Table 7.—Length/width distribution^a (in percent) of 8/4 nominal thickness, clear (C1F and C2F) quality rough parts for solid wood furniture

Length groupings (inches)	Width groupings (inches)										Percent of total	
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.01-20.0		
0-15	--	4.1	0.4	0.9	0.3	0.2	0.5	--	0.8	2.2	--	9.4
15.01-18	--	5.1	.9	1.2	--	1.1	.5	--	--	3.1	0.6	12.5
18.01-21	--	6.8	.9	.1	--	.7	2.0	.2	.4	6.5	3.0	20.6
21.01-25	--	3.9	1.6	1.6	--	--	.2	--	--	4.2	2.1	13.6
25.01-28	--	2.9	.3	.2	.4	--	--	--	--	2.5	--	6.3
28.01-32	--	1.7	.6	--	.9	.5	1.3	--	--	.2	--	5.2
32.01-35	--	.5	.7	--	--	.3	--	--	--	.6	--	2.0
35.01-40	--	--	.6	2.1	.3	--	--	1.0	--	5.2	--	9.1
40.01-45	--	--	--	--	--	.8	.9	.6	3.6	5.1	1.0	11.9
45.01-50	--	.4	--	--	--	.4	--	--	--	3.3	--	4.2
50.01-60	--	--	1.2	1.3	--	--	--	--	--	1.8	--	4.3
60.01-70	--	--	.3	--	--	.6	--	--	--	--	--	.9
70.01-90	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	--	25.4	7.5	7.4	1.9	4.6	5.5	1.7	4.8	34.6	6.6	100.0

^aPercentage of total surface area of required rough parts.

Table 8.—Overview of rough part requirements for veneered wood furniture

Nominal thickness (inches)	Part quality	Percent of requirements ^a
5/8	Clear (C1F and C2F)	10.1
4/4	Clear (C1F and C2F)	14.3
4/4	Core	23.8
4/4	Sound interior	10.9
5/4	Clear (C1F and C2F)	14.7
5/4	Core	4.8
6/4	Clear (C1F and C2F)	9.5
8/4	Clear (C1F and C2F)	7.9
All other combinations		4.0
		100.0

^aPercentage of total surface area of required rough parts.

Table 9.— Length/width distribution^a (in percent) of 5/8 nominal thickness, clear (C1F and C2F) quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-13	--	--	0.1	0.2	0.2	0.3	1.1	1.3	1.3	--	--	4.4
13.01-15	--	--	--	.1	.5	.2	2.1	3.4	5.8	--	--	12.1
15.01-17	0.2	--	.1	.5	.8	.6	3.2	6.5	29.1	--	--	41.1
17.01-18	--	.5	--	--	--	--	.4	--	.9	--	--	1.8
18.01-22	--	--	.2	.2	1.3	.3	.6	2.0	6.9	--	--	11.5
22.01-26	--	--	--	.3	.3	.2	1.5	1.9	8.5	--	--	12.8
26.01-31	--	--	--	--	.1	.1	.3	1.0	5.8	--	--	7.4
31.01-36	--	--	--	--	--	--	.6	1.1	5.3	--	--	6.9
36.01-42	--	--	--	--	--	--	--	--	1.9	--	--	1.9
Percent of total	0.2	0.5	0.4	1.4	3.1	1.9	9.8	17.2	65.5	--	--	100.0

^aPercentage of total surface area of required rough parts.

Table 10.—Length/width distribution^a (in percent) of 4/4 nominal thickness, clear (C1F and C2F) quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	1.5	0.7	0.7	0.9	1.0	0.4	0.5	0.3	0.8	0.2	--	7.1
15.01-18	2.4	.8	1.2	.6	.9	1.1	.4	2.0	2.5	.4	.8	13.1
18.01-21	1.5	.7	1.4	1.3	.5	.6	1.1	.3	.9	.6	.7	9.4
21.01-25	2.1	1.4	2.3	1.9	.7	.3	.7	.3	2.3	1.3	.2	13.5
25.01-29	.7	1.0	1.4	1.0	.6	.1	.3	.1	1.0	.1	--	6.3
29.01-33	.7	.7	.6	.4	.2	.3	1.5	.1	2.2	.6	.3	7.4
33.01-38	.7	2.3	1.6	1.0	.5	.1	.2	.1	1.2	.9	.2	8.7
38.01-45	.8	.8	1.6	.6	.5	.4	--	--	1.1	.2	1.0	6.9
45.01-50	.9	1.1	.6	1.5	.3	.2	.2	--	.4	.1	--	5.2
50.01-60	1.1	2.1	1.1	.5	.6	.4	.5	.2	.5	1.1	--	8.0
60.01-75	.9	1.6	1.8	.7	.1	1.0	1.1	.5	1.1	--	--	8.8
75.01-100	--	1.6	1.3	.6	.3	--	--	--	1.8	--	--	5.5
Percent of total	13.4	14.8	15.5	10.8	6.3	4.8	6.4	3.7	15.6	5.4	3.3	100.0

^aPercentage of total surface area of required rough parts.

Table 11.—Length/width distribution^a (in percent) of 4/4 nominal thickness, core quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	0.1	--	0.1	0.2	0.1	--	--	2.4	0.8	0.8	2.4
15.01-18	--	.1	0.1	.1	.2	--	0.3	--	1.3	3.8	2.2	8.0
18.01-21	--	.1	--	--	.1	--	.1	--	.3	6.7	3.9	11.3
21.01-23	--	.1	--	--	.1	--	--	--	4.6	8.3	3.3	7.7
23.01-26	--	.1	--	--	.1	.2	.2	--	1.1	3.6	4.4	9.8
26.01-29	--	.3	--	--	.1	--	.1	--	.5	2.1	3.1	6.2
29.01-34	--	.3	--	--	.1	.1	--	--	1.5	4.1	3.2	9.3
34.01-40	--	.4	--	.1	.1	--	--	--	.6	4.7	2.9	8.9
40.01-50	--	.4	--	--	.3	--	--	--	1.1	4.6	3.1	9.5
50.01-60	--	.1	--	.1	--	--	--	--	.4	3.8	3.6	8.0
60.01-70	--	.3	--	.2	.6	.1	.1	.1	.5	3.3	2.5	7.7
70.01-95	--	.3	--	.2	.8	.1	.1	.1	2.3	3.8	3.3	11.2
Percent of total	--	2.7	0.1	0.8	2.7	0.6	0.9	0.2	10.3	45.2	36.5	100.0

^aPercentage of total surface area of required rough parts.

Table 12.—Length/width distribution^a (in percent) of 4/4 nominal thickness, sound interior quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	3.0	7.3	0.8	0.3	0.4	0.1	0.7	0.5	--	--	--	13.2
15.01-18	3.9	9.6	1.5	.2	.3	.2	1.5	.1	--	--	--	17.2
18.01-21	2.7	3.0	.5	.4	.1	.2	.1	.1	--	--	--	7.0
21.01-25	1.9	4.2	1.4	.4	--	.1	.1	--	--	--	0.3	8.4
25.01-29	1.6	3.5	.8	.7	--	.1	.1	--	.1	--	.1	7.0
29.01-34	.7	4.1	.5	1.0	.1	.2	--	--	--	--	.1	6.8
34.01-40	.7	6.2	1.1	.6	.4	.2	.1	--	--	--	.1	9.5
40.01-50	1.3	7.1	.8	1.0	--	.3	--	--	--	--	--	10.5
50.01-60	.9	4.3	.3	.6	--	.3	.3	--	--	--	--	6.7
60.01-70	.7	4.2	.7	.9	.4	.7	.2	--	--	--	--	7.7
70.01-95	.7	3.7	.2	.6	.3	.4	.2	--	--	--	--	6.0
Percent of total	18.1	57.3	8.7	6.7	1.9	2.7	3.3	0.6	0.1	--	0.4	100.0

^aPercentage of total surface area of required rough parts.

Table 13.— Length/width distribution^a(in percent) of 5/4 nominal thickness, clear (CIF and C2F) quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.3	0.5	1.3	0.6	0.6	0.7	0.2	0.3	0.2	1.0	0.1	5.8
15.01-18	.6	.5	1.3	1.7	4.1	1.3	.9	.6	.9	2.4	--	14.3
18.01-21	.6	.9	1.8	1.3	1.3	.5	.8	.7	.4	1.2	.1	9.7
21.01-25	.8	.9	2.2	.6	3.0	.9	1.4	1.2	.8	1.7	.3	13.7
25.01-29	.5	.7	1.4	1.1	1.2	--	1.7	--	.6	.8	1.0	9.0
29.01-33	.3	.4	.9	.2	2.0	1.0	2.9	.5	1.4	.9	.6	11.1
33.01-38	.5	.3	.6	.3	.3	.3	.1	.2	.9	.4	.3	4.2
38.01-45	.6	.4	.4	.6	.7	.4	.9	.1	.3	.8	.3	5.6
45.01-50	.5	.2	1.2	.1	.4	--	--	--	--	.9	--	3.4
50.01-60	.6	.8	1.8	1.3	.8	.4	1.0	.6	.8	.9	.2	9.1
60.01-75	.7	.1	1.6	1.9	1.3	.2	.5	.6	.7	.2	--	7.9
75.01-100	1.0	.2	.6	1.5	2.4	.1	.1	.2	--	--	--	6.2
Percent of total	7.0	5.9	15.3	11.3	18.0	5.7	10.7	4.9	7.0	11.2	3.0	100.0

^aPercentage of total surface area of required rough parts.

Table 14.—Length/width distribution^a(in percent) of 5/4 nominal thickness, core quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent Of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	--	--	0.8	1.7	--	--	--	1.7	1.3	0.4	6.0
15.01-18	--	--	--	--	.1	--	--	--	--	.7	.8	1.5
18.01-21	--	--	--	--	.1	--	.3	--	.5	4.8	.7	6.4
21.01-23	--	--	--	--	--	--	--	--	--	1.7	2.8	4.5
23.01-26	--	--	--	--	.8	--	--	--	--	4.0	8.9	13.7
26.01-29	--	--	--	--	.2	--	--	--	.6	--	2.1	2.9
29.01-34	--	--	--	.3	--	--	--	--	.2	4.0	.3	4.9
34.01-40	.1	--	--	--	--	--	--	--	.8	1.6	.5	3.0
40.01-50	--	.2	--	.4	.2	--	.3	--	.9	10.4	7.3	19.8
50.01-60	--	--	--	--	--	.4	--	--	1.9	11.0	7.1	20.4
60.01-70	--	.1	.3	--	.4	--	.5	--	.7	.5	5.4	7.8
70.01-85	--	--	--	--	.9	--	--	--	7.4	.8	--	9.1
Percent of total	0.1	0.3	0.3	1.6	4.4	0.4	1.1	--	14.7	40.8	36.3	100.0

^aPercentage of total surface area of required rough parts.

Table 15.—Length/width distribution^a (in percent) of 6/4 nominal thickness, clear (C1F and C2F) quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	1.0	0.5	0.2	1.2	0.3	0.3	0.6	0.5	1.2	0.8	--	6.6
15.01-18	.8	.9	.6	2.6	1.8	2.2	1.0	.4	.9	2.9	--	14.0
18.01-21	.5	.7	1.6	1.8	1.8	.4	.7	.8	.4	1.0	0.3	10.1
21.01-25	.4	1.3	.8	2.7	1.3	.7	.8	.9	.6	.5	--	10.0
25.01-28	.6	.7	.8	2.3	1.1	.9	.6	.7	.4	.2	--	8.5
28.01-32	1.0	.1	.4	2.8	1.6	1.7	.9	.4	.5	.9	--	10.5
32.01-35	--	.3	.5	1.7	--	.2	.1	.2	.4	--	--	3.4
35.01-40	.4	.3	.2	.8	1.4	--	.8	--	.5	.7	--	5.2
40.01-45	.1	.2	1.0	1.6	1.4	1.3	.2	--	.2	.4	--	6.4
45.01-50	.6	.2	1.0	.5	1.0	.8	--	--	.3	--	--	4.5
50.01-60	.4	.8	.5	2.5	.3	.2	.3	.2	1.9	.7	--	7.8
60.01-70	.5	.2	.5	.9	.9	.2	.2	.2	.5	.4	.3	4.6
70.01-85	.7	.8	2.3	1.3	.4	.4	.2	.8	.7	.7	--	8.4
Percent of total	7.2	7.0	10.5	22.8	13.2	9.3	6.6	5.0	8.6	9.2	0.6	100.0

^aPercentage of total surface area of required rough parts.

Table 16.—Length/width distribution^a (in percent) of 8/4 nominal thickness, clear (C1F and C2F) quality rough parts for veneered wood furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.1	0.3	0.5	0.7	0.4	--	0.5	0.1	0.4	0.2	--	3.1
15.01-18	.2	2.4	.5	1.3	2.3	1.7	1.2	.1	--	1.4	.1	11.2
18.01-21	.2	1.5	1.3	1.2	1.9	.8	.1	.4	.7	1.6	.2	9.9
21.01-25	.2	2.9	.9	.3	1.2	1.4	1.1	.1	2.2	1.3	--	11.6
25.01-28	--	1.0	.6	.1	--	1.9	1.6	--	--	1.1	--	6.3
28.01-32	.2	.8	1.7	1.0	.7	4.0	5.2	1.0	--	8.8	--	15.9
32.01-35	.1	.1	--	.1	.2	.1	--	--	--	.8	--	1.3
35.01-40	--	1.0	.4	--	.2	.3	.8	--	--	3.5	--	6.3
40.01-45	.1	1.1	.9	.4	.7	.3	.3	.6	--	3.1	--	7.6
45.01-50	.1	.4	.6	1.3	.5	.6	.4	--	--	1.2	2.0	7.1
50.01-60	.2	.2	1.2	--	.5	2.6	.6	.5	--	--	--	5.8
60.01-70	--	.5	.9	1.4	.7	--	.2	--	.5	--	--	4.2
70.01-90	.5	1.7	3.6	1.7	1.8	--	.1	.3	--	--	--	9.7
Percent of total	2.0	13.8	13.1	9.5	11.1	13.7	12.1	3.2	3.7	15.5	2.3	100.0

^aPercentage of total surface area of required rough parts.

Table 17.—Overview of rough part requirements for upholstered furniture

Nominal thickness (inches)	Part quality	Percent of requirements ^a
4/4	Clear(C1F and C2F)	3.2
4/4	Sound frame	58.6
5/4	Sound frame	21.5
6/4	Clear (C1F and C2F)	4.9
6/4	Sound frame	3.0
8/4	Clear (C1F and C2F)	3.2
8/4	Sound frame	4.1
All other combinations		1.5
		100.0

^aPercentage of total surface area of required rough parts.

Table 18.— Length/width distribution^a(in percent) of 4/4 nominal thickness, clear (C1F and C2F) quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	--	--	--	2.2	--	3.8	--	--	--	--	6.0
15.01-18	--	--	--	--	--	--	--	--	--	--	--	--
18.01-21	--	--	2.6	--	--	4.5	5.4	--	--	--	--	12.5
21.01-25	--	--	--	--	--	--	4.3	--	--	14.1	--	18.4
25.01-29	--	--	--	--	7.6	6.2	3.4	--	--	--	--	17.2
29.01-33	--	--	--	--	--	--	25.2	--	--	--	--	25.2
33.01-38	--	--	--	--	--	--	--	--	--	--	--	--
38.01-45	--	--	--	--	--	--	--	--	--	--	--	--
45.01-50	--	--	--	--	--	--	--	--	--	--	--	--
50.01-60	--	--	--	--	--	--	--	--	--	--	--	--
60.01-75	--	--	--	--	--	--	8.5	--	--	--	--	8.5
75.01-100	--	--	--	--	--	--	12.2	--	--	--	--	12.2
Percent of total	--	--	2.6	--	9.8	10.7	62.8	--	--	14.1	--	100.0

^aPercentage of total surface area of required rough parts.

Table 19.— Length/width distribution^a(in percent) of 4/4 nominal thickness, sound frame quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-13	0.6	0.5	0.4	1.1	1.0	0.1	0.5	--	0.2	--	0.2	4.7
13.01-17	.7	1.2	.6	1.0	.3	.8	.3	0.2	.1	--	.1	5.3
17.01-19	.7	1.6	.5	1.8	.4	.2	.5	--	--	--	--	5.7
19.01-22	1.6	2.1	.5	1.2	1.0	.9	1.1	.7	.8	1.0	2.1	13.0
22.01-24	.4	1.2	.4	1.1	.3	.7	1.5	--	.7	--	.1	6.4
24.01-27	.7	3.1	.8	1.9	.5	1.5	1.7	.9	.6	1.0	2.2	14.8
27.01-29	1.1	3.0	.5	1.9	.7	4.1	.1	--	.5	--	.4	12.4
29.01-33	.8	2.3	.9	3.6	.9	.9	2.0	--	.4	.5	.2	12.4
33.01-44	.5	1.3	.1	1.5	.2	1.4	.3	--	1.0	--	--	6.4
44.01-54	.1	.6	.9	.5	--	.3	.9	--	--	--	--	3.2
54.01-70	--	2.6	.4	1.7	--	.2	--	--	--	--	--	5.0
70.01-80	.1	2.6	1.4	1.1	.4	1.9	.6	--	--	.3	--	8.4
80.01-100	--	1.0	--	1.4	--	--	--	--	--	--	--	2.3
Percent of total	7.3	23.0	7.5	20.0	5.7	13.1	9.4	1.7	4.3	2.7	5.3	100.0

^aPercentage of total surface area of required rough parts.

Table 20.— Length/width distribution^a(in percent) of 5/4 nominal thickness, sound frame quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.01-20.0	14.01-20.0	20.01-26.0	
0-15	0.5	0.3	--	0.2	0.3	--	--	--	--	--	0.4	1.6
15.01-18	.2	.4	0.6	.3	.7	0.3	0.4	--	0.6	--	.1	3.5
18.01-20	.1	.3	.5	.1	.3	--	.2	--	2.4	0.2	1.8	6.0
20.01-23	--	.9	1.6	2.9	.8	--	2.0	1.0	.4	--	1.4	10.9
23.01-25	.4	--	.3	.7	.2	.7	.3	.4	.2	--	.7	4.1
25.01-28	.2	.7	1.3	.5	--	1.6	--	--	1.8	--	5.3	11.3
28.01-33	.8	.4	1.4	2.7	1.1	--	1.5	--	1.6	--	2.6	12.0
33.01-45	--	5.6	--	--	1.8	--	.5	2.5	--	--	--	10.4
45.01-55	--	--	--	.8	1.7	--	--	.8	1.8	--	--	5.1
55.01-65	--	--	--	2.3	2.2	--	1.5	.8	1.1	--	--	7.8
65.01-80	--	--	--	2.9	4.7	--	--	--	6.5	--	--	14.1
80.01-90	--	--	.4	1.9	3.9	--	1.1	1.1	2.9	--	--	11.3
90.01-100	--	--	--	.7	--	--	1.2	--	--	--	--	1.9
Percent of total	2.3	8.5	6.1	16.1	17.5	2.6	8.7	6.6	19.2	0.2	12.2	100.0

^aPercentage of total surface area of required rough parts.

Table 21.—Length/width distribution^a(in percent) of 6/4 nominal thickness, clear (C1F and C2F) quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	--	--	--	--	6.6	--	--	--	--	--	6.6
15.01-18	--	--	--	--	--	--	--	--	--	11.2	--	11.2
18.01-21	--	--	--	--	--	--	--	--	--	--	2.3	2.3
21.01-25	--	--	--	--	--	5.6	1.2	--	--	--	2.8	9.6
25.01-28	--	--	--	--	2.0	--	6.6	--	--	1.9	5.1	15.6
28.01-32	--	--	--	--	--	21.6	--	--	--	--	--	21.6
32.01-35	--	--	--	--	--	4.4	--	--	--	--	--	4.4
35.01-40	--	--	--	--	--	--	--	--	--	--	2.7	2.7
40.01-45	--	--	--	--	--	--	--	--	--	--	--	--
45.01-50	--	--	--	--	--	--	--	--	--	--	--	--
50.01-60	--	--	--	6.7	3.8	--	--	--	--	--	--	10.5
60.01-70	--	--	--	--	--	--	--	--	--	--	--	--
70.01-85	--	--	--	9.9	5.6	--	--	--	--	--	--	15.5
Percent of total	--	--	--	16.6	11.4	38.2	7.8	--	--	13.1	12.9	100.0

^aPercentage of total surface area of required rough parts.

Table 22.—Length/width distribution^a(in percent) of 6/4 nominal thickness, sound frame quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-14	--	2.6	--	0.6	--	--	--	--	--	--	--	3.2
14.01-18	--	.5	3.9	--	2.0	--	--	--	1.1	--	2.0	9.5
18.01-21	--	5.9	.2	4.9	--	--	3.5	--	1.2	--	3.6	19.3
21.01-24	--	--	--	--	--	--	--	--	--	--	4.9	4.9
24.01-28	--	.3	8.4	6.3	--	3.8	--	--	3.4	--	--	22.3
28.01-31	3.7	5.1	5.6	--	3.2	--	--	--	--	--	--	17.5
31.01-34	--	7.5	5.0	3.6	3.9	--	--	--	--	--	--	20.0
34.01-40	--	--	--	--	--	--	--	--	--	--	3.3	3.3
Percent of total	3.7	21.8	23.1	15.5	9.2	3.8	3.5	--	5.7	--	13.7	100.0

^aPercentage of total surface area of required rough parts.

Table 23.—Length/width distribution^a (in percent) of 8/4 nominal thickness, clear (C1F and C2F) quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	10.8	--	2.7	--	4.3	--	--	--	--	1.3	19.1
15.01-18	--	2.3	--	1.6	2.1	--	--	0.7	--	12.0	--	18.7
18.01-21	--	--	--	1.9	--	--	--	--	--	--	--	1.9
21.01-25	--	3.3	--	--	19.0	--	--	--	--	--	8.7	31.0
25.01-28	--	5.8	--	--	--	--	--	--	5.8	--	--	11.6
28.01-32	--	--	--	--	--	--	13.3	--	--	--	--	13.3
32.01-35	--	--	--	--	--	--	--	--	--	--	--	--
35.01-40	--	--	--	--	--	--	--	--	--	--	--	--
40.01-45	--	--	--	--	--	--	--	--	--	--	4.4	4.4
45.01-50	--	--	--	--	--	--	--	--	--	--	--	--
50.01-60	--	--	--	--	--	--	--	--	--	--	--	--
60.01-70	--	--	--	--	--	--	--	--	--	--	--	--
70.01-90	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	--	22.2	--	6.2	21.1	4.3	13.3	0.7	5.8	12.0	14.4	100.0

^aPercentage of total surface area of required rough parts.

Table 24.—Length/width distribution^a (in percent) of 8/4 nominal thickness, sound frame quality rough parts for upholstered furniture

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-12	0.2	12.9	1.4	--	--	--	1.2	--	--	--	--	15.7
12.01-16	1.4	4.0	2.3	2.5	3.6	6.9	2.0	0.5	--	--	--	23.3
16.01-19	--	7.1	--	4.2	.9	1.0	--	--	2.7	--	--	15.9
19.01-21	--	2.2	1.7	4.9	--	1.5	--	1.4	--	--	--	11.8
21.01-24	--	1.1	3.6	--	3.9	--	--	1.8	--	--	3.3	13.6
24.01-28	--	2.3	--	--	--	3.1	--	--	5.2	--	--	10.6
28.01-30	--	2.0	--	--	--	--	--	--	--	--	--	2.0
30.01-34	--	2.0	2.0	1.7	--	--	--	--	1.5	--	--	7.1
Percent of total	1.6	33.6	11.0	13.3	8.3	12.6	3.2	3.7	9.4	--	3.3	100.0

^aPercentage of total surface area of required rough parts.

Table 25.—Overview of rough part requirements for recliners

Nominal thickness (inches)	Part quality	Percent of requirements ^a
4/4	Sound frame	52.7
5/4	Clear (C1F and C2F)	3.6
5/4	Sound frame	28.0
6/4	Sound frame	1.9
8/4	Clear (C1F and C2F)	2.0
8/4	Sound frame	8.1
All other combinations		3.7
		100.0

^aPercentage of total surface area of required rough parts.

Table 26.— Length/width distribution^a(in percent) of 4/4 nominal thickness, sound frame quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-13	--	0.1	0.1	--	--	--	--	--	--	0.2	--	0.5
13.01-17	1.6	1.4	.9	2.4	--	--	0.1	--	0.6	3.4	3.7	14.1
17.01-19	1.7	1.7	1.3	.9	2.0	.5	--	.6	--	.9	3.0	12.6
19.01-22	4.0	3.8	1.6	.6	.8	.1	--	.6	2.1	2.0	6.8	22.6
22.01-24	.8	2.0	1.6	1.7	.4	2.9	.6	--	1.1	3.6	5.7	20.5
24.01-27	.4	2.6	2.8	.6	--	1.5	1.0	2.0	.3	2.7	2.8	16.6
27.01-29	.6	.5	2.7	1.3	1.0	.6	--	.9	1.1	--	--	8.8
29.01-33	--	--	.4	--	.3	--	.8	1.9	1.1	--	--	4.3
33.01-44	--	--	--	--	--	--	--	--	--	--	--	--
44.01-54	--	--	--	--	--	--	--	--	--	--	--	--
54.01-70	--	--	--	--	--	--	--	--	--	--	--	--
70.01-80	--	--	--	--	--	--	--	--	--	--	--	--
80.01-100	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	9.0	12.2	11.5	7.5	4.6	5.6	2.4	6.0	6.2	12.9	22.1	100.0

^aPercentage of total surface area of required rough parts.

Table 27.—Length/width distribution^a(in percent) of 5/4 nominal thickness, clear (C1F and C2F) quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	--	--	--	--	--	--	--	--	--	--	--
15.01-18	--	--	--	--	--	1.4	--	--	--	--	--	1.4
18.01-21	--	14.7	--	2.5	--	--	--	--	10.1	3.7	3.6	34.6
21.01-25	--	--	--	1.2	--	--	--	--	--	40.2	8.8	50.3
25.01-29	--	--	4.9	--	--	--	--	--	--	--	--	4.9
29.01-33	--	--	--	--	--	--	--	--	--	--	8.8	8.8
33.01-38	--	--	--	--	--	--	--	--	--	--	--	--
38.01-45	--	--	--	--	--	--	--	--	--	--	--	--
45.01-50	--	--	--	--	--	--	--	--	--	--	--	--
50.01-60	--	--	--	--	--	--	--	--	--	--	--	--
60.01-75	--	--	--	--	--	--	--	--	--	--	--	--
75.01-100	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	--	14.7	4.9	3.7	--	1.4	--	--	10.1	43.9	21.3	100.0

^aPercentage of total surface area of required rough parts.

Table 28.—Length/width distribution^a(in percent) of 5/4 nominal thickness, sound frame quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.2	--	--	--	--	--	--	--	--	1.1	1.9	3.1
15.01-18	8.4	1.9	2.7	0.8	--	--	0.9	--	--	1.0	.5	16.2
18.01-20	4.8	6.4	6.1	1.7	1.0	--	.1	--	--	1.5	7.8	29.5
20.01-23	--	1.3	4.3	.3	.8	.5	--	--	0.4	1.0	1.9	10.5
23.01-25	.1	--	2.8	--	--	--	--	--	--	.9	6.2	10.0
25.01-28	.9	--	2.4	--	5.0	1.0	--	--	2.4	1.4	9.9	23.0
28.01-33	--	.3	.7	--	.5	--	--	--	2.5	--	3.6	7.7
33.01-45	--	--	--	--	--	--	--	--	--	--	--	--
45.01-55	--	--	--	--	--	--	--	--	--	--	--	--
55.01-65	--	--	--	--	--	--	--	--	--	--	--	--
65.01-80	--	--	--	--	--	--	--	--	--	--	--	--
80.01-90	--	--	--	--	--	--	--	--	--	--	--	--
90.01-100	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	14.4	9.9	19.0	2.8	7.2	1.5	1.0	--	5.3	7.0	31.9	100.0

^aPercentage of total surface area of required rough parts.

Table 29.— Length/width distribution^a(in percent) of 6/4 nominal thickness, sound frame quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)										Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.01-20.0	20.01-26.0	
0-14	--	--	--	--	--	--	--	--	--	--	--
14.01-18	4.2	8.7	6.5	3.8	9.7	--	--	--	--	--	32.8
18.01-21	--	8.5	--	8.1	--	11.1	--	--	--	--	27.8
21.01-24	--	6.0	--	--	10.7	--	--	--	--	--	16.7
24.01-28	--	18.7	--	--	--	--	--	--	--	--	18.7
28.01-31	--	4.0	--	--	--	--	--	--	--	--	4.0
31.01-34	--	--	--	--	--	--	--	--	--	--	--
34.01-40	--	--	--	--	--	--	--	--	--	--	--
Percent of total	4.2	45.9	6.5	11.9	20.4	11.1	--	--	--	--	100.0

^aPercentage of total surface area of required rough parts.

Table 30.—Length/width distribution^a(in percent) of 8/4 nominal thickness, clear (C1F and C2F) quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	--	--	--	--	--	--	--	--	--	--	--	--
15.01-18	--	--	--	--	--	--	--	--	--	--	5.7	5.7
18.01-21	--	5.1	--	--	--	--	--	--	21.3	--	17.1	43.5
21.01-25	--	--	--	17.8	4.9	--	--	--	--	--	--	22.7
25.01-28	--	--	--	--	--	--	8.8	--	--	19.3	--	28.1
28.01-32	--	--	--	--	--	--	--	--	--	--	--	--
32.01-35	--	--	--	--	--	--	--	--	--	--	--	--
35.01-40	--	--	--	--	--	--	--	--	--	--	--	--
40.01-45	--	--	--	--	--	--	--	--	--	--	--	--
45.01-50	--	--	--	--	--	--	--	--	--	--	--	--
50.01-60	--	--	--	--	--	--	--	--	--	--	--	--
60.01-70	--	--	--	--	--	--	--	--	--	--	--	--
70.01-90	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	--	5.1	--	17.8	4.9	--	8.8	--	21.3	19.3	22.8	100.0

^aPercentage of total surface area of required rough parts.

Table 31.—Length/width distribution^a(in percent) of 8/4 nominal thickness, sound frame quality rough parts for recliners

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-12	--	--	--	--	--	--	--	--	--	--	2.6	2.6
12.01-16	--	1.3	0.6	--	--	--	--	--	--	--	2.2	4.1
16.01-19	6.5	48.5	2.7	2.8	3.1	--	--	--	--	2.5	1.4	67.5
19.01-21	1.1	1.1	5.2	--	--	1.4	3.3	--	--	--	.4	12.6
21.01-24	.7	.4	4.4	--	--	--	--	--	1.2	--	2.9	9.6
24.01-28	.7	2.0	--	--	--	--	--	--	--	--	.9	3.6
28.01-30	--	--	--	--	--	--	--	--	--	--	--	--
30.01-34	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	9.0	53.4	13.0	2.8	3.1	1.4	3.3	--	1.2	2.5	10.3	100.0

^aPercentage of total surface area of required rough parts.

Table 32.—Overview of rough part requirements for kitchen cabinets

Nominal thickness (inches)	Part quality	Percent of requirements ^a
3/4	Clear (C1F and C2F)	18.9
4/4	Clear (C1F and C2F)	70.0
4/4	Sound interior	4.7
5/4	Clear (C1 and C2F)	4.8
All other combinations		1.6
		100.0

^aPercentage of total surface area of required rough parts.

Table 33.—Length/width distribution^a(in percent) of 3/4 nominal thickness, clear (C1F and C2F) quality rough parts for kitchen cabinets.

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-14	0.3	1.4	5.1	1.0	1.6	0.8	0.3	0.4	2.5	0.5	--	13.9
14.01-17	.2	1.6	2.2	1.1	.6	.3	.7	.2	2.2	.7	--	9.8
17.01-19	.4	.6	.3	.9	.3	.1	.7	.2	2.1	.9	--	6.5
19.01-22	.7	1.0	3.5	1.8	.2	2.8	3.5	1.8	2.7	.1	--	18.0
22.01-25	1.7	1.7	1.4	1.5	1.0	--	.2	.2	3.9	1.8	--	13.5
25.01-29	.6	3.3	4.9	2.2	.8	--	.2	--	.3	--	--	12.4
29.01-31	5.0	2.6	1.2	.1	1.5	.2	.3	--	--	--	--	11.0
31.01-35	.4	5.2	2.0	--	1.1	--	--	.1	--	--	--	8.7
35.01-41	.2	1.4	.2	.1	.3	--	--	--	--	--	--	2.2
41.01-47	.1	1.1	--	.1	.2	--	.1	.1	.4	--	--	2.0
47.01-58	.2	.1	.2	.1	--	--	--	--	--	--	--	.6
58.01-86	.7	.3	--	.1	.2	--	--	--	--	--	--	1.3
Percent of total	10.5	20.3	21.0	8.9	7.9	4.3	6.1	3.2	14.0	3.9	--	100.0

^aPercentage of total surface area of required rough parts.

Table 34.—Length/width distribution^a(in percent) of 4/4 nominal thickness, clear (C1F and C2F) quality rough parts for kitchen cabinets

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.2	1.9	1.2	3.0	1.1	0.6	1.3	0.5	1.1	0.1	0.4	11.6
15.01-18	.2	1.8	1.1	1.3	.6	.5	.7	.9	1.7	.5	.5	9.8
18.01-21	.2	1.2	1.6	1.6	.6	.3	1.7	.5	1.6	1.1	1.1	11.5
21.01-25	.6	2.6	2.2	2.8	1.9	.8	.7	.7	3.5	2.5	1.8	19.9
25.01-29	.4	2.7	3.4	2.7	1.3	1.5	.2	.1	.5	--	1.2	14.0
29.01-33	.9	7.0	.2	1.1	2.0	.5	.1	.1	.3	--	1.5	13.8
33.01-38	.3	1.2	--	.3	1.4	.6	.3	--	--	--	--	4.1
38.01-45	.3	.9	--	.2	.9	.2	.1	--	.2	--	--	2.7
45.01-50	.2	.4	.1	1.6	.7	.1	1.2	.2	.5	--	.5	5.5
50.01-60	--	.1	.1	.4	.3	--	.1	--	.1	--	1.3	2.4
60.01-75	--	.2	.1	.1	.2	.1	.2	.3	.5	--	--	1.6
75.01-100	.1	.5	.1	.3	.3	--	--	.4	1.3	--	--	3.1
Percent of total	3.4	20.5	10.1	15.4	11.2	5.2	6.5	3.7	11.4	4.3	8.3	100.0

^aPercentage of total surface area of required rough parts.

Table 35.— Length/width distribution^a(in percent) of 4/4 nominal thickness, sound interior quality rough parts for kitchen cabinets

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	3.7	1.5	2.6	--	--	--	--	--	--	--	--	7.9
15.01-18	5.4	3.5	2.6	--	--	--	--	--	--	--	--	11.6
18.01-21	.6	2.2	3.1	--	--	--	--	--	--	--	--	5.9
21.01-25	2.1	7.3	10.2	0.9	--	--	--	--	--	--	--	20.4
25.01-29	.6	1.8	1.8	--	--	--	--	--	--	--	--	4.3
29.01-34	3.2	3.0	9.1	.4	--	--	--	0.8	--	--	--	16.4
34.01-40	3.4	4.8	10.0	--	--	--	--	--	--	--	--	19.6
40.01-50	2.5	3.7	7.8	--	--	1.4	--	--	--	--	--	14.0
50.01-60	--	--	--	--	--	--	--	--	--	--	--	--
60.01-70	--	--	--	--	--	--	--	--	--	--	--	--
70.01-95	--	--	--	--	--	--	--	--	--	--	--	--
Percent of total	21.6	27.8	47.1	1.3	--	1.4	--	0.8	--	--	--	100.0

^aPercentage of total surface area of required rough parts.

Table 36.— Length/width distribution^a(in percent) of 5/4 nominal thickness, clear (C1F and C2F) quality rough parts for kitchen cabinets

Length groupings (inches)	Width groupings (inches)											Percent of total
	0-1.5	1.51-2.0	2.01-2.5	2.51-3.0	3.01-3.5	3.51-4.0	4.01-5.0	5.01-6.0	6.01-14.0	14.01-20.0	20.01-26.0	
0-15	0.5	3.6	0.1	0.1	0.9	--	1.0	--	0.3	--	--	6.5
15.01-18	.5	3.9	--	--	--	--	.4	--	.2	--	--	5.0
18.01-21	.3	1.6	--	.1	--	--	8.1	--	2.2	--	--	12.3
21.01-25	.6	3.7	--	--	.1	--	--	--	--	--	0.9	5.3
25.01-29	.4	4.7	--	--	--	--	--	--	--	--	--	5.1
29.01-33	1.0	12.6	--	1.0	1.6	--	--	--	--	--	--	16.2
33.01-38	.7	8.4	--	1.4	.5	--	2.2	--	2.8	2.7	--	18.7
38.01-45	.4	3.7	--	.3	--	--	--	--	--	--	--	4.5
45.01-50	.2	1.7	--	--	.2	--	--	--	.7	--	--	2.9
50.01-60	--	--	--	--	--	--	--	--	--	2.2	--	2.2
60.01-75	--	--	--	--	--	--	--	--	--	--	--	--
75.01-100	--	4.5	2.6	.3	.5	--	.6	--	6.9	6.1	--	21.5
Percent of total	4.5	48.2	2.7	3.1	3.9	--	12.4	--	13.2	11.0	0.9	100.0

^aPercentage of total surface area of required rough parts.

Table 37.— Recommended hardwood blank standard sizes for furniture and cabinet manufacturers (inches)

Nominal thickness	Intended product finish thickness	Actual blank thickness	Blank lengths												
Clear Quality/26-inch Wide Blanks															
5/8	3/8	1/2	13	15	17	18	22	26	31	36	42				
3/4	1/2	5/8	14	17	19	22	25	29	31	35	41	47	58	86	
1	3/4	7/8	15	18	21	25	29	33	38	45	50	60	75	100	
1-1/4	1	1-1/8	15	18	21	25	29	33	38	45	50	60	75	100	
1-1/2	1-1/4	1-3/8	15	18	21	25	28	32	35	40	45	50	60	70	85
2	1-5/8	1-3/4	15	18	21	25	28	32	35	40	45	50	60	70	90
Core Quality/26-inch Wide Blanks															
1	3/4	7/8	15	18	21	23	26	29	34	40	50	60	70	95	
1-1/4	1	1-1/8	15	18	21	23	26	29	34	40	50	60	70	85	
Sound Frame Quality (for upholstered frames)/20-inch Wide Blanks															
1	3/4	7/8	13	17	19	22	24	27	29	33	44	54	70	80	100
1-1/4	1	1-1/8	15	18	20	23	25	28	33	45	55	65	80	90	100
1-1/2	1-1/4	1-3/8	14	18	21	24	28	31	34	40					
2	1-5/8	1-3/4	12	16	19	21	24	28	30	34					
Sound Interior Quality (for case goods)/20-inch Wide Blanks															
1	3/4	7/8	15	18	21	25	29	34	40	50	60	70	95		

Table 38.—Using blanks to satisfy kitchen cabinet part requirements for front frame, door and drawer parts for 50 sets of 9 cabinets^a

Material species/lumber thickness	Quality	Rough part information			No. needed	Standard-size blanks required			Blanks to parts conversion results		
		T x	Size L x W			Quality	Size T x L x W	No. needed	% used	% reglu-able	% waste
Red oak 4/4	C1F	7/8 X	31-1/2 X 1-7/8		100	Clear	7/8 x 33 x 26	8	86	4	10
	C2F	7/8 X	28-5/8 X 3-3/4		200		7/8 X 29 X 26	133	90	2	8
	C2F	7/8 X	28-1/4 X 2-1/4		700						
	C1F	7/8 X	27-3/4 X 1 X 3/4		500						
	C2F	7/8 X	24-3/4 X 8-7/8		200		7/8 X 25 X 26	172	89	5	5
	C2F	7/8 X	24-3/4 X 5-7/8		150						
	C1F	7/8 X	22-1/2 X 2-1/4		400						
	C1F	7/8 X	12-3/8 X 1 -3/4		50						
	C1F	7/8 X	12-1/4 X 5-1/4		200						
	C2F	7/8 X	21 X 4-1/2		150		7/8 X 21 X 26	151	90	1	9
	C1F	7/8 X	20-1/2 X 2-1/4		350						
	C2F	7/8 X	20 X 8-7/8		50						
	C2F	7/8 X	18-3/4 X 8-7/8		200						
	C1F	7/8 X	9-7/8 X 1 -3/4		100						
	C2F	7/8 X	15 X 7-5/8		100		7/8 X 15 X 26	179	91	1	7
	C2F	7/8 X	15 X 5-1/4		100						
	C1F	7/8 X	15 X 1-7/8		800						
	C1F	7/8 X	15 X 1-3/4		350						
	C2F	7/8 X	14-1/2 X 5		25						
	C2F	7/8 X	14-1/2 X 2-1/4		75						
	C2F	7/8 X	13-3/8 X 3-3/4		50						
	C1F	7/8 X	13 X 2-1/4		200						
Total							5050	643	90	3	7

^aParts are ripped from blanks with a 1/8-inch kerf rip saw blade.

Table 39.—Using blanks to satisfy solid furniture part requirements for 100 servers^a

Material species/lumber thickness	Rough part information				Standard-size blanks required				Blanks to parts conversion results					
	Quality	T	x	Size L x W	No. needed	Quality	T	x	Size L x W	No. needed	% used	% reglu- able	% waste	
Red oak 5/4	C2F	1-1/8	X	43 X 5-1/8	200	Clear	1-1/8	x	45 x 26	53	90	b	10	
	C1F	1-1/8	X	43-1/2 X 1-3/8	200									
	C1F	1-1/8	X	20-1/2 X 1-3/8	200			1-1/8	X	21 X 26	12	86	2	12
	C1F	1-1/8	X	18 X 1-7/8	400			1-1/8	X	18 X 26	77	92	3	6
	C1F	1-1/8	X	17-1/2 X 5-1/8	200									
	C1F	1-1/8	X	8-1/2 X 1-7/8	100									
Red oak 4/4	C1F	1-1/8	X	7-1/4 X 1-7/8	400	Clear	1-1/8	X	15 X 26	16	87	4	9	
	C2F	7/8	X	43-1/2 X 19	100		7/8	X	45 X 26	100	85	9	6	
	C1F	7/8	X	39-3/4 X 2-1/8	200									
	C1F	7/8	X	31-1/2 X 16-3/8	200		7/8	X	33 X 26	200	65	31	4	
	C1F	7/8	X	31-1/2 X 2-3/4	100									
	C1F	7/8	X	12-1/4 X 11-1/8	200		7/8	X	25 X 26	73	87	10	3	
	C1F	7/8	X	8-1/8 X 8-1/2	200									
	C1F	7/8	X	5 X 1-7/8	200		7/8	X	21 X 26	4	86	4	10	
	C2F	7/8	X	18 X 3-3/8	400		7/8	X	18 X 26	75	94	b	6	
	C2F	7/8	X	17 X 1-7/8	200									
	C2F	7/8	X	17-3/4 X 1-1/4	100									
	C2F	7/8	X	14-1/2 X 10-1/2	200		7/8	X	15 X 26	115	90	5	5	
	C2F	7/8	X	14-1/2 X 3-3/8	200									
	Yellow-poplar 4/4	Sound interior	7/8	X	39-3/4 X 2-1/4		300	Sound interior	7/8	X	40 X 20	48	88	5
7/8			X	37-1/4 X 1-7/8	100									
7/8			X	17-1/2 X 1-1/4	200	7/8	X		18 X 20	15	81	5	14	
7/8			X	14-3/4 X 2-3/8	200	7/8	X		15 X 20	25	93	..	7	
Yellow-poplar 4/4	Core	7/8	X	38-7/8 X 8-1/2	100	Core	7/8	X	40 X 26	34	93	2	5	
Total					4900					847	82	12	6	

^aParts are ripped from blanks with a 1/8-inch kerf rip saw blade.

^bLess than 1/2 percent.

Table 40.—Using blanks to satisfy veneered dining room furniture part requirements for 100 tables and 400 chairs^a

Material species/lumber thickness	Rough part information					Standard-size blanks required					Blanks to parts conversion results		
	Quality	Size			No. needed	Quality	Size			No. needed	% used	% reglu-able	% waste
		T	x	L x W			T	x	L x W				
Ash 8/4	C2F	1	-3/4 X	43-3/4 X 1	800	Clear	1	-3/4 X	45 X 26	62	90	1	9
	C2F	1	-3/4 X	30-1/2 X 3-3/8	800		1	-3/4 X	32 X 26	115	86	6	8
	C2F	1	-3/4 x	21 x 1-1/4	200		1	-3/4 X	21 X 26	11	87	4	9
	C2F	1	-3/4 x	17 x 2	800		1	-3/4 X	18 X 26	67	87	b	13
Ash 6/4	C2F	1	-3/8 X	43-1/2 X 3-3/4	200	Clear	1	-3/8 X	45 X 26	100	83	10	7
	C2F	1	-3/8 X	42-3/4 X 3-3/4	400								
	C2F	1	-3/8 X	21 X 3-1/2	400		1	-3/8 X	21 X 26	80	91	3	5
	C2F	1	-3/8 X	21 x 2-1/2	200								
	C2F	1	-3/8 X	17-1/4 X 2-1/2	400		1	-3/8 X	18 X 26	156	86	b	14
		1	-3/8 X	16-1/2 X 2-1/2	800								
		1	-3/8 X	16 x 2	400								
		7/8 X	40 x 2	400	Core		7/8 X	40 X 26	50	90	..	10	
Core	7/8 X	37-11/2 X 2	200										
Core	7/8 X	21 x 2-1/2	534	7/8 X		21 X 26	80	86	8	6			
	7/8 X	20 X 2-3/8	200										
Total					6734					721	87	4	9

^aParts are ripped from blanks with a 1/8-inch kerf rip saw blade.^bLess than 1/2 percent.

Table 41 .—Using blanks to satisfy upholstered love seat frame part requirements for 50 frames^a

Material species/lumber thickness	Rough part information			Standard-size blanks required				Blanks to parts conversion results			
	Quality	Size		No. needed	Quality	Size		No. needed	% used	% reglu- able	% waste
		T x L x	W			T x L x	w				
Mixed hardwoods 4/4	Sound frame	7/8 X 65 X 2-1/2	50	Sound frame	7/8 X 70 X 20	8	73	18	9		
		7/8 x 5 2 x 4	50		7/8 X 54 X 20	25	87	3	10		
		7/8 x 5 2 x 3	50								
		7/8 x 5 2 x 2	50		7/8 X 33 X 20	24	91	..	9		
		7/8 X 33 X 3-1/2	100								
		7/8 X 32 X 7/8	100								
		7/8 x 2 9 x 3	100								
		7/8 x 2 9 x 2	150		7/8 X 29 X 20	34	88	5	7		
		7/8 X 22 X 5-1/2	100								
		7/8 X 22 X 4-1/2	100		7/8 X 22 X 20	61	90	7	4		
		7/8 x 1 8 x 2	50								
		7/8 x 1 7 x 2	100		7/8 X 17 X 20	28	84	3	13		
		7/8 x 1 6 x 2	100								
		7/8 x 8 x 2	50								
		7/8 X 8 X 1-1/2	50								
		7/8 x 1 2 x 3	50		7/8 X 13 X 20	9	77	13	10		
Total			1250			189	86	6	8		

^aParts are ripped from blanks with a 1/8-inch kerf ripsaw blade.

Araman, Philip A., Charles J. Gatchell, and Hugh W. Reynolds.
Meeting the solid wood needs of the furniture and cabinet industries: standard-size hardwood blanks, Broomall, PA: Northeast. For. Exp. Stn.; 1982; USDA For. Serv. Res. Pap. NE-494. 27p.

Standard-size, kiln-dried hardwood blanks (panels) of specified lengths, widths, thicknesses, and qualities can be used instead of lumber to produce rough dimension furniture parts. Standard sizes were determined by analyzing thousands of part requirements from 20 furniture and 12 kitchen cabinet companies. The International Woodworking Machinery and Furniture Supply Fair-USA collected the data and supported the analysis. Recommended blank sizes and examples of rough dimension parts for furniture and cabinets made from blanks are included.

836.1 ; 854.1; 854.2

Keywords: Hardwood dimension; panels; standard sizes

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