

VITAL MATERIALS NEEDED—THINGS THEY MAKE

The following equivalents have been prepared for your use where needed in dramatizing quotas and for publicity explaining the importance of scrap.

1. SCRAP IRON AND STEEL

(The following items will provide an amount of scrap equivalent to the scrap normally required to produce the steel used in the opposite military items.)



Old flatiron=2 steel helmets or 30 hand grenades. (9 old flatirons=6-inch shell.)



Electric iron=five 37-mm. antiaircraft shells. (9 electric irons=1000 .50 cal. cartridges.)

Old wood or coal kitchen stove=ten 4-inch shells. (10 stoves=a scout car.)

Set of skid chains=twenty 37-mm. antiaircraft shells. (75 sets of chains=one 16-inch projectile.)

5 bathtubs=one 1/2-ton truck.



Lawn mower=six 3-inch shells. (252 lawn mowers=one 3-inch antiaircraft gun.)



Golf clubs: 1 old set of golf clubs=one .30 caliber machine gun. Refrigerator=twelve .45 cal. submachine guns. (61 refrigerators=one light tank.)

Old radiator=seventeen .30 cal. rifles. (17 old radiators=one 75-mm. tank gun.)

11 old washing machines=one 1/2-ton truck.

Kitchen sink=25 three-inch shells. (175 old kitchen sinks=one medium tank.)

Large ash can=two .30 cal. rifles. (6 large ash cans=one antiaircraft director.)

Garbage pail=1000 .30 cal. cartridges. (111 garbage pails=one 75-mm. howitzer.)



Wash pail=3 bayonets. (10 wash pails=one 60-mm. mortar.)



Old disc (420 pounds)=210 semi-automatic light carbines.

Old plow (850 pounds)=100 armor-piercing projectiles (75-mm.)



Discarded tractor=580 machine guns (.30 cal.)



FARM ITEM

- 1 Tractor, under 30 H.P.=
- 1 Tractor, over 30 H.P.=
- 5 Tractors, over 30 H.P.=
- 2 Two-disc tractor plows=
- 1 Two-bottom tractor moldboard plow=
- 1 Spike or spring tooth sections harrow=
- 1 Disc harrow=
- 1 One-horse cultivator=
- 15 Two-row tractor cultivators=
- 12 Mowers=
- 5 Hayrakes=
- 1 Hand cornsheller=
- 1 Hand garden planter=
- 1 Combination corn and cotton planter, single-row=
- 10 Grain drills=
- 1 Fertilizing distributor=

MILITARY EQUIVALENT

- 10 37-mm. tank guns
- 4 16" projectiles
- 1 medium tank
- 1 75-mm. tank gun
- 1 75-mm. howitzer
- 4 4" shells
- 10 antiaircraft directors
- 2 60-mm. mortars
- 1 light tank
- 1 3" antiaircraft gun
- 1 armored scout car
- 3 6" shells
- 4 .30 cal. rifles
- 7 .45 cal. submachine guns
- 1 light tank
- 10 .50 cal. machine guns

MILITARY USES OF STEEL

ITEM	STEEL USED (LBS.)	SCRAP THAT CAN BE USED (LBS.)
3-inch antiaircraft gun	20,000	10,000
37-mm. tank gun	750	375
.30 caliber machine gun	25	12.5
.50 caliber machine gun	100	50
Medium tank—27 tons	56,000	28,000
Light tank—15 tons	32,000	16,000
Hull—Heavy Cruiser	13,270,000 (6,635 tons)	6,635,000
35,000-ton battleship	36,000,000 (18,000 tons)	18,000,000
100-pound aerial bomb	50	25
500-pound aerial bomb	250	125
2,000-pound aerial bomb	1,000	500
75-mm. howitzer	2,066	1,030
155-mm. howitzer	8,960	4,480
3-inch shells	13.5	6.75

ITEM	STEEL USED (LBS.)	SCRAP THAT CAN BE USED (LBS.)
4-inch shells	48	24
6-inch shells	108	54
16-inch Navy shells	2,000	1,000
5-inch Navy shells	62.5	31.25
3-inch trench mortar	110	55
20-mm. aircraft cannon	111	55.5
1/2-ton truck (blitz-buggy)	3,970	1,985
4-ton truck	18,000	9,000
Hand grenades	1.2	.54

Roughly, half the material used to make steel is scrap. If 1 1/2 million tons (2,500,000,000 lbs.) of scrap were collected from farms, this would provide the scrap necessary to make:

- a More than twice as many battleships as there are in the whole world today, or
- b Enough 2000-pound bombs to drop 3 per minute from Flying Fortress bombers incessantly for over 3 years, or
- c Enough 100-pound bombs to drop one every second of every minute of every hour of every day for over 3 years.

AUTOMOBILES

(containing on the average, 1500 pounds of steel)—

If used with an equivalent amount of pig iron one automobile will make more than—

- 16 17-mm. guns, or
- 27 20-mm. aircraft guns (cannon), or
- 30 .50 cal. machine guns, or
- 1 1/2 16-inch Navy shells, or
- 3 2,000-pound aerial bombs.

2. RUBBER

(The following items will provide an amount of reclaimed rubber equivalent to the rubber used in the opposite military items.)



1 old tire=20 pairs parachute trooper's boots, or 12 gas masks.



125 old tires=1 Flying Fortress.

1 bicycle tire and tube=6 radio sets, or 1 gas mask.

Garden hose (25 ft.)=6 collapsible water bags or 6 auxiliary tires for pursuit planes.



1 pair rubber hip boots=3 pairs argic overshoes.

1,000 pairs galoshes=1 medium bomber.

MILITARY USES OF RUBBER

- Heavy bomber=1,825 pounds (One tire uses over 100 pounds. Self-sealing tank uses 1,429 pounds.)
- Medium bomber=804 pounds (Self-sealing tank uses 528 pounds.)
- Pursuit plane=255 pounds (One tire uses 17 1/2 pounds. Self-sealing tank—177 pounds.)
- Scout car=306 pounds
- Light tank=489 pounds (Tracks alone use 317 pounds.)
- Gas mask=1.11 pounds
- Gun carriage for 37-mm. gun=61.1 pounds
- Gun carriage for 57-mm. gun=82.1 pounds
- 2 1/2-ton army truck=446 pounds
- Motorcycle=10.7 pounds
- Pair of ski boots=0.31 pounds
- Pair of hip boots=2.62 pounds
- 10-ton pontoon bridge uses 3644 pounds
- Aircraft tires range from 17 to 100 pounds each.

165,000 pounds of rubber go into making a 40,000-ton battleship. 100 pounds go into the tire of a big bomber.

Rubber used for one month's manufacture of baby pants can make 2,800 rubber lifeboats for ocean-going planes.

A single month's rubber supply to the comb factories is enough to put tires on 1,700 eight-wheeled 2 1/2-ton army trucks.

9 automobile tires use the equivalent of the rubber needed for one tire on a four-engine bomber.

6,000,000 pounds of crude rubber previously used for 30 million rubber bands per year can put bulletproof gas tanks into 300 heavy bombers and make treads, engine mounts, shock-

absorbing cushions and machine gun insulation for 500 t (or it could be used to make 1,500,000 gas masks and 500,000 army raincoats).

180 tons of rubber previously used for pencil erasers will make over 200,000 army gas masks.

Rubber previously used for garden hose will provide for tires on carriages of 8,500 "75's" and 6,800 37-mm. antiaircraft guns, and 600 pontoons for army bridges.

3. COPPER AND BRASS

(The following items will provide amount of scrap copper equivalent to copper used in opposite military items.)



Lamp bulbs: 1,000 burnt-out lamp bulbs=40 compasses.



Washing and ironing machines=eight 4-lb. incendiary bombs. (25 washing and ironing machines=one 37-mm. tank gun.)

Refrigerator=1 refrigerator=70,000 37-mm. antiaircraft projectiles. 2 refrigerators=one 60-mm. mortar.

Vacuum cleaner=31,000 .30 cal. cartridges or 110 rifles.



Copper kettle=84 rounds of ammunition for an automatic rifle.



Electric cords=Ten 6-foot electric cords will provide the copper scrap equivalent to copper used in 1,000 37-mm. antiaircraft explosives.

4. ALUMINUM

(The following items will provide an amount of scrap aluminum equivalent to the aluminum used in the opposite military items.)

1 washing and ironing machine=21 4-lb. incendiary bombs.

7 washing and ironing machines=1 antiaircraft fuse setter.

1 refrigerator=eight .50 cal. machine guns.

225 refrigerators=1 light tank.

1 vacuum cleaner=seven .50 cal. machine guns.

1 vacuum cleaner=twelve 4-lb. incendiary bombs.

7,700 aluminum pots and pans=1 pursuit plane.

5. ZINC

(The following items will provide an amount of scrap zinc equivalent to the zinc used in the opposite military items.)

1,000 lamp bulbs=23 shells (37-mm.)

1 washing and ironing machine=20 rifles.

1 washing and ironing machine=one 37-mm. tank gun.

1 refrigerator=20 hand grenades.

3 refrigerators=1,000 .30 cal. cartridges.

10 vacuum cleaners=5 binoculars.

1 vacuum cleaner=one 37-mm. shell.

6. LEAD

(The following items will provide an amount of scrap lead equivalent to the lead used in the opposite military items.)



1 old battery=three 3" antiaircraft guns, or three 75-mm. howitzers, or 29 tank guns (37-mm.)



7. COOKING FATS—2 pounds of waste cooking fat will make enough glycerine for five anti-tank shells.

8. TOOTH PASTE TUBES—60 old tooth paste tubes provide all the tin necessary for solder in the electrical connections of a Flying Fortress.

9. TIN CANS—(needed only in certain areas) Tin reclaimed is used for babbitt metal in the bearings of airplane engines and for solder.

Steel reclaimed from tin cans is used for all machines of war.

10. WASTE PAPER—(needed only in certain areas)—100 pounds (stack about 5 ft.

high)=carton for 35 antiaircraft shells, or 80 75-mm. shell containers, or 35 containers of solid fiber for shipping canned food.

One ton of waste paper will produce any of the following:

- 1,500 shell containers
- 47,000 boxes for .30 cal. ammunition
- 71,000 dust covers for airplane engines
- 36,000 practice targets