Notation:

Common Design Loads in Building Codes

A	= name for area	R	= rainwater load or ice water load
AASE	<i>HTO</i> = American Association of State		symbol
	Highway and Transportation	S	= snow load symbol
	Officials	SEI	= Structural Engineering Institute
ASCE	E = American Society of Civil	t	= name for thickness
	Engineers	Т	= effect of material & temperature
ASD	= allowable stress design		symbol
D	= dead load symbol	V	= name for volume
Ε	= earthquake load symbol	W	= name for distributed load
F	= hydraulic loads from fluids symbol	W	= wind load symbol
Η	= hydraulic loads from soil symbol		= force due to a weight
L	= live load symbol		= name for total force due to
L_r	= live roof load symbol		distributed load
LRFL	D = load and resistance factor design	γ	= density or unit weight

Design Codes in General

Design codes are issued by a professional organization interested in insuring safety and standards. They are legally backed by the engineering profession. Different design methods are used, but they typically defined the load cases or combination, stress or strength limits, and deflection limits.

Load Types

Loads used in design load equations are given letters by *type*:

D = dead load

L = live load

 $L_r = live roof load$

W = wind load

S = snow load

E = earthquake load

- R = rainwater load or ice water load
- T = effect of material & temperature
- H = hydraulic loads from soil
- F = hydraulic loads from fluids

Determining Dead Load from Material Weights

Material density is a measure of how much mass in a unit volume causes a force due to gravity. The common symbol for density is γ . When volume, V, is multiplied by density, a force value results:

$$W = \gamma \cdot V$$

Materials "weight" can also be presented as a weight per unit area or length. This takes into account that the volume is a thickness times an area: $V = t \cdot A$; so the calculation becomes:

 $W = (weight/unit area) \cdot A$

- $w = (weight/unit volume) \cdot t$ which is a weight per unit area
- $w = (weight/unit volume) \cdot A$ which is a weight per unit <u>length</u>

Minimum Concentrated Loads

adapted from SEI/ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

Location	Concentrated load lb (kN)
Catwalks for maintenance access	300 (1.33)
Elevator machine room grating (on area of 2 in. by 2 in.	300 (1.33)
(50 mm by 50 mm))	
Finish light floor plate construction (on area of 1 in. by 1 in.	200 (0.89)
(25 mm by25 mm))	
Hospital floors	1,000 (4.45)
Library floors	1,000 (4.45)
Manufacturing	
Light	2,000 (8.90)
Heavy	3,000 (13.40)
Office floors	2,000 (8.90)
Awnings and canopies	
Screen enclosure support frame	200 (0.89)
Roofs – primary members and subject to maintenance workers	300 (1.33)
School floors	1,000 (4.45)
Sidewalks, vehicular driveways, and yards subject to trucking (over	
wheel area of 4.5 in. by 4.5 in. (114 mm x 114 mm)	8,000 (35.60)
Stairs and exit ways on area of 2 in. by 2 in. (50 mm by 50 mm) non-	
concurrent with uniform load	300 (1.33)
Store floors	1,000 (4.45)

Allowable Stress Design (ASD)

Combinations of service (also referred to as *working*) loads are evaluated for maximum stresses and compared to allowable stresses. The allowed stresses are some fraction of limit stresses.

ASCE-7 (2010) combinations of loads:

1. D2. D + L3. $D + 0.75(L_r \text{ or } S \text{ or } R)$ 4. $D + 0.75L + 0.75(L_r \text{ or } S \text{ or } R)$ 5. D + (0.6W or 0.7E)6a. $D + 0.75L + 0.75(0.6W) + 0.75(L_r \text{ or } S \text{ or } R)$ 6b. D + 0.75L + 0.75(0.7E) + 0.75S7. 0.6D + 0.6W8. 0.6D + 0.7E

When F loads are present, they shall be included with the same load factor as dead load D in 1 through 6 and 8.

When H loads are present, they shall have a load factor of 1.0 when adding to load

effect, or 0.6 when resisting the load when permanent.

Load and Resistance Factor Design – LRFD

Combinations of loads that have been *factored* are evaluated for maximum loads, moments or stresses. These factors take into consideration how likely the load is to happen and how often. This "imaginary" worse case load, moment or stress is compared to a limit value that has been modified by a *resistance* factor. The resistance factor is a function of how "comfortable" the design community is with the type of limit, ie. yielding or rupture...

ASCE-7 (2010) combinations of factored nominal loads:

1.	1.4 <i>D</i>
2.	$1.2D + 1.6L + 0.5(L_r \text{ or } S \text{ or } R)$
3.	$1.2D + 1.6(L_r \text{ or } S \text{ or } R) + (L \text{ or } 0.5W)$
4.	$1.2D + 1.0W + L + 0.5(L_r \text{ or } S \text{ or } R)$
5.	1.2D + 1.0E + L + 0.2S
6.	0.9D + 1.0W
7.	0.9D + 1.0E

When F loads are present, they shall be included with the same load factor as dead load D in 1 through 5 and 7.

When H loads are present, they shall have a load factor of 1.6 when adding to load effect, or 0.9 when resisting the load when permanent.

Minimum Uniformly Distributed Live Loads

Location	Uniform load psf (kN/m^2)
Apartments (see Residential)	
Access floor systems	
Office use	50 (2.4)
Computer use	100 (4.79)
Armories and drill rooms	150 (7.18)
Assembly areas	
Fixed seats (fastened to floor)	60 (2.87)
Lobbies	100 (4.79)
Movable seats	100 (4.79)
Platforms (assembly)	100 (4.79)
Stage floors	150 (7.18)
Assembly areas (other)	100 (4.79)

adapted from SEI/ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

	Uniform load psf (kN/m^2)
Balconies and decks	1.5 times the live load for the
	area served. Not required to
	exceed 100 psf (4.79 kN/m2)
Catwalks for maintenance access	40 (1.92)
Corridors	
First floor	100 (4.79)
Other floors	same as occupancy served
	except as indicated
Dining rooms and restaurants	100 (4.79)
Dwellings (see Residential)	
Elevator machine room grating (on area of 2 in. by 2 in.	300 (1.33)
(50 mm by 50 mm))	
Finish light floor plate construction (on area of 1 in. by 1 in.	200 (0.89)
(25 mm by 25 mm))	
Fire escapes	100 (4.79)
On single-family dwellings only	40 (1.92)
Garages	, , , , , , , , , , , , , , , , , , ,
Passenger vehicles only	40 (1.92)
Helipads	60 (2.87)
Hospitals	, , , , , , , , , , , , , , , , , , ,
Operating rooms, laboratories	60 (2.87)
Patient rooms	40 (1.92)
Corridors above first floor	80 (3.83)
Hotels (see Residential)	
Libraries	
Reading rooms	60 (2.87)
Stack rooms	150 (7.18)
Corridors above first floor	80 (3.83)
Manufacturing	
Light	125 (6 00)
Heavy	250 (11.97)
Office buildings	
File and computer rooms shall be designed for heavier loads based	
on anticipated occupancy	
Lobbies and first floor corridors	100 (4 79)
Offices	50 (2.40)
Corridors above first floor	80 (3.83)
Penal institutions	
Cell blocks	40 (1.92)
Corridors	100 (4.79)
Recreational uses	
Bowling alleys, poolrooms, and similar uses	75 (3.59)
Dance halls and ballrooms	100 (4.79)
Gymnasiums	100 (4.79)
Reviewing stands, grandstands, and bleachers	100 (4.79)
Stadiums and arenas with fixed seats (fastened to the floor)	60 (2.87)
Residential	
One- and two-family dwellings	
Uninhabitable attics without storage	10 (0.48)
Uninhabitable attics with storage	20 (0.96)
	30 (1 44)
Habitable attics and sleeping areas	40 (1.02)
Habitable attics and sleeping areas All other areas except stairs	4011921
Habitable attics and sleeping areas All other areas except stairs All other residential occupancies	40 (1.92)
Habitable attics and sleeping areas All other areas except stairs All other residential occupancies Private rooms and corridors serving them	40 (1.92)

Location	Uniform load psf (kN/m ²)
Roofs	
Ordinary flat, pitched, and curved roofs	20 (0.96n
Roofs used for roof gardens	100 (4.79)
Roofs used for assembly occupancies	Same as occupancy served
Roofs used for other occupancies	As approved by authority
	having jurisdiction
Awnings and canopies	
Fabric construction supported by a skeleton structure	5(0.24) nonreducible
Screen enclosure support frame	5(0.24) nonreducible
	and based on the tributary
	area of the roof supported by
	the frame
All other construction	20 (0.96)
Schools	
Classrooms	40 (1.92)
Corridors above first floor	80 (3.83)
First-floor corridors	100 (4.79)
Scuttles, skylight ribs, and accessible ceilings	200 (0.89)
Sidewalks, vehicular driveways, and yards subject to trucking	250 (11.97)
Stairs and exit ways	100 (4.79)
One- and two-family dwellings only	40 (1.92)
Storage areas above ceilings	20 (0.96)
Storage warehouses (shall be designed for heavier loads if required for	
anticipated storage)	
Light	125 (6.00)
Heavy	250 (11.97)
Stores	
Retail	
First floor	100 (4.79)
Upper floors	75 (3.59)
Wholesale, all floors	125 (6.00)
Walkways and elevated platforms (other than exit ways)	60 (2.87)
Yards and terraces, pedestrian	100 (4.79)
Live load reductions are not permitted for specific types (see code).	
Some occupancies must be designed for appropriate loads as approved by the author	ority having jurisdiction.

Some occupancies must be designed for appropriate loads as appro Library stack room floors have specified limitations (see code) AASHTO lane loads should also be considered where appropriate.

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Biology (model) Event	Matrix Beam Description Description <thdescription< th=""> Descriprion <thdescrip< th=""><th>Print Second Desite Second Desite Second Desite <thdesite< th=""> Desite <thdesite< th=""> <thdesite< th=""> <thdesite< th=""></thdesite<></thdesite<></thdesite<></thdesite<></th><th>Function Specific Section Specific Section</th><th>iaht</th><th></th><th>Weig</th><th>hts and Sp</th><th>ecific Gravities</th><th>Weicht</th><th></th></thdescrip<></thdescription<>	Print Second Desite Second Desite Second Desite Desite <thdesite< th=""> Desite <thdesite< th=""> <thdesite< th=""> <thdesite< th=""></thdesite<></thdesite<></thdesite<></thdesite<>	Function Specific Section	iaht		Weig	hts and Sp	ecific Gravities	Weicht	
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3.0 100 <td>30.2 Inor ore, himmatrie cose 132-160 - Mpple, while 43 30.2 Inor ore, himmatrie cose 137 49-52 Ook lose 44 30.2 Inor ore, himmatrie cose 137 49-52 Ook lose 54 32.5-28 Inor ore, magnetis 112 11-15 112 14-16 32.5-28 Magnesian 112 11-15 11-15 22-8 25.5-28 Magnesian 112 11-15 22-8 24-9 26 25.5-28 Magnesian 112 11-15 11-15 22-8 24 26 25.5-28 Magnesian 11-15 11-15 11-15 22-8 24 26 26 25.5-28 Magnesian 12-15 12-15 27 26 26 25.5-28 Magnesian 12-15 27 26 26 26 25.5-28 Magnesian 12-15 27 26 26 26 26.5 27.5 Ma</td> <td>3.0 10.0</td> <td>30 100 magnitude 100 43 43 44 43 44</td> <td>2.3-2.8</td> <td>Iron ore, hematite in bank</td> <td>325 160–180</td> <td>2.C</td> <td>Locust</td> <td>46</td> <td>0.73</td>	30.2 Inor ore, himmatrie cose 132-160 - Mpple, while 43 30.2 Inor ore, himmatrie cose 137 49-52 Ook lose 44 30.2 Inor ore, himmatrie cose 137 49-52 Ook lose 54 32.5-28 Inor ore, magnetis 112 11-15 112 14-16 32.5-28 Magnesian 112 11-15 11-15 22-8 25.5-28 Magnesian 112 11-15 22-8 24-9 26 25.5-28 Magnesian 112 11-15 11-15 22-8 24 26 25.5-28 Magnesian 11-15 11-15 11-15 22-8 24 26 26 25.5-28 Magnesian 12-15 12-15 27 26 26 25.5-28 Magnesian 12-15 27 26 26 26 25.5-28 Magnesian 12-15 27 26 26 26 26.5 27.5 Ma	3.0 10.0	30 100 magnitude 100 43 43 44 43 44	2.3-2.8	Iron ore, hematite in bank	325 160–180	2.C	Locust	46	0.73
25.2 Encode monthe 237 36-40 Magle while 33 2.5 26-53 Oak (abstrict) 33 36-40 Magle while 33 2.5-26 Magnetine monthe 172 12-75 72-40 94 94 2.5-28 Magnetine monthe 172 12-74 0ak (whit bild) 34 2.5-28 Magnetine monthe 172 12-74 0ak (whit bild) 36 2.5-28 Magnetine monthe 122 12-74 0ak (whit bild) 36 2.5-28 Magnetine monthe 126 12-73 0ak (whit bild) 36 2.5-28 Magnetine monthe 136 14-16 7 24 2.5-28 Magnetine monthe 136 14-16 26 26 Magnetine monthe 136 14-16 7 27 26 Magnetine monthe 136 14-16 7 27 26 Magnetine monthe 136 14-16 7 26 26 26	25-28 Inor one, minonite 237 36-4.0 Magie strutt 53 25-28 Inor one, minonite 237 36-4.0 Magie strutt 53 25-28 Nagrestim 27-75 Oak, refer that 54 25-28 Nagrestim 27-75 Oak, refer that 26 25-28 Nagrestim 27-75 Oak, refer that 26 25-28 Nagrestim 27-75 Oak, refer that 26 26-28 Nagrestim 27-75 Oak, refer that 26 27-29 Nagrestim 26 27-75 Prine, ordin 27 26-28 Nagrestim 26 27-75 Prine, ordin 26 27-29 Nation, and the last 26 27-75 Nation, and the last 27 27 27 27 27 27 27 27 27 28 29-93 21-215 Prine, and the last 27 27 27 27 28 26 27-25 Na	25-26 Inform one immonite 227 36-40 Magnetize 25 30 25-26 Magnetize 315 25-30 Oak, mobile 35 25-26 Magnetize 315 25-30 Oak, mobile 35 25-26 Magnetize 315 25-30 Oak, mobile 35 25-26 Magnetize 45 25-30 Oak, mobile 35 25-26 Magnetize 45 25-40 Oak, mobile 35 25-26 Magnetize 45 25-30 Oak, mobile 36 25-26 Magnetize 45 25-30 Oak, mobile 46 25-26 Magnetize 45 25-30 Oak, mobile 46 25-26 Magnetize 45 25-35 26-40 46 27-45 26-26 Magnetize 45 26-47 26-47 26-47 26-47 26-27 Zanc, east, harmered 355 12-1215 27-27 26-47 27-46 27-46 </td <td>25-24 Icor on minomite 237 3-4.5 Magin effettion 23 27-30 25-2.3 Icor on migration 112 25-2.4 Magin effettion 23 25-2.3 Magretion 27 25-2.6 Ook, cheathint 23 25-2.3 Magretion 27 25-2.6 Ook, cheathint 25 25-2.3 Magretion 275 25-2.6 Ook, cheathint 25 25-2.3 Magretion 265 39-3.0 Ook, cheathint 24 25-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. J</td> <td>3.0</td> <td>Iron ore, hematite loose</td> <td>130-160</td> <td>I</td> <td>Maple, hard</td> <td>43</td> <td>0.68</td>	25-24 Icor on minomite 237 3-4.5 Magin effettion 23 27-30 25-2.3 Icor on migration 112 25-2.4 Magin effettion 23 25-2.3 Magretion 27 25-2.6 Ook, cheathint 23 25-2.3 Magretion 27 25-2.6 Ook, cheathint 25 25-2.3 Magretion 275 25-2.6 Ook, cheathint 25 25-2.3 Magretion 265 39-3.0 Ook, cheathint 24 25-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.3 Magretion 265 39-3.0 Phys. Anthole 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. Jakan 26 26 26 26 26-2.4 Math. J	3.0	Iron ore, hematite loose	130-160	I	Maple, hard	43	0.68
32 1000 memorphile 315 4 4 - 52 Oak, key block 54 00 25-26 Nangenese 737 736 0.45 0.45 0.46 0.	3.0 100 too tempetitie 315 4.9-5.2 Oak (ne) tool (chestrul - 54) 3.2-28 Nangaffrees or, proteine 315 4.9-5.2 Oak (ne) tool (chestrul - 54) 3.2-28 Nangaffrees or, proteine 315 4.9-5.2 Oak (ne) tool (chestrul - 54) 2.2-28 Nangaffrees or, proteine 315 4.9-5.2 Oak (ne) tool (chestrul - 54) 2.2-28 Nangaffrees or, proteine 315 1.27-1.83 2.1-27.13 Oak (ne) tool (chestrul - 26) 2.2-28 Nangaffrees or, proteine 317 3.7-46 Pino, Andrehal - 36 2.2-29 Nangaffrees or, proteine 316 1.2-113 Oak (ne) tool (chestrul - 26) 2.2-28 Nandart back Nandart back 326 2.2-26 Nored Ministration 330 2.1-27.15 Structor Andrehal - 36 327 2.2-29 Nandart back 326 Nandart back 326 2.2-20 Structor Ministration 326 329-42 329-42 2.2-21 Core on back and back 438 32-42 329-42 2.2-22 <td>30 100000 1000000000000000000000000000000000000</td> <td>30 (25-29) [Con one memories] (25-23) 315 (25-24) 45-5.2 (25-24) Oak web block 55 (25-24) (25-22) (25-22) (26-24) (26-24) (26-24) (26-24) (25-22) (26-24) (26-24) (26-24) (26-24) (26-24) (25-22) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-</td> <td>2.5-2.8</td> <td>Iron ore, limonite</td> <td>237</td> <td>3.6-4.0</td> <td>Maple, white</td> <td>33</td> <td>0.53</td>	30 100000 1000000000000000000000000000000000000	30 (25-29) [Con one memories] (25-23) 315 (25-24) 45-5.2 (25-24) Oak web block 55 (25-24) (25-22) (25-22) (26-24) (26-24) (26-24) (26-24) (25-22) (26-24) (26-24) (26-24) (26-24) (26-24) (25-22) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-24) (26-	2.5-2.8	Iron ore, limonite	237	3.6-4.0	Maple, white	33	0.53
2.52.5 Lund Greg general (arrange) 71/5 7.1/5 Cold, with array (array) Cold, with array (array (array) Cold, with array (array) Cold, with array (array (array) Cold, with array (array (array) Cold, with array (array (array (array)) Cold, with array (array (2.5.2.9 Indiago 1.5.7 Out, end table, india 4.1 2.5-2.9 Nangaresen (indiago) 1.1.5 Out, end table, india 2.6 2.5-2.9 Nangaresen (indiago) 1.1.5 Out, end table, india 2.6 2.5-2.9 Nangaresen (indiago) 1.1.5 Out, end table, india 2.6 2.5-2.9 Nangaresen (indiago) 1.1.5 7.1.5 0.04, end table, india 2.6 2.5-2.9 Nangaresen (indiago) 1.1.5 7.1.5 0.04, end table, indiago) 2.6 2.5-2.8 Nangaresen (indiago) 1.1.5 7.1.7 2.7.4 7.1.7 2.7-2.9 Nangaresen (indiago) 2.6 2.7.4 7.1.7 2.7.5 2.7-2.5 Nangaresen (indiago) 2.7.5 7.2.75 7.2.75 2.7.5 2.7.5 2.7.5 2.7.5 0.04, end (indiago) 2.7.5 0.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	2.5.2.9 Lignt and 2.5.2.9 1.7.2.1.5 O.M. res. Jakk, with 2.5.2.9 O.M. res. Jakk, with 2.5.2.9 1.7.2.1.5 D.M. res. Jakk, with 2.5.2.9 2.7.2.1 D.M. res. Jakk, with 2.5.2.7 2.5.1 D.M. res. Jakk, with 2.5.2 2.7.4 2.7.5 D.M. res. Jakk, with 2.5.2 2.7.4 D.M. res. Jakk, with 2.5.2 2.7.4 2.7.5 D.M. res. Jakk, with 2.5.2	2.2.2 Unorselection 712 717 000, set, back 713 000, set, back 713 7240 000, set, back 724 000, set, back 724 000 725 7240 724	3.0	Iron ore, magnetite	315	4.9-5.2	Oak, chestnut	54	0.80
0.375-00 Cued one, galana dist 7.3-7.6 Ook write-and one and	0.375,080 0.657,080 0.66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3-76 0.66 66 7.3 0.66 66 7.3 0.66 66 7.3 0.66 66 7.3 0.66 66 7.3 0.66 66 7.3 0.66 66 7.3 0.66 <td>0.07.00 0.07.00 0.00</td> <td>0.073-05 0.00, white:</td> <td>2 6-2 G</td> <td>Iron slag</td> <td>2/1</td> <td>11.37</td> <td>Oak red black</td> <td>50 11</td> <td>99.0</td>	0.07.00 0.07.00 0.00	0.073-05 0.00, white:	2 6-2 G	Iron slag	2/1	11.37	Oak red black	50 11	99.0
25-28 Magneties 172 172-18 Prim, Orderin 22 22 0 27-28 Mangeties 255 3-46 Prim, Mini, Impleti 28 0 27-28 Mangeties 255 3-46 Prim, Mini, Impleti 28 0 27-28 Mangeties 255 3-54 Prim, Mini, Impleti 28 0 27-29 Prim, Mini, Impleti 255 3-42 Prim, Mini, Impleti 28 0 27-25 Timore, cast, Immered 1300 21-12 Prim, Mini, Impleti 28 0 27-25 Timore, cast, Immered 430 7.2-75 Prim, Mini, Impleti 28 0 27-25 Zinc, cast, Immered 430 7.2-75 Prim, Mini, Impleti 28 0 27-265 Timore, cast, Immered 430 6-7-7 Prim, Mini, Impleti 28 0 27-275 Timore, cast, Immered 430 6-7-7 Prim, Mini, Impleti 27 11-11 27-15 Timore, cast, Immered<	25-28 Magnetin alfres 112 1,24-183 Pine, origin 26 27-28 Mangetines ore, protidate 237-40 Pine, with 26 27-28 Mangetines ore, protidate 237-40 Pine, with 26 27-28 Monoi Metal 237-40 Pine, with 26 27-28 Monoi Metal 233 21-215 Pine, with 26 27-275 Pine, with, block 26 27 2 2 27-275 Pine, with, block 26 26 27 2 27 27 2 27-75 Manut, with 26 27 2 27 2 27 2 27 2 </td <td>2528 Magnesier and an interval model 112 <td< td=""><td>22.5.28 Nonsymmetric intervent 112 1,74-18 Prine, policy, longenitie 225 27.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 556 8.8-00 Prine, policy, longenitie 236 25.2.29 Nonsymmetric intervent 550 211-21.5 Strong, and the longe 236 25.2 Nonsymmetric intervent 439 8.4-2.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 8.2-7.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 6.2-7.7 Nonsymmetric intervent 239 25.2 The cash, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled</td><td>0.37-0.90</td><td>Lead ore nalena</td><td>465</td><td>7.3-7.6</td><td>Oak white</td><td>46</td><td>0.7</td></td<></td>	2528 Magnesier and an interval model 112 <td< td=""><td>22.5.28 Nonsymmetric intervent 112 1,74-18 Prine, policy, longenitie 225 27.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 556 8.8-00 Prine, policy, longenitie 236 25.2.29 Nonsymmetric intervent 550 211-21.5 Strong, and the longe 236 25.2 Nonsymmetric intervent 439 8.4-2.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 8.2-7.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 6.2-7.7 Nonsymmetric intervent 239 25.2 The cash, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled</td><td>0.37-0.90</td><td>Lead ore nalena</td><td>465</td><td>7.3-7.6</td><td>Oak white</td><td>46</td><td>0.7</td></td<>	22.5.28 Nonsymmetric intervent 112 1,74-18 Prine, policy, longenitie 225 27.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 233 3.746 Prine, policy, longenitie 235 25.2.28 Nonsymmetric intervent 556 8.8-00 Prine, policy, longenitie 236 25.2.29 Nonsymmetric intervent 550 211-21.5 Strong, and the longe 236 25.2 Nonsymmetric intervent 439 8.4-2.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 8.2-7.7 Nonsymmetric intervent 238 25.2 The cash, homeled 439 6.2-7.7 Nonsymmetric intervent 239 25.2 The cash, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled 247 25.2 Distrong Nons, homeled 439 6.2-7.7 Nathold Nons, homeled	0.37-0.90	Lead ore nalena	465	7.3-7.6	Oak white	46	0.7
2.2-25 Manipanese 475 7.2-80 Pine, india 20 20 2.2-25 Manipanese 23.6 Pine, video 20	22-25 Marginenes one pyrolustie 275 7.2-6.0 Pine, file 20 22-25 Marginese one pyrolustie 269 336 21-21.5 29.9.2 20 25-25 Marginese one pyrolustie 269 336 21-21.5 29.9.2 20 25-25 Marginese one pyrolustie 258 8.9-2.0 10.4.10.5 26 26 25-25 Standard 256 255 27.4.5 26 26 26 25 Standard 250 21.1-21.5 27.1.2.5 27.2.5 27.2.5 27.2.5 27.2.5 27.2.5 27.2.5 27.2.5	22-25 Manipanes 475 7.2-80 Prime, winte 20 22-26 Manipanes 23-6 Prime, winte 20 22-28 Manipanes 23-6 Prime, winte 20 22-29 Manipanes 23-6 Prime, winte 20 22-29 Manutic cash, harmmend 230 24-2 Prime, winte 20 22-20 Patham, cash, harmmend 250 8-9-2 Prime, winte 26 22-3 Stell reliad 255 8-9-2 Prime, winte 26 22-4 Prime 440 7.55 Walnut, wine 27 27 Stell reliad 440 7.55 Walnut, wine 26 27 Adds, suphuic Brist 233 3-4.2 Prime 26 27 Stell reliad 440 7.55 Walnut, wine 26 28 Valnut, Brist Adds, suphuic Brist 26 22 28 Valnut, Brist 27 27 27 <td< td=""><td>22-25 Muniquese or mytolatie 475 72-80 Pins, redi 22 22-28 Muniquese or mytolatie 475 72-80 Pins, redi 22 22-28 Mercury 849 13.6 Pins, redit 24 24 22-29 Mercury 849 13.6 Pins, redit 24 24 25 Start Manual sets, hammered 555 13-4.5 26 27 27 26 Tin, cast, hammered 555 14-16 74 27 27 26 26 27 27</td><td>2.5-2.8</td><td>Magnesium, alloys</td><td>112</td><td>1.74-1.83</td><td>Pine, Oregon</td><td>32</td><td>0.5</td></td<>	22-25 Muniquese or mytolatie 475 72-80 Pins, redi 22 22-28 Muniquese or mytolatie 475 72-80 Pins, redi 22 22-28 Mercury 849 13.6 Pins, redit 24 24 22-29 Mercury 849 13.6 Pins, redit 24 24 25 Start Manual sets, hammered 555 13-4.5 26 27 27 26 Tin, cast, hammered 555 14-16 74 27 27 26 26 27 27	2.5-2.8	Magnesium, alloys	112	1.74-1.83	Pine, Oregon	32	0.5
27-29 Manyanese on: protosis 29 37-46 Prins, williow 26 0.0 7 Manyanese on: protosis 256 88-90 75 75 89-90 75 26 26 0.0 7 75 Noted Meal 556 89-90 71-21.5 Prins, yellow, long-leat 26 0.0 7 75 Static reast, hammered 450 7.2-7.5 Wahu, Maik 26 0.0 7 75 Static reast, nammered 450 7.2-7.5 Wahu, Maik 26 0.0 7 75 Tim ore, cast, nammered 450 5-7.2 27	22-29 Munganese on pyrolusie 29 37-46 Pins, wildow, long-leaf 26 22-28 Mennel Metal 26 33-46 Pins, wildow, long-leaf 26 22 Steace 133-6 Pins, wildow, long-leaf 26 27 22 Stear, lammered 1330 211-215 Retwoor California 27 27 23 Stear, lammered 1330 211-215 Retwoor California 27 27 27 27 23 Stear, lammered 430 21-215 Walnut, while 26 27 <	27-29 Mangamesone one production 259 3.7-46 Pine, yellow, torpiett 26 7 Monel Meal 556 88-90 Pine, yellow, torpiett 26 7 Monel Meal 556 89-90 Pine, yellow, torpiett 26 7 Ster, cast, harmmered 1330 211-21.5 Pine, yellow, torpiett 26 7 Ster, cast, harmmered 1330 211-21.5 Pine, yellow, torpiett 26 7 Ster, cast, rolled 439 7.2-7.5 Wahu, while 26 7 Tro, cast, harmmered 439 7.2-7.5 Wahu, while 26 7 27.2-7.5 Wahu, while 27 27.2-7.5 Wahu, while 26 7 28.6 0.04-0.5 28 22-7.2 27.2-7.5 27.2-7.5 27.2-7.5 7 7.2-7.5 Wahu, take, while, buck 26 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5 27.2-7.5	27-29 Munganese ore, production 259 37-46 Prins, willink, long-teat 26 9 7 Nonel Weal 556 89-90 74.6 Prins, willink, long-teat 28 9 27 26 28 9 26 28 9 26 28 26 26 28 26 <td< td=""><td>2.2-2.5</td><td>Manganese</td><td>475</td><td>7.2-8.0</td><td>Pine, red</td><td>30</td><td>0.4</td></td<>	2.2-2.5	Manganese	475	7.2-8.0	Pine, red	30	0.4
2-6-28 Meerury 849 13.6 Phe., yellow, shortheid 44 0.0 0.00el (Mell) 556 8.9-92 Phe., yellow, shortheid 39 0.4 0.00el (Mell) 556 8.9-92 Phe., yellow, shortheid 39 0.4 0.00el (Mell) 556 8.9-92 Phe., yellow, shortheid 39 0.4 0.00el (Mell) 556 3.9-42 Phe., yellow, shortheid 39 0.4 0.11-15 Tro, cast, harmneed 430 7.2-75 Wahu, black 26 0.4 1.1-15 Tro, cast, harmneed 430 5.7-7.3 Spruce, write, black 26 0.4 1.1-14 Tro, cast, harmneed 430 5.7-7.5 Wahu, black 27 0.40- 1.1-14 Tro, cast shortheid 430 6.7-7.0 27 0.40- 26 0.40- 1.1-14 Creeals, unine 27 27 27 27 0.40- 27 27 0.40- 27 27 0.40- 27 0.40 </td <td>2-2-28 Monculvia 336 Prins, yellow, itony-last 44 Noted See 9.2 Pens, yellow, itony-last 36 9.9 34 </td> <td>2-8-28 Mercury 343 136 Pins, yellow, tony-field 441 -</td> <td>2.5-2.8 Mercury 343 13.6 Pren, yellow, short-leat 44 0 7 2.5-2.8 Noteel 39-9.2 Pren, yellow, short-leat 30 7 2.5 Steat, numered 350 2.11-21.5 27 27 7 2.7 Steat, numered 430 7.2-7.5 Wahn, hads 27 0.0 7 7 7.5 Wahn, hads 27 0.0 27 0.0 7 7 7.2-7.5 Wahn, hads 26 0.0 27 27 0.0 27 27</td> <td>2.7-2.9</td> <td>Manganese ore, pyrolusite</td> <td>259</td> <td>3.7-4.6</td> <td>Pine, white</td> <td>26</td> <td>0.4</td>	2-2-28 Monculvia 336 Prins, yellow, itony-last 44 Noted See 9.2 Pens, yellow, itony-last 36 9.9 34	2-8-28 Mercury 343 136 Pins, yellow, tony-field 441 -	2.5-2.8 Mercury 343 13.6 Pren, yellow, short-leat 44 0 7 2.5-2.8 Noteel 39-9.2 Pren, yellow, short-leat 30 7 2.5 Steat, numered 350 2.11-21.5 27 27 7 2.7 Steat, numered 430 7.2-7.5 Wahn, hads 27 0.0 7 7 7.5 Wahn, hads 27 0.0 27 0.0 7 7 7.2-7.5 Wahn, hads 26 0.0 27 27 0.0 27 27	2.7-2.9	Manganese ore, pyrolusite	259	3.7-4.6	Pine, white	26	0.4
Norel Metal 556 88–90 Pin, yillow, storheid i 38 9.0 Pathrum, cast, hummered 556 88–90 Pink, yillow, storheid i 38 9.0 Steel colid 389 27.5 Yunku, table 38 9.0 Th, cast, hummered 389 211-215 Spruce, with, black 38 9.0 Th, cast, hummered 430 5-72 Wahnu, table 38 9.0 Th, cast, hummered 430 5-72 Wahnu, table 27 0.00 Th, cast, hummered 430 5-72 Wahnu, table 28 0.0 Th, cast, hummered 430 5-72 Yuhnu, table 27 0.0 Th, cast, hummered 39.7 Xahoul, 100% 27 0.0 27 0.0 206-036 065-085 Centeals, bulk 39 1.47-1.5 Mathu, table 27 0.0 026-044 Ceneals, corn, type hub 28 0.05 0.05 0.05 026-055 Ceneals, corn, type 240-	Monel Metal 556 88-20 Prine, visual statistication 38 Paintum, cast, hammered. 1300 211-215 Press, visual statistication 38 Paintum, cast, hammered. 1300 211-215 Press, visual statistication 38 The completed 1300 211-215 Press, visual statistication 38 The completed 130 211-215 Press, visual statistication 38 The completed 130 211-215 Press, visual statistication 28 The completed 140 65-72 2 28 28-42 28 The completed 140 65-72 2 26 28 28-42 28 The completed 43 64-72 Xannout, tatist, wite 28 24-28 28 27 29 26 12-15 Xannout, tatist, wite statist,	Monel Metal 556 88–90 Prin, yolio, storietat 38	Morein Middla S55 88–90 Pine, yoins, storheid i 33 21 23 21 23 23 24 25 25 25 25 25 25 25 26 26 27 25 26 27 27 26 27 27 26 27 27 26 26 27 27 26 27 27 26 27 27 26 27 27 26 27 27 27 26 27 27 26 27 27 27 26 27 27 26 27 27 26 27 27 26 27 27 26 26 27 26 26 27 26 26 27 26 26 26 27 26 26 26 26 27 27 26 26 26 26 26 26 26 26 26 26 26 26 26 26	2.6-2.8	Mercury	849	13.6	Pine, yellow, long-leaf	44	0.7
Note: Bit Main Size 8.9-9.2 Prodemotic California 20 0.04 The cast hammered 555 8.9-9.2 Prodemotic California 20 0.04 The cast hammered 555 8.9-9.2 Prodemotic California 20 0.04 The cast hammered 555 8.9-1.2 Prodemotic California 20 0.04 The cast hammered 430 7.2-7.5 Wainut, while 27 0.04 The cast hammered 430 7.2-7.5 Wainut, while 26 0.44 The cast hammered 430 5.7-7.5 Wainut, while 27 0.04 The cast hammered 430 5.7-7.5 Wainut, while 27 0.49 The cast hammered 430 6.9-7.2 Acids, minide 40% 27 0.49 The cast hammered 430 6.9-7.2 Acids, minide 40% 27 0.49 The cast hammered 23 3.9-4.2 Acids, submuce 6% 112 112 The cast hamered 23 3.9-4.2<	Notedit 555 55 59-92 Poplar 20	Micket Side <	Media State State <th< td=""><td></td><td>Monel Metal</td><td>556</td><td>8.8-9.0</td><td>Pine, yellow, short-leaf</td><td>38</td><td>0.6</td></th<>		Monel Metal	556	8.8-9.0	Pine, yellow, short-leaf	38	0.6
	Figure Second contract 530 121-12/13 Second contraction 233 242 243 243 243 244 253 233 242 243 243 244 253 233 243 243 243 244 253 233 243 244 253 233 243 244 253 233 243 244 253 233 243 244 253 233 243 244 253 233 243 244 253 233 243 244 253 233 243 245 246 246 247 253 233 243 246 247 253 233 243 246 243 246 243 246 243 246 243 246 243 246 243 247 246 243 243 244 243 244 243 244 243 244 243 244 243 244 244 244	Tin cash mammedo 1530 12.11-15 Feromon, main, back,	Time Previound Constraint Constraint <td></td> <td>Nickel</td> <td>565</td> <td>8.9-9.2</td> <td>Poplar</td> <td>80</td> <td>9.0</td>		Nickel	565	8.9-9.2	Poplar	80	9.0
Tin cast, nammered expo variable expone, summer and transmered expo variable expone, summer and transmered expo variable expone, summer and transmered expo variable expone, summered expo	- Struct, task interfered -	Tin cast namened 900 755 Splite, make, bask 52 -	- Steel nith -		Platinum, cast, hammered	1330	G.12-1.12	Redwood, California	97	4.0
Time Time <th< td=""><td>7 Tot cast, Numeric 49 7.2.7.5 Warnin, write 26 7 7.2.7.5 Warnin, end, mile 27 7 7.2.7.5 Manuti, mile 49 7 7.2.7.5 Manuer 26 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7 7.2.7.5 <td< td=""><td></td><td>- Time and manufacture 450 7.2-7.0 Wantuk undex 26 0 -</td><td>1</td><td>Silver, cast, nammered</td><td>000</td><td>10.4-10.6 7 ac</td><td>Spruce, white, plack</td><td>12</td><td>104.0</td></td<></td></th<>	7 Tot cast, Numeric 49 7.2.7.5 Warnin, write 26 7 7.2.7.5 Warnin, end, mile 27 7 7.2.7.5 Manuti, mile 49 7 7.2.7.5 Manuer 26 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7.2.7.5 7 7.2.7.5 7.2.7.5 7 7.2.7.5 <td< td=""><td></td><td>- Time and manufacture 450 7.2-7.0 Wantuk undex 26 0 -</td><td>1</td><td>Silver, cast, nammered</td><td>000</td><td>10.4-10.6 7 ac</td><td>Spruce, white, plack</td><td>12</td><td>104.0</td></td<>		- Time and manufacture 450 7.2-7.0 Wantuk undex 26 0 -	1	Silver, cast, nammered	000	10.4-10.6 7 ac	Spruce, white, plack	12	104.0
Tin ruckst: interfere 13 6.4-70 VARIOUS LOUIDS 9 Tin ruckst: interfere 43 6.9-72 3.9-42 2 0.0 Tin ruckst: interfere 43 6.9-72 3.9-42 49 0.1 Tin ruckst: interfere 43 6.9-72 3.9-42 49 0.1 Tin ruckst: interfere 43 6.9-72 3.9-42 49 0.1 Zinc cast, rolled 20 6.9-72 3.9-42 49 0.1 Tin ruckst: interfere 33 3.9-42 400 94 112 Tin -1.15 Zinc cast, rolled 33 3.9-42 400 94 112 Tin -1.14 Cereals, antro bulk 39 - 0.1 - 94 112 Tin -1.14 Cereals, antro bulk 39 - 0.1 - - - 112 - 112 - 112 - 112 - 112 - 112 112 0.0 -	- -	Tin concretation 10 6.4-7.0 11-1.5 VARIOUS LOUIDS 40 6.4-7.0 Tin concretation 253 3.9-4.2 20 6.9-7.2 20 49 Tin concretation 253 3.9-4.2 20 6.9-7.2 75 Zinc cast, rolled 253 3.9-4.2 20 6.9-7.2 75 Tin concretation 233 3.9-4.2 20 6.9-7.2 75 Tin cast, rolled 253 3.9-4.2 20 6.9-7.2 75 Tin cast, rolled 253 3.9-4.2 20 6.9-7.2 75 Tin concretation 20 6.9-7.2 20 6.9-7.2 75 Careals, control 200 20 6.9-7.2 75 75 UP-1.15 Careals, control 20 147-1.5 0.8, water, east wrater 106 UP-2.3 Flour, losse 20 147-1.5 0.8, water, east wrater 106 UP-2.3 Flour, losse 20 0.8, water, east wrater 106		1	Tio cast hammered	450	3 2-6 2	Walnut, black	30 96	0.0
Zmc. cast. rolled 440 69-72 Zmc. cast. rolled 440 69-72 11-15 Zmc. crea, blande 253 39-42 XariOUS LIOUIS 49 75 11-15 Tarcore, blande 253 39-42 XariOUS SOLIDS 49 75 11-15 Tarcore, blande 253 39-42 XariOUS SOLIDS 49 75 12-15 VARIOUS SOLIDS Action 10% 27 75 75 75 12-15 VARIOUS SOLIDS 0.01-01% 28 242 75 76 0.47-057 Cereals, wheat Dulk 29 242-260 0.03 147-150 Water, for C 77 0.09-17 0.79-087 Flour, floar, Henno 28 0.09-050 Water, for C 77 0.09-051 147-150 Water, for C 75 0.09-17 0.79-087 Flour, floar, Henno 242-266 Mater, for C 75 0.09-17 106 112 0.77-115 Flour, floar, Henno 242-226 Mater, for C	Zinc. cest. rolled 440 6.9-7.2 Xarious Louros 2mc. cest. rolled 253 3.9-4.2 4.0 6.9-7.2 11-115 Zinc. cest. rolled 253 3.9-4.2 4.0 6.9-7.2 11-115 Zinc. cest. rolled 253 3.9-4.2 4.0 6.9-7.2 11-115 Zinc. creats. barrlw 253 3.9-4.2 4.0 6.9-7.2 11-14 Creats. barrlw bulk 29 Acids. suptruct 67% 7.9 0.65-0.05 Creats. barrly bulk 29 29 242 242 0.70-051 Creats. barrly bulk 29 29 242 242 0.87-053 Creats. barrly bulk 29 242 242 242 0.87-054 Creats. barrly bulk 29 242 242 242 0.87-051 Coreals. oonyre bulk 29 242 242 242 0.87-051 Coreals. oonyre bulk 28 242 242	Zmc crest rolled 440 6.9-7.2 Xmratrous 440 6.9-7.2 Zmc crest rolled 233 3.3-4.2 Xmratrous 49 400 6.9-7.2 49 11-1.5 Zmc crest rolled 233 3.3-4.2 49 400 6.9-7.2 49 11-1.4 Zmc crest rolled 233 3.3-4.2 2 49 400 6.9-7.2 49 12-1.5 Zmc crest rolled 233 3.3-4.2 2 49 400 6.9-7 49 400 6.9-7 49 400 6.9-7 49 400 6.9-7 40 400 6.9-7 49 400 6.9-7 49 400	Time Zinc crests, rolled 440 6.9-7.2 Xarious Locuus 49 40 6.9-7.2 2 2 40 40 6.9-7.2 2 2 40 6.9-7.2 40 6.9 40	I	Tin ore, cassiterite	418	6.4-7.0		9	5
Zinc ore, blende 233 3-4.2 Various Llouins 49 0.1 11-15 14-17 Various source 23 3-4.2 Various source 49 0.1 11-14 Various source 23 3-4.2 Various source 23 0.1 0.1 0.6 75 76 75 <td>Zanc ore, blende 233 33-4.2 WARIOUS LIQUIDS 11-15 1.1-1.5 Annous SOLIDS Annous SOLIDS 49 1.1-15 1.1-1.7 WARIOUS SOLIDS Annous SOLIDS 49 1.1-15 1.1-1.7 WARIOUS SOLIDS Annous SOLIDS 49 1.1-15 MARIOUS SOLIDS Annous SOLIDS 49 0.85-0.85 Cereals, barlwy bulk 39 - 0.85-0.85 Cereals, barlwy bulk 39 - - 0.85-0.85 Cereals, corn, rye bulk 39 - <td< td=""><td>Zinc ore, blende 253 33-4.2 VARIOUS LIQUIDS VARIOUS SOLIDS 11-15 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.1-14 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 9 0.62-044 Careals, oats Dis, water the 10% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, o</td><td>Title Title Athons Louis Athons Athons<td>1 1</td><td>Zinc, cast, rolled</td><td>440</td><td>6.9-7.2</td><td></td><td></td><td></td></td></td<></td>	Zanc ore, blende 233 33-4.2 WARIOUS LIQUIDS 11-15 1.1-1.5 Annous SOLIDS Annous SOLIDS 49 1.1-15 1.1-1.7 WARIOUS SOLIDS Annous SOLIDS 49 1.1-15 1.1-1.7 WARIOUS SOLIDS Annous SOLIDS 49 1.1-15 MARIOUS SOLIDS Annous SOLIDS 49 0.85-0.85 Cereals, barlwy bulk 39 - 0.85-0.85 Cereals, barlwy bulk 39 - - 0.85-0.85 Cereals, corn, rye bulk 39 - <td< td=""><td>Zinc ore, blende 253 33-4.2 VARIOUS LIQUIDS VARIOUS SOLIDS 11-15 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.1-14 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 9 0.62-044 Careals, oats Dis, water the 10% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, o</td><td>Title Title Athons Louis Athons Athons<td>1 1</td><td>Zinc, cast, rolled</td><td>440</td><td>6.9-7.2</td><td></td><td></td><td></td></td></td<>	Zinc ore, blende 253 33-4.2 VARIOUS LIQUIDS VARIOUS SOLIDS 11-15 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.4-1.7 VARIOUS SOLIDS Acond., 100% 7 9 1.1-14 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 9 0.65-085 Careals, oats Dis, material 4% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 9 0.62-044 Careals, oats Dis, water the 10% 7 7 0.62-044 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 7 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, oats Dis, water the 10% 64 7 0.72-075 Careals, o	Title Title Athons Louis Athons Athons <td>1 1</td> <td>Zinc, cast, rolled</td> <td>440</td> <td>6.9-7.2</td> <td></td> <td></td> <td></td>	1 1	Zinc, cast, rolled	440	6.9-7.2			
11-15 VARIOUS LIQUIDS 11-15 1.4-1.7 12-15 VARIOUS SOLIDS 1.4-1.7 1.2-1.5 1.4-1.7 VARIOUS SOLIDS 1.1-1.4 Cereals, bulk 0.55-0.85 Cereals, bulk 0.55-0.85 Cereals, bulk 0.55-0.87 Cereals, bulk 0.57-0.91 Cereals, bulk 0.77-0.91 Cereals, bulk 0.77-0.91 Cereals, corn, rys 0.77-0.92 Cereals, corn, rys 0.77-0.93 Cereals, corn, rys 0.77-0.93 Cereals, corn, rys 0.77-0.92 Cereals, corn, rys 0.77-0.57 Cereals, corn, rys 0.77-0.57 Cereals, corn, rys 0.97-0.91 Cereals, corn, rys 0.97-0.92 Cereals, corn, rys 0.97-0.92 Cereals, corn, rys 0.97-05 Cereals, corn, rys	11-15 WARDOUS LIQUIDS 1.1-15 1.1-1.7 1.1-15 1.1-1.7 1.1-15 1.1-1.7 1.1-17 VARIOUS SOLIDS 1.1-17 1.1-1.7 1.1-17 VARIOUS SOLIDS 1.1-17 1.1-1.7 VARIOUS SOLIDS Acids, mirred 10, 00% 0.55-0.85 0.55-0.85 0.55-0.85 Cereals, batrly, bulk 0.55-0.85 0.55-0.85 0.55-0.85 Cereals, batrly, bulk 0.55-0.85 0.55-0.85 0.55-0.85 Cereals, batrly, bulk 0.87-0.91 Cereals, batrly, bulk 0.87-0.92 Cereals, batrly, bulk 0.87-0.91 0.77-0.57 0.87-0.93 Cereals, batrly, bulk 0.87-0.91 0.77-0.57 0.87-0.91 Cereals, worth, paule 0.97-0.92 Cereals, morth bulk 0.98 0.99-0.95 0.97-0.56 Cereals, worth, prosted 0.97 Cereals, worth, prosted 0.97 Cereals, worth, prosted 0.97 Cereals, worth, prosted 0.97 Cere	11-15 11-15 VARIOUS SOLIDS 49 11-17 14-1.7 Accord, 100% 49 12-15 VARIOUS SOLIDS Accord, 100% 74 12-15 VARIOUS SOLIDS Accord, 100% 74 12-15 VARIOUS SOLIDS Accord, 100% 74 0.85-085 0.85-085 Careals, oarts 74 0.85-014 Careals, oarts 28 26 0.85-014 Careals, oarts 28 245 0.85-015 Careals, oarts 28 242 0.87-017 Flour, loose 29 147-150 Variate, 100°C 242 0.70-018 0.87-016 240-050 Variate, 100°C 242 242 0.87-017 19-15 Variate, ison, rest item 26 245 27 0.87-018 Careadis, plate or crown 116 240-260 Variate, ison, rest item 24 0.87-016 Glass, plate or crown 116 240-260 Variate, ison, rest item 24 0.88-102 Careadis, plate or crown 116 240-260 Variate, ison, rest item 24	11-15 VARIOUS LOUDS VARIOUS LOUDS 49 49 11-17 1-4-1.7 VARIOUS SOLIDS 49 49 49 11-14 2-15 VARIOUS SOLIDS Accohol, 100%. mtrcs 61%. 75 44 11 11-14 2-15 VARIOUS SOLIDS Accohol, 100%. mtrcs 61%. 75 44 75 11-14 0.65-085 Careals, barloy Dulk 39 1-4-1.9 75 0.61 112		Zinc ore, blende	502	3.9-4.2			
11-15 11-15 11-15 40 0.7 14-17 14-17 14-17 14-17 49 0.7 14-17 14-17 14-17 14-17 75 <t< td=""><td>11-15 11-15 11-15 14-17 14-17 14-17 14-17 14-17 14-17 14-17 14-17 14-17 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 2-11 2-14 2-15 2-16 2-16 2-16 2-17 2-17 2-14 2-16 2-14 2-16 2-14 2-16 2-14 2-14 2-15 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-15 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14</td><td>11-15 Narrous source 49 11-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 2 12-15 Cereals, carity bulk 22 2 0.28-048 Corr. rye bulk 23 0.28-048 Corr. rye bulk 23 0.28-048 Corr. rye bulk 23 0.28-048 Corr. Flax, Hemp 33 147-150 0.29-038 Erun kices 240-2.60 Water, 45 53 0.77-038 Coston 161 245-2.27 Water, 66 56 0.83-038 Coston 161 245-2.27 Water, 66 56 0.83-0406 Coston 161 245-2.20 Water, 66 56 0.83-0406 161 245-2.20 Gass. now, fresh falien 64 0.8</td><td>11-15 11-15 Alcond, 1005 49 11-15 14-17 XNRIOUS SOLIDS 49 49 11-14 1.2-15 1.2-15 Alcond, 1005 49 11-14 0.5-043 Cereats, balley 20 20 21 0.5-043 0.5-043 Cereats, balley 21 21 21 0.5-043 Cereats, balley 23 - 0.5 20 21 0.85-043 Cereats, balley 23 - 0.5 20 21 21 0.85-043 Cereats, balley 23 - 0.5 20 21 21 0.87-091 Error, presed 10-14 28 0.40-0.50 Water, 100°C 57 0.00 0.87-091 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 49 10 0.87-013 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 40 106 105 0.87-013 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 41 10 10 10 10</td><td></td><td>ع C</td><td></td><td></td><td></td><td></td><td></td></t<>	11-15 11-15 11-15 14-17 14-17 14-17 14-17 14-17 14-17 14-17 14-17 14-17 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 11-14 2-15 2-11 2-14 2-15 2-16 2-16 2-16 2-17 2-17 2-14 2-16 2-14 2-16 2-14 2-16 2-14 2-14 2-15 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-14 2-15 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14 2-15 2-14	11-15 Narrous source 49 11-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 14-17 12-15 14-17 14-17 2 12-15 Cereals, carity bulk 22 2 0.28-048 Corr. rye bulk 23 0.28-048 Corr. rye bulk 23 0.28-048 Corr. rye bulk 23 0.28-048 Corr. Flax, Hemp 33 147-150 0.29-038 Erun kices 240-2.60 Water, 45 53 0.77-038 Coston 161 245-2.27 Water, 66 56 0.83-038 Coston 161 245-2.27 Water, 66 56 0.83-0406 Coston 161 245-2.20 Water, 66 56 0.83-0406 161 245-2.20 Gass. now, fresh falien 64 0.8	11-15 11-15 Alcond, 1005 49 11-15 14-17 XNRIOUS SOLIDS 49 49 11-14 1.2-15 1.2-15 Alcond, 1005 49 11-14 0.5-043 Cereats, balley 20 20 21 0.5-043 0.5-043 Cereats, balley 21 21 21 0.5-043 Cereats, balley 23 - 0.5 20 21 0.85-043 Cereats, balley 23 - 0.5 20 21 21 0.85-043 Cereats, balley 23 - 0.5 20 21 21 0.87-091 Error, presed 10-14 28 0.40-0.50 Water, 100°C 57 0.00 0.87-091 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 49 10 0.87-013 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 40 106 105 0.87-013 Error, presed 15 245-272 0.14/1-150 Water, 50°C ms. 41 10 10 10 10		ع C					
11-15 11-15 Antrolus Soulds 7 12-15 12-15 Addis muritaric 97% 7 12-15 12-15 Addis muritaric 97% 7 11-14 0.65-0.65 Cereals, ont. nye 0.61 94 112 11-14 Cereals, antry bulk 39 - 0.61 94 112 0.65-0.65 Cereals, antry bulk 39 - 0.61 94 112 0.65-0.65 Cereals, antry bulk 39 - 0.61 94 112 0.65-0.65 Cereals, andry bulk 39 - 0.61 94 112 0.77-0.61 Use of common 15 0.90-0.97 Water, 4* C mix density 57 0.99-1 0.79-0.62 0.87-0.68 0.47-0.57 Water, 4* C mix density 57 0.99-1 0.79-0.62 0.87-0.68 0.47-0.50 Water, 4* C mix density 57 0.99-1 0.79-0.62 0.87-0.50 Water, snow, fresh fallon 64 <	11-15 WRIOUS SOLIDS 2 4 7 12-15 WARIOUS SOLIDS 12-13 Acids, mutch 40% 94 12-14 0.65-0.85 Cereals, oats 94 94 0.11-14 Cereals, oats bulk 32 - 94 0.11-14 Cereals, oats bulk 38 - 05 94 0.11-14 Cereals, oats bulk 38 - 05 94 0.28-0.44 Cereals, oats bulk 38 - 05 94 0.28-0.91 Cereals, wheat bulk 38 - 05 94 0.27-057 Cereals, wheat bulk 48 - - 94 0.27-058 Cereals, wheat bulk 48 - - 94 0.27-058 Cotton, Flax, Henp 58 0.0 05 94 - 0.87-058 Cotton, Flax, Henp 20 0.00-057 Water, for wheat - - - - - - - - - - - - <t< td=""><td>11-15 Various solues 33 </td><td>11-15 11-15 Addis, multicative, and set of a suphrules and set of a supervise and set of a suphrune set of a supervise and set of a supervise and set</td><td></td><td></td><td></td><td></td><td>Alcohol LIQUIUS</td><td>10</td><td>02.0</td></t<>	11-15 Various solues 33	11-15 11-15 Addis, multicative, and set of a suphrules and set of a supervise and set of a suphrune set of a supervise and set of a supervise and set					Alcohol LIQUIUS	10	02.0
14-17 Acids infre 91% 94 112 11-14 11-14 11-14 94 112 11-14 11-14 11-14 466 461 112 112 11-14 11-14 11-14 48 - 461 106 111 112 112 11-14 Cereals, barley Dulk 33 - 018, wegetable 56 091- 112 <td>14-17 14-17 14-17 14-17 94 12-15 VARIOUS SOLIDS 11-14 4417 94 11-14 11-14 11-14 11-14 11-14 94 11-14 0.47-057 Crereals, unburk 33 2 2 26.5.08 06 0.28-044 Crereals, unburk 33 2 2 20.5.015 11-2 25.6 0.6 0.47-057 Hay and Straw bulk 38 2 01.4.7-150 018, wegetable 58 2.47 0.9 0.87-057 Flour, (pose 0.87 014-1-5 Water, 100° C 58 2.47 0.9 0.87-058 Flour, (pose 0.87 014-1-5 Water, 100° C 56 0.9 2.47 0.14-1-5 0.87-058 Glass, optation 156 0.40-050 Water, 100° C 56 0.0 0.65-068 0.44 1.22 0.47 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.41</td> <td>14-17 Acids. submine 61% 94 12-15 VARIOUS SOLIDS 2 2 94 11-14 0.65-0.65 0.65-0.65 0.66, submine 61% 94 11-14 0.65-0.65 0.65-0.65 0.66, submine 61% 94 0.85-0.05 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.64, submine 61% 94 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.64, submine 61% 94 0.87-0.014 Cereals, som, type bulk 39 - 0.64, submine 61% 98 0.79-025 Cereals, som, type bulk 39 - 0.64, submine 61% 94 0.73-075 Cereals, som, type bulk 26 - 240-0.50 Water, top'C 7424 0.73-075 Class, som, trent, top'C 0.64 - 240-2.50 Water, som, trent fillen 64 0.73-075 Class, som, trent, top'C 0.64-0.50 Water, som, trent fillen 64</td> <td>14-17 Natious SoLubs 14-17 Adids intric 81% 94 14-17 11-14 11-14 11-14 Adids intric 81% 94 11 11-14 11-14 11-14 Adids intrine 81% 94 11 11-14 11-14 Adids intrine 11, when all ubits 33 085-048 085-048 089 081 0.85-0.85 Cereals, when, type bulk 33 - 018, wegetable 57 0.00 0.87-0.91 Cereals, when, them bulk 33 1.47-150 Water, 100°C 58 0.09 0.87-0.91 Fals Nater, 100°C Water, 500% 0.82-428 0.09 56 0.85 0.86</td> <td>1.1-1.5</td> <td>150</td> <td></td> <td></td> <td>Acids. muriatic 40%</td> <td>75</td> <td>1.20</td>	14-17 14-17 14-17 14-17 94 12-15 VARIOUS SOLIDS 11-14 4417 94 11-14 11-14 11-14 11-14 11-14 94 11-14 0.47-057 Crereals, unburk 33 2 2 26.5.08 06 0.28-044 Crereals, unburk 33 2 2 20.5.015 11-2 25.6 0.6 0.47-057 Hay and Straw bulk 38 2 01.4.7-150 018, wegetable 58 2.47 0.9 0.87-057 Flour, (pose 0.87 014-1-5 Water, 100° C 58 2.47 0.9 0.87-058 Flour, (pose 0.87 014-1-5 Water, 100° C 56 0.9 2.47 0.14-1-5 0.87-058 Glass, optation 156 0.40-050 Water, 100° C 56 0.0 0.65-068 0.44 1.22 0.47 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.44 1.22 0.47 1.22 0.41	14-17 Acids. submine 61% 94 12-15 VARIOUS SOLIDS 2 2 94 11-14 0.65-0.65 0.65-0.65 0.66, submine 61% 94 11-14 0.65-0.65 0.65-0.65 0.66, submine 61% 94 0.85-0.05 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.64, submine 61% 94 0.85-0.044 Cereals, oarn, ye bulk 39 - 0.64, submine 61% 94 0.87-0.014 Cereals, som, type bulk 39 - 0.64, submine 61% 98 0.79-025 Cereals, som, type bulk 39 - 0.64, submine 61% 94 0.73-075 Cereals, som, type bulk 26 - 240-0.50 Water, top'C 7424 0.73-075 Class, som, trent, top'C 0.64 - 240-2.50 Water, som, trent fillen 64 0.73-075 Class, som, trent, top'C 0.64-0.50 Water, som, trent fillen 64	14-17 Natious SoLubs 14-17 Adids intric 81% 94 14-17 11-14 11-14 11-14 Adids intric 81% 94 11 11-14 11-14 11-14 Adids intrine 81% 94 11 11-14 11-14 Adids intrine 11, when all ubits 33 085-048 085-048 089 081 0.85-0.85 Cereals, when, type bulk 33 - 018, wegetable 57 0.00 0.87-0.91 Cereals, when, them bulk 33 1.47-150 Water, 100°C 58 0.09 0.87-0.91 Fals Nater, 100°C Water, 500% 0.82-428 0.09 56 0.85 0.86	1.1-1.5	150			Acids. muriatic 40%	75	1.20
12-15 Acids. suphuric 87% 112 12 11-14 Cereals. corr. tye bulk 32 - Up, sogetable 106 11.2 065-063 Cereals. corr. tye bulk 32 - Up, sogetable 55 0.91.3 065-063 Cereals. corr. tye bulk 32 - Up, sode 66% 106 11.2 0747-057 Cereals. corr. tye bulk 32 - Up, sode 66% 106 106 0747-057 Cereals. corr. tye bulk 20 - Water, 100* 57 0.90 087-051 Flour, floar 147 0.70-050 Water, 100* 56 0.89 0.91 0.87-051 Glass, common 161 245-2.72 Water, 50* 56 0.89 0.91 0.73-075 Glass, common 161 245-2.72 Water, 50* 56 0.89 1.02 0.73-075 Glass, common 161 245-2.72 Water, 50* 56 0.89 1.02 </td <td>12-15 NHIOUS SOLIDS 11-14 Acids, suphruic 87%. 112 11-14 Cereats, barlw, bulk 39 - 106 065-0.68 106 0.65-0.63 Cereats, barlw, bulk 39 - 0.8, vogetable. 106 0.70-0.105 Cereats, barlw, bulk 38 - 0.8, vogetable. 106 0.70-0.114 Cereats, barlw, bulk 48 - 0.8, vogetable. 57 0. 0.70-127 Cereats, barlw, bulk 48 - 0.8, vogetable. 57 0. 0.70-14 Cereats, word, per, bulk 48 - 0.8, vogetable. 57 0. 0.87-0.91 Faux toose 20 1.47-1.50 Water, foor /// tuber 58 0. 0.87-0.92 Gars, ormmon 161 2.45-2.72 0.44-5.6 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 2.1 2.1 2.1</td> <td>12-15 VARIOUS SOLIDS 112-11 12-11 12-11 11</td> <td>12-115 VARIOUS SOLIDS 112 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113</td> <td>1.4-1.7</td> <td></td> <td></td> <td></td> <td>Acids, nitric 91%</td> <td>94</td> <td>1.5</td>	12-15 NHIOUS SOLIDS 11-14 Acids, suphruic 87%. 112 11-14 Cereats, barlw, bulk 39 - 106 065-0.68 106 0.65-0.63 Cereats, barlw, bulk 39 - 0.8, vogetable. 106 0.70-0.105 Cereats, barlw, bulk 38 - 0.8, vogetable. 106 0.70-0.114 Cereats, barlw, bulk 48 - 0.8, vogetable. 57 0. 0.70-127 Cereats, barlw, bulk 48 - 0.8, vogetable. 57 0. 0.70-14 Cereats, word, per, bulk 48 - 0.8, vogetable. 57 0. 0.87-0.91 Faux toose 20 1.47-1.50 Water, foor /// tuber 58 0. 0.87-0.92 Gars, ormmon 161 2.45-2.72 0.44-5.6 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 2.1 2.1 2.1	12-15 VARIOUS SOLIDS 112-11 12-11 12-11 11	12-115 VARIOUS SOLIDS 112 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113 113	1.4-1.7				Acids, nitric 91%	94	1.5
11-14 Cereals offs bulk 32 - Lys. soda 66% 10 0.65-0.65 Cereals, orn, nye bulk 33 - Oils, weda 66% 10 0.28-0.45 Cereals, orn, nye bulk 33 - Oils, weda 66% 57 0.90- 0.28-0.45 Cereals, orn, nye bulk 48 - Nater, 47° mix density 57 0.90- 0.28-0.41 Cereals, orn, nye bulk 48 - Nater, 47° mix density 57 0.90- 1.9-23 Four locates bulk 28 0.90-0.50 Nater, 47° mix density 57 0.90- 0.87-0.91 Fas 0.90-0.50 Nater, 50° with failen 5 0.80- 0.87-0.62 Glass, pate or crown 156 2.40-260 Nater, 50° with failen 64 1.02- 0.70-1.15 Glass, pate or crown 156 2.40-260 Mater, 50° with failen 64 1.02- 0.70-1.15 Glass, pate or crown 156 2.40-260 0.80- 1.02-	11-14 Cereals, oats Dulk 32 - Lye, soda 66% 106 0.05 0.65-0.65 Cereals, oron, nye Dolls, wegatable 2 0.018, wegatable 5 0 0.28-0.44 Cereals, oron, nye Dulk 33 - Dolls, wegatable 5 0 0.28-0.44 Cereals, oron, nye Dulk 48 - Nater, 4° Cmax, density 5 0 0.28-0.41 Hay and Strawn Dales 33 1,47-1.50 Water, 100°C 558.30 0 0 0.87-0.91 Faus Envir, pressed 47 0,70-0.80 0 0 44 1 - 0 144 - - 0 5 5 0<	11-14 Cereals, oats Dulk 32 - Lys. sold 665 105 0.65-0.85 Cereals, certy bulk 33 - Olis, weetade 665 55 0.22-0.45 Cereals, certy bulk 33 - Olis, weetade 665 55 0.247-057 Cereals, certy bulk 33 - Olis, weetade 665 55 0.247-057 Cereals, certy bulk 48 - Nater, too 53 0.27-057 Cereals, certy flax, Herm 23 147-1.50 Water, flow flext flain 54 0.87-058 Cereals, common 156 2.40-0.50 Water, flow 59.56 0.73-075 Cereals, common 156 2.40-2.60 Water, flow 64 0.73-075 Cereals, common 156 2.40-2.60 Water, snow, fresh flain 64 0.73-075 Glass, common 156 2.40-2.60 Water, snow, fresh flain 64 0.73-075 Glass, common 156 2.40-2.60 Water, snow fresh flain 64 0.73-075 Gla	11-14 Cereals, barly bulk 32 - Ups. sola 66% 106 106 0.66-0.65 Cereals, corn, nye bulk 33 - Oils, wegetable 57 0.09 0.28-0.47 Cereals, corn, nye bulk 33 - 0.01, whereat 106 0.98-0.47 Cereals, corn, nye bulk 48 - 0.01, whereat 57 0.09 0.97-0.57 Cereals, corn, nye bulk 48 - Nater, 100°C 58 0.09 0.87-0.01 Flour, pressed 147-1.50 Water, ison, fresh fallen 64 106 0.87-0.02 Flour, pressed 147-1.50 Water, ison, fresh fallen 64 106 0.73-0.75 Glass, crystal 161 240-56 0.08-0.03 107 107 0.73-0.75 Glass, crystal 161 242-2.75 Mater, ison, fresh fallen 64 106 0.73-0.75 Glass, crystal 161 242-2.75 Mater, ison, fresh fallen 106 107 <	1.2-1.5	VARIOUS SOLIDS			Acids, sulphuric 87%	112	1.8
0.65-085 Cereals bulk 39 - Olls, wegetable 56 0.91- 0.24-057 Cereals, orm, rye bulk 39 - Olls, mineral, lubricants. 57 0.91- 0.47-057 Cereals, orm, rye bulk 48 - Water, 100° C. 57 0.91- 1.9-14 Hay and Straw. bulk 48 - Water, 100° C. 5980 0.90- 0.87-037 Cereals, what bales 20 - Water, 100° C. 59830 0.90- 0.87-037 Certon, Flax, Hemp. 58 0.40-0.50 Water, 100° C. 59830 0.90- 0.87-037 Certon, Flax, Hemp. 58 0.40-0.50 Water, 100° C. 59 0.91- 0.73-075 Glass, common 156 2.40-2.60 Water, 100° C. 56 0.81 0.71-115 Glass, common 156 2.40-2.60 Water, 100° C. 56 0.81 0.71-115 Glass, common 156 2.40-2.60 Mater, 100° C. 1007	0.85-085 Cereals, barley bulk 39 - Oils, mineral, lubricants 58 0. 0.47-057 0.47-057 0.47-057 0.01s, mineral, lubricants 58 0. 0.47-057 0.47-057 0.47-057 0.01s, mineral, lubricants 57 0. 0.47-057 0.47-057 0.47-057 0.01s, mineral, lubricants 57 0. 0.47-057 0.47-057 0.01s, mineral, lubricants 57 0. 0. 0.87-057 0.87 0.87-057 0.01s, mineral, lubricants 57 0. 0.87 1.9-2.03 0.47-056 0.30-0.097 Water, team water, tons, tresh failen 58 0. 0.87 0.87 0.87 0.40-050 Water, teaw water, tons, tresh failen 64 1 0.73-075 0.48 0.40-050 Water, teaw water, tons, tresh failen 64 1 0.73-15 Leasther 161 2.42-272 0.06-0.05 0.476 0.715 Leaster 161 2.42-272 0.06-0.15 0.476 <td>0.65-0.85 Cereals, barley Dulk 38 - Olis, wontrall, ubricants 55 0.47-0.57 0.47-0.57 0.47-0.57 0.47-0.57 0.47-0.57 58 0.47-0.57 58 0.47-0.57 58</td> <td>0.65-085 Cereals, anti-yre bulk 39 - Olls, mineral, lubricans 57 0.03 0.28-0.44 Cereals, corn, rye bulk 48 - Olls, mineral, lubricans 57 0.03 0.47-0.51 Cereals, corn, rye bulk 48 - Olls, mineral, lubricans 57 0.03 0.47-0.53 Cereals, wheat bulk 20 - Water, for mx, density. 58 0.09 0.03 0.87-0.51 Cereals, wheat bulk 28 0.90-0.97 Water, for mx, density. 59 0.03 0.87-0.51 Flour, pressed 28 0.40-0.50 Water, sea water 59 0.03 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 64 1.02 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 64 1.02 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 1.02 0.03 0.73-0.75 Glass, pristed 161 2.40-2.80 0.38 0.07</td> <td>1.1-1.4</td> <td>Cereals, oatsbulk</td> <td>32</td> <td>I</td> <td>Lye, soda 66%</td> <td>106</td> <td>1.7</td>	0.65-0.85 Cereals, barley Dulk 38 - Olis, wontrall, ubricants 55 0.47-0.57 0.47-0.57 0.47-0.57 0.47-0.57 0.47-0.57 58 0.47-0.57 58 0.47-0.57 58	0.65-085 Cereals, anti-yre bulk 39 - Olls, mineral, lubricans 57 0.03 0.28-0.44 Cereals, corn, rye bulk 48 - Olls, mineral, lubricans 57 0.03 0.47-0.51 Cereals, corn, rye bulk 48 - Olls, mineral, lubricans 57 0.03 0.47-0.53 Cereals, wheat bulk 20 - Water, for mx, density. 58 0.09 0.03 0.87-0.51 Cereals, wheat bulk 28 0.90-0.97 Water, for mx, density. 59 0.03 0.87-0.51 Flour, pressed 28 0.40-0.50 Water, sea water 59 0.03 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 64 1.02 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 64 1.02 0.73-0.75 Glass, pristed 0.70-0.15 Water, sea water 1.02 0.03 0.73-0.75 Glass, pristed 161 2.40-2.80 0.38 0.07	1.1-1.4	Cereals, oatsbulk	32	I	Lye, soda 66%	106	1.7
0.28-0.44 Cereals. com. tye Ukl 48 - Oils 57 0.90 1.0-1.4 Hay and Straw. Ukls. 4 8 - Oils. flat. 0.47-0.57 0.47-0.57 0.47-0.57 0.40-0.50 Maler. 4°C micedli Ukls. 67 0.90 1.0-1.4 Hay and Straw. Ubulk 28 0.47-0.57 Water, for within the file 67 0.90 0.87-051 Edsts. wheat Ubulk 28 0.40-0.50 Water, for within the file 64 1.02- 0.87-051 Flour, loose 28 0.40-0.50 Water, sow witer, issow isso 68 0.80- 0.73-0.75 Glass, common 161 2.45-2.72 Olase, stow isso 0.8071 1.02- 0.73-0.75 Glass, common 161 2.45-2.72 Olase, stow isso 0.8071 1.02- 0.73-0.75 Glass, common 161 2.45-2.72 Olase, isso isso 0.8071 1.02- 0.70-115 Glass, common 161 2.45-2.72 Olase-0.69 0.8071 1.02- <td>0.27-057 Cereals, wom, rye bulk 48 - Oils 57 0 1.0-1.4 Cereals, wom, rye bulk 48 - Oils 57 0 1.0-1.4 Hay and Straw Dalk 48 - Waler, flow, fluckinstns 57 0. 1.0-1.4 Hay and Straw Dalk - Waler, flow Se 830 - 0.877-0.91 Fats. Cotton, Flax, Herp 28 0.40-050 Water, icow. itershiften 56 0. 0.877-0.92 Flour, floose 28 0.40-050 Water, icow. itershiften 64 1 0.73-0.75 Glass, patel or crown 147 2.42-202 Water, icow. itershiftelion 64 1 0.73-0.75 Glass, patel or crown 161 2.45-207 Water, icow. itershiftelion 64 1 1.00-1 Glass, patel or crown 161 2.45-207 0.470 173 0.73-0.75 Glass, patel or crown 161 2.45-207 0.470 1.47 1.478<td>0.289-044 Cereals, com, tye bulk 48 - Ols, mineral, thorinants 57 10-14 10-14 Water, tor, mx, density 83 - Valer, tor, mx, density 82 10-15 Cottor, Flax, Herno 33 147-150 Water, tor, mx, density 82 0.87-058 Fato 0.90-057 Water, tor 86 900-057 0.87-058 Fato 0.90-050 Water, tor 86 900-057 0.87-058 Fato 0.90-057 Water, tor 86 900-071 0.87-058 Fato 0.87-050 Water, tor 86 900-071 0.87-058 Gatss, common 156 2.40-2.60 Water, tor 86 0.73-058 Gatss, common 161 2.45-272 Gatss, common 64 1.20 Costo-069 Gatss, common 161 2.45-272 0.80-102 1.24 0.66-069 Gatss, common 161 2.42-2.02 0.47-05 0.476 0.66-067 Gatss, pater</td><td>0.250-044 0.280-044 Cereals, com. rye blik 48 - Olis minerial, lubricants 57 0.30 1.0-14 1.0-14 Hay and Straw 20 - Olis - 57 0.30 1.0-14 Hay and Straw 20 - Water, toor C 58 0.30 56 0.30 10.21 <t< td=""><td>0.65-0.85</td><td>Cereals, barley bulk</td><td>39</td><td>I</td><td>Oils, vegetable</td><td>58</td><td>0.91-(</td></t<></td></td>	0.27-057 Cereals, wom, rye bulk 48 - Oils 57 0 1.0-1.4 Cereals, wom, rye bulk 48 - Oils 57 0 1.0-1.4 Hay and Straw Dalk 48 - Waler, flow, fluckinstns 57 0. 1.0-1.4 Hay and Straw Dalk - Waler, flow Se 830 - 0.877-0.91 Fats. Cotton, Flax, Herp 28 0.40-050 Water, icow. itershiften 56 0. 0.877-0.92 Flour, floose 28 0.40-050 Water, icow. itershiften 64 1 0.73-0.75 Glass, patel or crown 147 2.42-202 Water, icow. itershiftelion 64 1 0.73-0.75 Glass, patel or crown 161 2.45-207 Water, icow. itershiftelion 64 1 1.00-1 Glass, patel or crown 161 2.45-207 0.470 173 0.73-0.75 Glass, patel or crown 161 2.45-207 0.470 1.47 1.478 <td>0.289-044 Cereals, com, tye bulk 48 - Ols, mineral, thorinants 57 10-14 10-14 Water, tor, mx, density 83 - Valer, tor, mx, density 82 10-15 Cottor, Flax, Herno 33 147-150 Water, tor, mx, density 82 0.87-058 Fato 0.90-057 Water, tor 86 900-057 0.87-058 Fato 0.90-050 Water, tor 86 900-057 0.87-058 Fato 0.90-057 Water, tor 86 900-071 0.87-058 Fato 0.87-050 Water, tor 86 900-071 0.87-058 Gatss, common 156 2.40-2.60 Water, tor 86 0.73-058 Gatss, common 161 2.45-272 Gatss, common 64 1.20 Costo-069 Gatss, common 161 2.45-272 0.80-102 1.24 0.66-069 Gatss, common 161 2.42-2.02 0.47-05 0.476 0.66-067 Gatss, pater</td> <td>0.250-044 0.280-044 Cereals, com. rye blik 48 - Olis minerial, lubricants 57 0.30 1.0-14 1.0-14 Hay and Straw 20 - Olis - 57 0.30 1.0-14 Hay and Straw 20 - Water, toor C 58 0.30 56 0.30 10.21 <t< td=""><td>0.65-0.85</td><td>Cereals, barley bulk</td><td>39</td><td>I</td><td>Oils, vegetable</td><td>58</td><td>0.91-(</td></t<></td>	0.289-044 Cereals, com, tye bulk 48 - Ols, mineral, thorinants 57 10-14 10-14 Water, tor, mx, density 83 - Valer, tor, mx, density 82 10-15 Cottor, Flax, Herno 33 147-150 Water, tor, mx, density 82 0.87-058 Fato 0.90-057 Water, tor 86 900-057 0.87-058 Fato 0.90-050 Water, tor 86 900-057 0.87-058 Fato 0.90-057 Water, tor 86 900-071 0.87-058 Fato 0.87-050 Water, tor 86 900-071 0.87-058 Gatss, common 156 2.40-2.60 Water, tor 86 0.73-058 Gatss, common 161 2.45-272 Gatss, common 64 1.20 Costo-069 Gatss, common 161 2.45-272 0.80-102 1.24 0.66-069 Gatss, common 161 2.42-2.02 0.47-05 0.476 0.66-067 Gatss, pater	0.250-044 0.280-044 Cereals, com. rye blik 48 - Olis minerial, lubricants 57 0.30 1.0-14 1.0-14 Hay and Straw 20 - Olis - 57 0.30 1.0-14 Hay and Straw 20 - Water, toor C 58 0.30 56 0.30 10.21 <t< td=""><td>0.65-0.85</td><td>Cereals, barley bulk</td><td>39</td><td>I</td><td>Oils, vegetable</td><td>58</td><td>0.91-(</td></t<>	0.65-0.85	Cereals, barley bulk	39	I	Oils, vegetable	58	0.91-(
U-1-U2/ (10-14) Cereals, main and Straw. Ubik (10-14) 48 (10-14) - Water, 10- (10-14) U-1- (10-14) U-1- (10-14) 13-23 (10-14) 13-23 (10-14) 13-23 (10-14) 13-23 (10-14) 13-23 (10-14) 147 (10-14) 13-23 (10-14) 13-23 (10-25) 13-23 (10-	U-1-U-1 Cereals, most Ublk 48 - Water, 10°C - 52.428 1.9-23 1.9-23 1.47-1.50 Water, 10°C - 56 0 1.9-23 0.87-0.91 Fas. - Water, 10°C - 56 0 0.87-0.91 Fas. 0.87-0.91 Fas. 58 0.40-0.50 Water, 10°C 56 0 0.87-0.82 Four, fosse 2.8 0.40-0.50 Water, 10°C 56 0 0.79-0.82 Four, fosse 2.47 0.70-0.80 Water, 10°C 56 0 0.79-0.82 Four, fosse 2.47 0.70-0.80 Water, 58a water 64 1 0.79-0.82 Four, fosses 1.47 0.70-0.80 Water, 58a water 64 1 0.79-0.82 Glass, crystal 1.120 Leather 165 2.45-2.75 0.8071 1 0.77-115 Glass, crystal 1.47 0.70-0.80 Mater, 58a water 1.43 1 1.20 <tr< td=""><td>10-11-4 User 4' Cmax density 20 10-12-3 Certary and Straw 20 - Water, 4'C max density 22.38 0.87-0.91 72.34 10-14 - Water, 4'C max density 26.330 56</td><td>U-1-Up-1 Cereals, water Dulk 48 - Water, 100°C Se2.428 0.10-14 1.9-2.3 1.0-14 Hay and Staw 0.30 0.31 1.47-1.50 Water, 100°C 56.30 0.86 0.87-031 Flour, Iosee 0.87 0.90-0.67 Water, 100°C 56.08 0.86</td><td>0.28-0.44</td><td>Cereals, corn, rye bulk</td><td>48</td><td>I</td><td>Oils, mineral, lubricants</td><td>57</td><td>-06.0</td></tr<>	10-11-4 User 4' Cmax density 20 10-12-3 Certary and Straw 20 - Water, 4'C max density 22.38 0.87-0.91 72.34 10-14 - Water, 4'C max density 26.330 56	U-1-Up-1 Cereals, water Dulk 48 - Water, 100°C Se2.428 0.10-14 1.9-2.3 1.0-14 Hay and Staw 0.30 0.31 1.47-1.50 Water, 100°C 56.30 0.86 0.87-031 Flour, Iosee 0.87 0.90-0.67 Water, 100°C 56.08 0.86	0.28-0.44	Cereals, corn, rye bulk	48	I	Oils, mineral, lubricants	57	-06.0
19-23 Tay and the Membranes 20 1,7 Water, iou 56 0.037 0.87-0.91 Fats Second 0.87-0.97 Water, iou 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.97 0.87-0.85 0.87-1.95 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 0.97-1.15 <	1.9-2.3 1.47-1.50 Water, loc 58 0.097-097 0.87-091 Fats Fats Fats 58 0.09-097 Water, loc 56 0. 0.87-075 Four, possed 28 0.09-050 Water, loc 56 0. 0.87-075 Four, possed 28 0.09-050 Water, sea water 56 0. 0.87-075 Glass, proved 28 0.09-050 Water, sea water 64 1. 0.73-075 Glass, proved 156 2.40-260 0. 0. 90071 0.73-075 Glass, proved 161 2.90-300 0.065-060 0.0478 0.73-15 Leather 161 2.90-300 0.067-105 0.0713 0.73-150 Leather 161 2.90-300 0.02715 0.0713 1.20-1.15 Leather 164 2.90-300 0.0276 0.078 1.20 Leather 164 2.90-305 0.0276 0.078	Tay and Straw Control. Flax. Herrop. Second Straw Second Stram	19-23 Tay and success 20 1,47-1.50 Water, low Current para 8 9,430,10 0.87 0.87-0.91 Fats 56 0,90-0,57 Water, low Current para 64 1,02 0.87-0.91 Fats 56 0,90-0,57 Water, low Current para 64 1,02 0.87-0.55 Flour, pressed 155 2,40-260 Water, see water 64 1,02 0.73-0.75 Glass, orminon 156 2,40-260 Water, see water 64 1,02 0.70-1.15 Leather 156 2,40-260 Water, see water 64 1,02 0.70-1.15 Catos, cystal 161 2,42-260 Water, see water 64 1,02 0.70-1.15 Leather 161 2,42-20 Water, see water 1,02 1,02 1.20 U.20-1.15 Leather 164 2,42-20 0,00 1,02 1,02 1.20 U.20-1.15 Leather 2,42-20 Catoon monide 1,23 1,12 1,12 1,12<	10.14/0.14	Cereals, wheat bulk	48	I	Water, 4°C max. density	62.428	
0.877-0.91 Fails 0.907-0.91 0.917-0.91 0.910-0.91 <th0.910-0.91< th=""> 0.910-0.91 0.910-0</th0.910-0.91<>	0.87-0.31 Fait 0.007 Fait 0.007 Fait 0.007 Fait 0.007 <th< td=""><td>0.87-091 Construction S8 Construction S9 Construction S9 Construction S9 Construction S9 Construction S8 Construction S9 <</td><td>0.87-0.91 Fails 0.90 7.47</td><td>1 9-2.3</td><td></td><td>02</td><td>1 47-1 60</td><td>Water ice</td><td>92.00</td><td></td></th<>	0.87-091 Construction S8 Construction S9 Construction S9 Construction S9 Construction S9 Construction S8 Construction S9 <	0.87-0.91 Fails 0.90 7.47	1 9-2.3		02	1 47-1 60	Water ice	92.00	
0.87 Flour, loose 28 0.40-0.50 Water, sea water 64 1.02- 0.73-0.75 0.73-0.75 Flour, loose 27 0.70-0.80 Water, sea water 64 1.02- 0.73-0.75 0.66-0.69 Glass, common 161 2.45-2.72 0.70-0.80 0.8071 1.02- 0.02-0.60 0.66-0.69 Glass, common 161 2.45-2.72 0.8071 1.120 1.07-1.15 Glass, control 161 2.45-2.72 0.8071 1.120 1.120 Leather 58 0.70-1.15 Amonia 0.7071 1.124 Pater 58 0.70-1.15 Amonia 0.7071 1.224 0.8760 Rubber goods 0.82 0.82-1.02 0.822-0.96 Carbon monoxide 0.7781 0.376	0.87 Fuur, losse 28 0.40–0.50 Water, sea water 64 1. 0.73–0.75 Glass, common 0.70–0.80 Water, sea water 64 1. 0.73–0.75 Glass, common 161 2.40–0.50 Water, sea water 64 1. 0.73–0.75 Glass, common 161 2.45–2.72 0.70–0.80 0.607 0.66–0.69 Glass, corrent 161 2.45–2.72 0.8071 64 1. 1.07–1.15 Glass, corrent 161 2.45–2.72 0.80671 64 1. 1.07–1.15 Glass, corrent 161 2.45–2.72 0.80671 64 1. 1.07–1.15 Glass, corrent 161 2.45–2.03 0.80671 247 0.4778 0.4778 0.4778 0.4778 0.4778 0.4778 0.4769 0.728–0.56 0.728–0.56 0.728–0.56 0.728–0.56 0.728–0.56 0.778 0.778 0.778 0.778 0.778 0.778 0.778 0.778 0.778 0.778 0.728–0.56	0.87 Four loose 26 0.40-0.50 Water, see water 64 0.73-0.58 Flour, loose 23 0.40-0.50 Water, see water 64 0.73-0.75 0.66-0.89 Glass, common 156 240-250 Water, see water 64 0.73-0.75 0.66-0.89 Glass, common 156 240-250 Water, see water 64 0.66-0.89 Glass, common 151 240-250 Glass, form 09071 1.20 Leather 154 240-203 Glass, form 040-105 1.20 Leather 161 240-203 Glass, form 040-105 1.20 Leather 164 164 240-203 040-105 040-105 1.20 Leather 0.80-105 0.80-105 040-105 040-105 040-105 1.20 Leather carbon monoide 0.70 0478 0.705 212 Hubber, caoutchouc 9 1.52 Carbon monoide 0.705 213 Nooi 1.32<	0.87 Four loose 28 0.40-0.50 Water, sea water 64 1.02 0.73-0.75 Four loose 28 0.40-0.50 Water, sea water 64 1.02 0.73-0.75 Glass, common 15 2.45-272 0.30-0.60 0.86-0.89 0.86-0.89 0.86-0.89 0.86-1.02 0.87 1.02 0.66-0.87 Glass, common 161 2.45-272 0.86-1.02 0.8071 1.02 1.20 Leaner 55 0.86-1.02 58 0.80-1.02 0.8071 0.8071 Paper 58 0.70-1.15 Annonia 0.8071 0.47 0.47 Paper 58 0.89-1.02 Carbon doxide 0.731 0.17 0.47 0.47 0.47 0.47 0.47 0.47 0.47 0.47 0.47 0.47 0.44 0.44 1.12 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 </td <td>0.87-0.91</td> <td>Fats</td> <td>282</td> <td>76.0-06.0</td> <td>Water snow fresh fallen</td> <td>ç «</td> <td>12</td>	0.87-0.91	Fats	282	76.0-06.0	Water snow fresh fallen	ç «	12
0.79-082 Flour, pressed 47 0.70-080 073-075 Glass, common file 1 0.77-080 0.77-080 0.73-075 Glass, common file 156 2.40-260 0.06-071 1 <td< td=""><td>Flour, presed 47 0.70–0.80 6 7 0.70–0.80 0.73–0.75 Glass, common 16 2.40–2.60 0.8071 1.007-1.15 0.66–0.69 Glass, crystal 1.07–1.15 Glass, crystal 0.8071 1.07–1.15 1.07–1.15 Glass, crystal 1.02–1.00 Leather 1.65 2.45–2.20 1.07–1.15 Glass, crystal 1.84 2.20–3.00 Glass, crystal 0.8071 1.07–1.15 Leather 1.65 2.45–2.20 Glass, crystal 0.8071 Paper 1.02–1.15 Mmonia 0.8071 0.478 0.478 Paper 2.81, granulated 42 2.90–0.96 0.478 0.478 Rubber (coold) 42 1.0–2.0 Gas, illuminating 0.038-0.03 0.038-0.03 Salit granulated 67 - Gas, illuminating 0.038-0.03 0.038-0.03 - 5.310 hr 1.32.2 0.0496 hr 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03</td><td>0.79-082 Flour, pressed 47 0.70-0.80 0.73-0.75 Glass, common 165 2,40-2.60 0.067 0.073-0.75 Glass, common 165 2,40-2.60 0.067 0.073-0.75 Glass, common 165 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 163 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.25 Glass, common 164 2,90-3.00 Glass, common 164 2,90-3.00 Glass, common 1220 1224 1027-115 Annonia 1037-13 Annonia 1047 0.0071 1047 Phober cook Phober cook Phober cook Phober cook Phobe 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05</td><td>0.73-075 Flour, pressed 47 0.70-080 67 0.77-080 0.73-075 Glass, common method 151 2.40-260 0.77-080 0.73-075 0.73-075 Glass, constant 151 2.40-260 0.66-0.69 0.66-0.69 1.07-1.15 Glass, crystal 161 2.42-216 0.6071 0.6071 1.201 Leather 58 0.80-300 CASES 0.6071 0.478 0.12478 1.201 Leather 58 0.70-115 Air, 0°C 760 mm 0.478 0.12478 0.12478 Paper 58 0.70-115 Air, 0°C 760 mm 0.478 0.0279 0.038-0.050 0.3781 0.12478 0.12478 0.12478 0.12478 0.12478 0.12478 0.12418 0.12478 0.12478 0.12418 0.0259 0.0359 0.0356 0.0355 0.0356 0.0355 0.02559 0.0356 0.0355 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 <td< td=""><td>0.87</td><td>Flour, loose</td><td>28</td><td>0.40-0.50</td><td>Water, sea water</td><td>64</td><td>1.02-</td></td<></td></td<>	Flour, presed 47 0.70–0.80 6 7 0.70–0.80 0.73–0.75 Glass, common 16 2.40–2.60 0.8071 1.007-1.15 0.66–0.69 Glass, crystal 1.07–1.15 Glass, crystal 0.8071 1.07–1.15 1.07–1.15 Glass, crystal 1.02–1.00 Leather 1.65 2.45–2.20 1.07–1.15 Glass, crystal 1.84 2.20–3.00 Glass, crystal 0.8071 1.07–1.15 Leather 1.65 2.45–2.20 Glass, crystal 0.8071 Paper 1.02–1.15 Mmonia 0.8071 0.478 0.478 Paper 2.81, granulated 42 2.90–0.96 0.478 0.478 Rubber (coold) 42 1.0–2.0 Gas, illuminating 0.038-0.03 0.038-0.03 Salit granulated 67 - Gas, illuminating 0.038-0.03 0.038-0.03 - 5.310 hr 1.32.2 0.0496 hr 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03 0.038-0.03	0.79-082 Flour, pressed 47 0.70-0.80 0.73-0.75 Glass, common 165 2,40-2.60 0.067 0.073-0.75 Glass, common 165 2,40-2.60 0.067 0.073-0.75 Glass, common 165 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 163 2,45-2.75 Glass, common 163 2,44-2.20 Glass, common 161 2,45-2.75 Glass, common 163 2,44-2.25 Glass, common 164 2,90-3.00 Glass, common 164 2,90-3.00 Glass, common 1220 1224 1027-115 Annonia 1037-13 Annonia 1047 0.0071 1047 Phober cook Phober cook Phober cook Phober cook Phobe 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05 0.32-0.05	0.73-075 Flour, pressed 47 0.70-080 67 0.77-080 0.73-075 Glass, common method 151 2.40-260 0.77-080 0.73-075 0.73-075 Glass, constant 151 2.40-260 0.66-0.69 0.66-0.69 1.07-1.15 Glass, crystal 161 2.42-216 0.6071 0.6071 1.201 Leather 58 0.80-300 CASES 0.6071 0.478 0.12478 1.201 Leather 58 0.70-115 Air, 0°C 760 mm 0.478 0.12478 0.12478 Paper 58 0.70-115 Air, 0°C 760 mm 0.478 0.0279 0.038-0.050 0.3781 0.12478 0.12478 0.12478 0.12478 0.12478 0.12478 0.12418 0.12478 0.12478 0.12418 0.0259 0.0359 0.0356 0.0355 0.0356 0.0355 0.02559 0.0356 0.0355 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 0.02559 <td< td=""><td>0.87</td><td>Flour, loose</td><td>28</td><td>0.40-0.50</td><td>Water, sea water</td><td>64</td><td>1.02-</td></td<>	0.87	Flour, loose	28	0.40-0.50	Water, sea water	64	1.02-
0.73-0.75 0.65-0.69 Glass, common 156 2.40-2.60 0.65-0.69 Glass, path of crown 161 2.45-2.50 1.07-1.15 Glass, cystal 161 2.45-2.50 Glass, cystal 0.67-0.67 1.07-1.15 Glass, cystal 58 0.06-1.02 Glass, cystal 0.8071 1 1.20 Paper 58 0.06-1.02 58 0.70-1.15 0.8071 1 Paper 58 0.06-1.02 58 0.70-1.15 Air, 0°C 760 mm 0.8071 1 Paper 58 0.02-0.96 Carbon dioxide 0.7781 0.55 0.55 201 78 1.0-2.0 Gas, nithminating 0.7781 0.55 201 84 1.0-2.0 Gas, nithminating 0.789-0.36 0.78- 201 84 1.0-2.0 Gas, nithminating 0.78-0.39 0.47- 201 7 1.0-2.0 Gas, nithminating 0.78-0.39 0.47- 201 7 1.0-2.0 Gas, nithminating 0.79-0.36	0.73-075 Glass. common 156 2.40-2.60 0.66-0.69 Glass. pystal 0.66-0.69 Glass. pystal 2.45-2.72 Glass. pystal 0.0071 1.20 1.20 1.245-2.72 Glass. pystal 0.0071 1.20 1.20 Cases. pystal 0.0071 0.0071 Paper 0.066-1.02 CASES 0.06071 0.0711 Paper 0.061-1.02 CASES 0.06071 0.0731 Paper 0.020 0.05-0.96 CASES 0.070-1.15 Annonia Paper 0.020-1.02 CASES 0.020-1.15 Annonia 0.0731 Paper 0.020-0.96 0.02-0.96 CASES 0.0731 0.0731 Paper 0.020-0.96 0.02-0.96 0.02-0.96 0.029-0.06 0.0731 Pathers 0.02-0.96 0.02-0.96 0.02-0.96 0.029-0.06 0.038-0.07 Pathers 0.02-0.96 0.02-0.96 0.02-0.96 0.029-0.06 0.038-0.07 Saltipeter 0.02-0.96 1.53	0.73-0.75 Glass, common 156 2.45-2.50 0.73-0.75 0.85-0.56 0.65-069 Glass, pate or crown 161 2.45-2.72 0.06-01 0.07-01 1.07-1.15 Leather 58 0.06-1.02 GASES 0.0001 1.07-1.15 Leather 58 0.06-1.02 GASES 0.09071 Pater 58 0.06-1.05 GASES 0.07-1.15 Annonia 0.0478 Pater 58 0.05-0.15 Annonia 0.037-0.15 Annonia 0.071 Pater 58 0.02-0.16 42 0.02-0.06 Carbon choucle 0.031 58.15 Patrolest cooutchouc 99 0.32-0.06 Carbon monoxide 0.032-0.05 7 53.15 1.0-2.0 Gas, intuminating 0.028-0.06 0.035-0.05 7 63 1.0-2.0 Gas, intuminating 0.035-0.05 0.035-0.05 7 7 63 1.32 0.035-0.05 0.035-0.05 7 63 1.32 0.035-0.	0.73–075 Glass, common 156 2.40–2.60 0.65–0.69 Glass, cystal 0.06071 1 0.65–0.69 Glass, cystal 1.07–1.15 Leather 2.49–2.60 CASES 0.8071 0.807	0.79-0.82	Flour, pressed	47	0.70-0.80			
0.66-089 Glass, orystal 161 2.45-272 0.45-073 0.86-073 0.8071 1 1.07-115 Glass, orystal 184 290-300 6ASS 0.8071 1 1 1.20 Leather 53 0.70-115 Annonia 0.8071 1 1 Paper 53 0.70-115 Annonia 0.7071 0.713 0.478 0.8071 1 Paper 53 0.70-115 Annonia 0.7781 0.781	0.66-059 Glass, plate or crown 161 2.45-272 Glass, plate or crown 161 2.45-272 1.0 ⁻¹ 15 Glass, crystal 184 2.90-300 0.6071 1.0 ⁻¹ 15 Glass, crystal 184 2.90-300 0.6071 1.0 ⁻¹ 15 Glass, crystal 184 2.90-300 0.6071 Papter 58 0.70-1.15 Air, or C760 mm 0.477 Papter 58 0.70-1.15 Air, or C760 mm 0.473 Rubber, cacutronce 94 1.0-2.0 Garbon dodde 0.781 Salt, granulated, pled 48 - Gas, naturali 0.28-0.305 0 2 58.11 granulated, pled 48 - Gas, naturali 0.0559 0 2 58.11 granulated, pled 48 - 58.11 mm 0.783 0.0559 0 2 53.11 mm 1.53 Hydrogen 0.0559 0 0.0559 0 0.0559 0 2 53.11 mm 1.32 0xygen 0.0559	0.66-089 Glass, opstal 161 2.45-272 0.66-089 0.66-073 1.20 1.21 44.20-300 0.88-10.5 0.98-10.5 0.9071 1.20 Leather 58 0.70-115 Amnonia 0.9071 Paper 88 0.70-115 Amnonia 0.478 Paper 936 0.70-115 Amnonia 0.478 Paper 7 2.80 0.32-0.96 Carbon dioxide 0.478 Paper 7 94 1.0-2.0 Gass, natural 0.9071 Paper 7 94 1.0-2.0 Gass, natural 0.784 Paper 58 0.32-0.96 Gass, natural 0.784 0.785 Paper 667 - 68.3 0.792 0.782 0.782 Satipeter 1.53 1.53 Nitrogen 0.784 0.795 0.784 2 1.53 1.53 Nitrogen 0.082 0.784 0.074 2 5 1.53 <td< td=""><td>0.66-059 1.07-115 Glass, crystal 161 2.45-2.72 2.90-300 CASES 1.07-115 Glass, crystal 194 2.90-300 CASES 1.20 Leather 2.90-300 CASES 0.8071 1.20 Leather 2.90-300 CASES 0.8071 1.20 Leather 2.90-300 CASES 0.8071 2.120 Attrinofic 2.90-306 CASES 0.8071 2.120 Distribution 58 0.70-115 Attrinofic 0.8071 2.120 Distribution 59 0.82-0.96 Carbon dioxide 0.7781 0.1781 2.91 Distribution 59 0.92-0.96 Carbon dioxide 0.27-0.305 0.31 2.91 Distribution 59 0.92-0.96 Carbon dioxide 0.27-0.305 0.31 0.31 2.91 Saltpeter 1.0-2.0 Carbon dioxide 0.29-0.36 0.31 0.31 2.91 Saltpeter 1.32 Nitrogen 0.32-0.36 0.31 <t< td=""><td>0.73-0.75</td><td>Glass, common</td><td>156</td><td>2.40-2.60</td><td></td><td></td><td></td></t<></td></td<>	0.66-059 1.07-115 Glass, crystal 161 2.45-2.72 2.90-300 CASES 1.07-115 Glass, crystal 194 2.90-300 CASES 1.20 Leather 2.90-300 CASES 0.8071 1.20 Leather 2.90-300 CASES 0.8071 1.20 Leather 2.90-300 CASES 0.8071 2.120 Attrinofic 2.90-306 CASES 0.8071 2.120 Distribution 58 0.70-115 Attrinofic 0.8071 2.120 Distribution 59 0.82-0.96 Carbon dioxide 0.7781 0.1781 2.91 Distribution 59 0.92-0.96 Carbon dioxide 0.27-0.305 0.31 2.91 Distribution 59 0.92-0.96 Carbon dioxide 0.27-0.305 0.31 0.31 2.91 Saltpeter 1.0-2.0 Carbon dioxide 0.29-0.36 0.31 0.31 2.91 Saltpeter 1.32 Nitrogen 0.32-0.36 0.31 <t< td=""><td>0.73-0.75</td><td>Glass, common</td><td>156</td><td>2.40-2.60</td><td></td><td></td><td></td></t<>	0.73-0.75	Glass, common	156	2.40-2.60			
1.20 Cases, cystal 124 2.90-3.00 CASES 0.8071 1. Paper 58 0.70-1.15 Air, 0°C 760 mm 0.8071 1. 1. Paper 58 0.70-1.15 Air, 0°C 760 mm 0.8071 1. 1. Paper 58 0.70-1.15 Air, 0°C 760 mm 0.478 0.55 Paper 58 0.70-1.15 Air, 0°C 760 mm 0.478 0.55 Paper 58 0.70-1.15 Air, 0°C 760 mm 0.478 0.55 Pabros, cauchouc 59 0.22-0.96 Carbon monoxide 0.7781 0.37 Pubber goods 94 1.0-2.0 Carbon monoxide 0.781 0.36 Salt, granulated, piled 48 - Gas, illuminating 0.38-0.36 0.35- Saturch 96 1.53 hytrogen 0.365 0.35- Subhur 1.53 Nitrogen 0.7784 0.39 0.77 A 1.53 Nitrogen 0.39 0.77	1120 Ides. crystal 194 2.90-300 GASES 09071 1.20 Learther 58 0.70-1.15 Air, 0°C 760 mm 09071 Patrios 58 0.70-1.15 Air, 0°C 760 mm 04071 Patrios 58 0.70-1.15 Air, 0°C 760 mm 04071 Patrios 58 0.70-1.15 Air, 0°C 760 mm 0471 Patrios 58 0.70-1.15 Air, 0°C 760 mm 0471 Patrios 58 0.70-1.16 Air, 0°C 760 mm 0471 Patrios 58 0.22-0.96 Carbon nonoxide 0781 Air, 0°C 760 mm 63. filuminating 0.781 0.781 Air, 0°C 760 mm 63. filuminating 0.781 0.781 Air, 0°C 780 mm 7 7 Air, 0°C 780 mm 0.781 Air, 0°C 780 mm 63. filuminating 0.781 0.782 0.782 0.782 Air, 0°C 780 mm 7 7 7 7 0.781 0.784 Air 10-2.0 7 1	Till Constraint 184 2.90–3.00 CASES Till Leather 59 0.66–1.02 CASES 0.9071 Paper 59 0.66–1.02 Att, 0°C 760 mm 0.4078 Paper 59 0.66–1.02 Att, 0°C 760 mm 0.4071 Paper 59 0.68–1.02 Att, 0°C 760 mm 0.4071 Paper 50 0.70–1.15 Att, 0°C 760 mm 0.4071 Paper 50 0.70–1.12 Att, 0°C 760 mm 0.4071 Paper 58 0.70–1.12 Att, 0°C 760 mm 0.438 Paper 58 0.70–1.12 Att, 0°C 760 mm 0.438 Saltpeter 48 1.0–2.05 Carbon moxide 0.728–036 Saltpeter 48 1.53 Carbon moxide 0.728–036 Saltpeter 155 1.53 0.038–036 0.0359 Saltpeter 155 1.53 0.0490 0.0559 Mool 1.55 0.04900 0.0569 0.0569	Tito Class, crystal 184 2:90-300 CASES 0:0071 1.20 Leather 36 0:67-115 Air, o' C' 760 mm 0:0071 Paper 58 0.70-115 Air, o' C' 760 mm 0:0071 Paper 58 0.70-115 Air, o' C' 760 mm 0:0071 Paper 58 0.70-115 Air, o' C' 760 mm 0:0071 Paper 58 0.32-0.96 0:037 0:0731 0:0731 Paber goods 94 1.0-2.0 Carbon doxide 0:0731 0:0539 0:41 Safter 94 1.0-2.0 Carbon monxide 0:0731 0:0539 0:41 7 93 1.10-2.0 Carbon monxide 0:0539 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:0559 0:41 0:055	0.66-0.69	Glass, plate or crown	161	2.45-2.72			
Learner Dealer Dealer <thdealer< th=""> <thdealer< th=""> <thdealer< t<="" td=""><td>Total Learner 59 0.060-1.02 Gastra 0.08071 Paper Air, 0^oC 760 mm 0.478 0.478 0.478 Paper Air, 0^oC 760 mm 0.478 0.478 0.478 Paper 0.320-0.96 0.320-0.96 0.478 0.478 Rubber, coalchouc 59 0.92-0.96 Carbon moxide 0.781 Rubber, coalchouc 59 0.92-0.96 Carbon moxide 0.781 Salt, granulated, piled 48 - 638, iluminiating 0.035-0.96</td><td>The specific gravities of solids and figuids refer to water at 1.0 Dispect of the solid soli</td><td>The specific granulated, of the specific granulated of solids and inquids refer to watter at 4.°C. To mmonia Carbon mmonia 0.0871 0.1378 0.0371 0.1378 0.0371 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1324 0.1324 0.1324 0.1324 0.1324 0.1324 0.1324 0.1326 0.328 0.336</td><td>c1.1-/0.1</td><td>Glass, crystal</td><td>184</td><td>2.90-3.00</td><td></td><td></td><td></td></thdealer<></thdealer<></thdealer<>	Total Learner 59 0.060-1.02 Gastra 0.08071 Paper Air, 0 ^o C 760 mm 0.478 0.478 0.478 Paper Air, 0 ^o C 760 mm 0.478 0.478 0.478 Paper 0.320-0.96 0.320-0.96 0.478 0.478 Rubber, coalchouc 59 0.92-0.96 Carbon moxide 0.781 Rubber, coalchouc 59 0.92-0.96 Carbon moxide 0.781 Salt, granulated, piled 48 - 638, iluminiating 0.035-0.96	The specific gravities of solids and figuids refer to water at 1.0 Dispect of the solid soli	The specific granulated, of the specific granulated of solids and inquids refer to watter at 4.°C. To mmonia Carbon mmonia 0.0871 0.1378 0.0371 0.1378 0.0371 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1378 0.1324 0.1324 0.1324 0.1324 0.1324 0.1324 0.1324 0.1326 0.328 0.336	c1.1-/0.1	Glass, crystal	184	2.90-3.00			
Taper Taper Contrant Contrant <thcontrant< th=""> <thcontrant< th=""> <thcont< td=""><td>Anthone 0.07-1.13 0.070 0.070 0.070 Patter Attribution 0.07 0.070 0.070 0.070 Pubber cautobro goods 0.02 0.02 0.05 0.071 0.070 Rubber cautobro goods 0.02 0.02 0.06 0.071 0.071 Rubber cautobro goods 0.02 0.02 0.06 0.02 0.071 Satipater cautobro doxide 1.0 0.2 0.02 0.036 0.038 0.035 0</td><td>Terper Terper Terper<</td><td>Taper Taper <th< td=""><td>27</td><td>Leather</td><td>60</td><td>0.86-1.02</td><td>Air OLC 760 mm</td><td>12000</td><td>Ŧ</td></th<></td></thcont<></thcontrant<></thcontrant<>	Anthone 0.07-1.13 0.070 0.070 0.070 Patter Attribution 0.07 0.070 0.070 0.070 Pubber cautobro goods 0.02 0.02 0.05 0.071 0.070 Rubber cautobro goods 0.02 0.02 0.06 0.071 0.071 Rubber cautobro goods 0.02 0.02 0.06 0.02 0.071 Satipater cautobro doxide 1.0 0.2 0.02 0.036 0.038 0.035 0	Terper Terper<	Taper Taper <th< td=""><td>27</td><td>Leather</td><td>60</td><td>0.86-1.02</td><td>Air OLC 760 mm</td><td>12000</td><td>Ŧ</td></th<>	27	Leather	60	0.86-1.02	Air OLC 760 mm	12000	Ŧ
Public calculation 55 0.92-0.96 Calculation 12.4 1.53 Rubber goods 94 1.0-2.0 Calchon dioxide 1.724 1.53 Rubber goods 94 1.0-2.0 Calchon monoxide 0.781 0.781 0.781 Saft, granulated, piled 67 - Gas, illuminating 0.038-036 0.47- Satter 67 - Gas, illuminating 0.0569 0.47- Satter 67 - Gas, illuminating 0.0569 0.47- Vool 152 132-207 Nitrogen 0.0559 0.47- Vool 152-207 Nitrogen 0.0559 0.01- Vool 152-207 Nitrogen 0.0259 0.01 Vool 152-207 Nitrogen 0.0259 0.01 Vool 152 0.039 0.01 0.0259 0.01	Abbber, cauchouc 59 0.92–0.96 Carbon doxide 1.234 Aubber goods 0.92–0.96 Carbon monoxide 0.781 0.781 Saft granulated, piled 44 1.0–2.0 Carbon monoxide 0.781 Saft granulated, piled 48 - Gas, illuminating 0.282–0.096 0.781 Saft granulated, piled 48 - Gas, illuminating 0.038–039 0 Statch 96 1.53 Hydrogen 0.0559 0 Subhur 125 1.322 Oxygen 0.0559 0 Vool 82 1.322 Oxygen 0.0559 0	Protection 59 0.92-0.96 Carbon monitor 124 Rubber, cauchouc 59 0.92-0.96 Carbon monoide 0.731 - Rubber, cauchouc 59 1.0-2.0 Gas, illumiaring 0.731 - Salt, granulated, piled 67 - Gas, illumiaring 0.23-039 - Salt, granulated, piled 67 - Gas, illumiaring 0.23-039 - Gas, illumiaring - 263, illumiaring 0.23-039 0.33-039 - Gas, illumiaring - 1.53 Nitrogen 0.034-039 - - - - - 0.33-039 - - - - 0.33-039 - - - - 0.034-039 - - - 1.32 Nitrogen . - - - - 0.034 . - - - - 0.034 . - - -	- - <td></td> <td>Detatoos pilod</td> <td>00</td> <td></td> <td>Ammonia</td> <td>0478</td> <td>0 20</td>		Detatoos pilod	00		Ammonia	0478	0 20
Rubber goods 94 1.0–2.0 Carbon monoxide 0.781 0.84 Salt, garvulatel, piled 43 – Gats, niturnianing .028–036 0.38- Salt, garvulatel, piled 43 – Gats, niturnianing .028–036 0.38- Salt, garvulatel, piled 43 – Gats, niturnianing .028–036 0.38- Satech 96 1.53 Hydrogen .038-039 0.47- Subrur 125 1.33-2.07 Nitrogen .0784 0.30 Vool 22 Oxygen .0784 0.30 .0764	Rubber goods 94 1.0–2.0 Carbon monoxide .0781 Salt, granulated, piled 48 - Gas, nituraling .0781 Salt, granulated, piled 48 - Gas, nituraling .078039 0 Salt, granulated, piled 48 - Gas, nituraling .028039 0 Salt, granulated, piled 66 1.53 Hydrogen .00559 0 Notol 132 0.0559 1.32 .00599 .0784	Image: Control of the state of the	- - - - - - - - 0781 0.07 - - - - - - - - - - - 0.07 -		Rubber caoutchouc	28	0.92-0.96	Carbon dioxide	.1234	1.52
Zalt, granulated, piled 48 - Gas, illuminating	5ait. granulated, piled 48 - Gas. illuminating	- Salt, granulated, piled 48 - Gas, itiluminating 0.228-036 - Saltpeter 67 - Gas, itiluminating 0.33-035 - Saltpeter 67 - 363, itiluminating 0.33-035 - Saltpeter 67 1.53 Hydrogen	7 Sait, granulated, piled 48 - Gas, illuminating .028036 0.38 7 Saitpeler .038039 0.47 .038039 0.47 7 Saitpeler .038039 0.47 .038039 0.47 7 Gas, inturnating .038039 0.47 .038039 0.47 7 Startor 125 1.53 Nitrogen .0055-90 0.47 7 Startor 125 1.32-207 Nitrogen .00784 0.1 7 Nool .125 1.32-207 Nitrogen .00784 0.1 7 Nato 125 1.32 Oxygen .00922 1 7 Nitrogen .014 .012 .028-0036 .028 .028 7 Nitrogen .028 1.32 Oxygen .00922 1 7 Nitrogen .016 .028 .013 .028 .028 7 Nitrogen .0128 .0138		Rubber goods	94	1.0-2.0	Carbon monoxide	.0781	0.96
Saltpeter 67 - Gas. natural 0.035-039 0.47- Starch 96 1.53 Hydrogen 0.0659 0.005 Subbut 95 1.53 Hydrogen 0.0784 0.019 Wool 1.32 0xygen 0.774 0.992 1.11	Saltpeter 67 - Gas, natural 038039 0. Sarch 96 1.53 Hydrogan 00559 0. Suphur 125 1.392-2.07 Nitrogan 00559 0. Wool 1.32 Dxygen 0.0892 0.	2 Sarpeter 67 - 038-noturel 038-nota 2 Starch - 66 1.53 Hydrogen 003569 2 Suphur 125 1.93-2.07 Nitrogen 005569 2 001 125 1.32 Oxygen 00559 1 32 1.32 Oxygen 00559 1 1.32 0xygen 0082 1 1.32 0xygen 014	5 5 - - Gas. natural .033039 0.47 2 Starch	I	Salt, granulated, piled	48	I	Gas, illuminating	.028036	0.35-
Starch 96 1.53 Hydrogen 00559 005 Sulphur 1.55 1.82–2.07 Nitrogen .0784 0.91 Wool 1.55 1.82–2.07 Nitrogen .0784 0.92 Wool 1.55 1.32 Oxygen .0784 0.92 1.11 1.32 Oxygen .0692 1.11	Starch 96 1.53 Hydrogen 00559 Suphur 125 1.93-2.07 Nitrogen	Starch 96 1.53 Phdrogen .00559 Suphur 20phur .00559 .00569 Suphur 125 1.53 Nitrogen .0784 Wool	2 1.53 Hydrogen .00559 00 Suphur .00559 01 .00559 01 Suphur .0051 .00 .00 .00 Nool .00 .01 .00 .01 Nool .00 .01 .00 .01 Nool .00 .01 .00 .01 Inc. The .00 .00 .00 .00 Inc. The .00 .01 .00 .00 Inc. The .00 .00 .00 .00		Saltpeter	67	1	Gas, natural	.038039	0.47
Sulphur 125 1.33-2.07 Nitrogen	- Sulphur	Suphur 125 133-2.07 Nitrogen 0.784 Wool 0.014 0.0392 0.0392 0.0392 Wool 1.32 0.0xygen 0.0892 0.0892 The specific gravities of solids and liquids refer to water at 4. C, those of gases to air at 0°C and 760 mm pressure. The 0.0 0.0	Suphur 125 1:32 07 Nitrogen 0784 03 Wool Wool 03 1:32 0xygen 0392 1 Wool The specific gravities of solids and liquids refer to water at 4°C, those of gases to air at 0°C and 760 mm pressure. The weights per cubic foot are derived from average specific gravities, except where stated that weights are for bulk, heaped, of 0692 1		Starch	96	1.53	Hydrogen	.00559	0.06
Wool	Wool	Wool 82 1.32 0xygen .0892	Wool 00092 1.32 0xygen 00892 1 Ure. The The specific gravities of solids and liquids refer to water at 4°C, those of gases to air at 0°C and 760 mm pressure. The weights per cubic foot are derived from average specific gravities, except where stated that weights are for bulk, heaped, or 1000000000000000000000000000000000000	1	Sulphur	125	1.93-2.07	Nitrogen	.0784	0.97
		ure. The	ure. The The specific gravities of solids and liquids refer to water at 4. C, those of gases to air at 0°C and 760 mm pressure. The heaped, of weights per cubic foot are derived from average specific gravities, except where stated that weights are for bulk, heaped, of		Wool	82	1.32	Oxygen	.0892	1.10
		ure. The The specific gravities of solids and liquids refer to water at 4°C, those of gases to air at 0°C and 760 mm pressure. The	ure. The ure. The heaped, or weights per cubic foot are derived from average specific gravities, except where stated that weights are for bulk, heaped, or weights per cubic foot are derived from average specific gravities, except where stated that weights are for bulk, heaped, or							

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0.79 1.20 1.50 1.80 1.70 0.91-0.94 0.90-0.92 0.9684 0.9584 0.88-0.92 .125 1.02-1.03

Note Set 13.1

		M	4				0	0.	_		-	Ē	-	-				_	_	<	~ ~	~ ~		. 0)		_								¥				-															The	haw
Cherry	Gravity		2.1-2.8	4.50	2.55	1.7-1.8	1.8-2.6	1.8-2.6	25.96	2.4-2.7	2.5-3.1	2.8-3.2	2.3-2.8	0.5	3.0	3.2	2.6-2.9	0.37-0.90	2.5-2.8	0.7 - 7.9	2.6-2.8					I	I	I				1.1-1.5	1.4-1.7	1.2-1.5	0.65_0.85	0.28-0.44	0.47-0.57	1.0-1.4	0.2-6.1	0.87	0.79-0.82	0.73-0.75	0.66-0.69	CI.I-/0.1	27.1			1	1	1 1	1		The aped, or	
Weight Ib per	cu ft		281	184	159	109	137	181	159	159	175	18/	187	165	187	200	172	40	147	175	169			00	95 55	82	92	107				81	97	84	8/	53	33	75	131	54	50	46	42	69	0			4758	40-54	20-26	23-32		mm pressure. The for bulk, hear	
	Substance		Barvtes	Basalt	Bauxite	Chalk	Clar. marl	Dolomite	Feldspar, orthoclase	Gneiss, serpentine	Granite, syenite	Giverity alabeter	Hornblende	Limestone, marble	Magnesite	Phosphate rock, apatite	Porphyry	Pumice, natural	Sandstone hijestone	Shale slate	Soapstone, talc			STONE, QUARRIED, PILED	Limestone, marble, quartz	Sandstone	Shale	Greenstone, hornblende			BITUMINOUS SUBSTANCES	Asphaltum	Coal, anthracite	Coal, bituminous	Coal post turf day	Coal, charcoal, pine	Coal, charcoal, oak	Coal, coke	Denoficio	Petroleum	Petroleum, refined	Petroleum, benzine	Petroleum, gasoline	Pitch	lar, bituminous		COAL AND COKE. PILED	Coal, anthracite	Coal, bituminous, lignite	Coal charooal	Coal coke		iose of gases to air at 0°C and 760 r except where stated that weights ar	
Specific	Gravity	05-30	2.3-2.8	2.1-2.4			2.2-2.8	2.2-2.6	2.0-2.2		000	10-01	1.8-1.9			2.2-2.3	1.8-2.0	1.1-0.1		2 2-2 4	1.9-2.3				11	2.7-3.2	I	1.4-1.9	I	1	1 1			I		I	I	I	1		I		1	1	1 1		I	ı	I	1			water at 4°C, tr pecific gravities.	0
Weight Ib per	cu ft	165	160	140			155	150	130		00+	135	110			140	120	001		144	130	8		40 VE	606	183	53-64	103	67-72	98-11/	30 49–55			63	001	76	95	78	90	115	80-85	06	105	-105 CC1	118-120		60	65	80	90	65		liquids refer to from average s	
	Substance	Granite svenite oneiss	Limestone, marble	Sandstone, bluestone		MASONRY	Granite, svenite, gneiss	Limestone, marble	Sandstone, bluestone		Gradite avoite avoite	Limestone marble	Sandstone, bluestone		BRICK MASONRY	Pressed brick	Common brick	Solt Drick	CONCRETE MASONRY	Cement, stone, sand	Cement, slag, etc.		VARIOUS BUILDING	Achoe cindore	Cement, portland, loose	Cement, portland, set	Lime, gypsum, loose	Mortar, set	Slags, bank slag	Slace machine elac	Slads, macimie slag	3	EARTH, ETC., EXCAVATED	Clay, dry	Clay and gravel dry	Earth, dry, loose	Earth, dry, packed	Earth, moist, loose	Earth mud flowing	Earth. mud. packed	Riprap, limestone	Riprap, sandstone	Riprap, shale	Sand, gravel, dry, loose	Sand, gravel, wet	EVCAVATIONS IN MATER	Sand or gravel	Sand or gravel and clay	Clay	Roil	Stone riprap		I he specific gravities of solids and weights per cubic foot are derived	loose material, etc.

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Specific Gravity

Table 17-12. Weights and Specific Gravities

1.0 0.5920 1.5291 0.9673 0.35-0.45 0.47-0.48 0.0693 0.0693 1.1056

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Table 17-14. Weights and Measures United States System	LINEAR MEASURE	Inches Feet Yards Eurlongs Miles	1.0 = .08333 = .02778 = .0050505 = .00012626 = .0001578	12.0 = 1.0 = .33333 = .0000001 = .00151515 = .00016353 36.0 = 3.0 = 1.0 = .1818182 = .00454545 = .00056818	198.0 = 16.5 = 5.5 = 1.0 = .025 = .003125	7,920.0 = 660.0 = 220.0 = 40.0 = 1.0 = .125 63.360.0 = 5.260.0 = 1.760.0 = 320.0 = 8.0 = 1.0							SQUARE AND LAND MEASURE	Sa Inches Sauare Feet Sauare Vards Sauare Bods Acres Sa Miles		1.0 = .006944 = .00772	1.266.0 = 9.0 = 1.0 = 0.3306 = 0.00207	39,204,0 = 272,25 = 30,25 = 1.0 = .00625 = .000098	43,560.0 = 4,840.0 = 160.0 = 1.0 = 0015625	3,097,500.0 = $102,400.0$ = 640.0 = 1.0					AVOIRDUPOIS WEIGHTS	Conject Downs Access Deceded	Oranis Durkes Founds 1005	1.0 = .03657 = .002286 = .000143 = .00000714	437.5 = 16.0 = 1.0 = .00300 = .00003125	7,000.0 = 256.0 = 16.0 = 1.0 = .005	14,000,000,0 = 512,000,0 = 32,000,0 = 2,000,0 = 1.0						DRY MEASURE	Cubic	Pints Quarts Pecks Feet Bushels	1.0 = .5 = .0625 = .01945 = .01563	20 = 1.0 = .125 = .03891 = .03125	51.42627 = 25.71314 = 3.21414 = 1.0 = .00354	64.0 = 32.0 = 4.0 = 1.2445 = 1.0						LIQUID MEASURE	11.S Cathie	Gills Pints Quarts Gallons Feet	1.0 = .25 = .125 = 0.0418	4.0 = 1.0 = .5 = .125 = .01671	6.0 = 2.0 = 1.0 = 2.50 = 0.0537 32.0 = 8.0 = 4.0 = 1.0 = .1337	7.48052 = 1.0	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
	Weight	Ib per sq ft		17	18	28	34	40		91/2	101/2	121/2		181	N D	~	1 4	•	10	2 10		1/2	N							40	80	120			30	43	55	0		21	30	38	55		25	30	33	45	55	18	8 Construction	See Manulacture	<u>)</u> e		0	
e 17-13. uilding Materials	Meteologi	PARTITIONS	Clay tile	3 in.	4 in.	6 in.	8 in.	10 in.	Gypsum block	2 in.	3 in.	4 in.	5 in.	6 in.	Wood studs 2×4	12-16 in. o.c.	Steel partitions	Plaster 1 in.	Cement	Gypsum	Lathing	Metal	Gypsum board 1/2 in.					WALLS	Brick	4 in.	8 in.	12 in.	Hollow concrete block	(Heavy aggregate)	4 I.	6 in.	8 IJ.	Hollow concrete block	(1 inht accreate)	(Light aggregate) 4 in	6 in.	8 in.	12 in.	Clay tile (Load bearing)	4 in.	6 in.	8 in.	12 in.	Stone 4 in.	Glass block 4 in.	Window, Glass, Frame, & Sash	Curtain walls	Corrugated Cement Asbestos 1/4 in.		e Table 17-12.	AP CREET CONCEPTION
Tabl Weights of B	Weight Ih ner so ft	ti he ind ni	-	See Partitions	-					See Manufacturer			121/2	111/2	6 to 10			12	ŧ	3 to 9			9	8	4		13	10	-	6	4	21/2				-	See Manufactuer	51/2	2.4	>		2	e	9 to 14	10			e	4		÷	2/0	11/2	1	building construction, se	anita Netanita
	Materials	CEILINGS	Channel suspended system	Lathing and plastering	Acoustical fiber tile				FLOORS	Steel deck		Concrete-Reinforced 1 in.	Stone	Slag	Lightweight		Concrete-Plain 1 in.	Stone	Slag	Lightweight		Fills 1 inch	Gypsum	Sand	Cinders	Finishes	Terrazzo 1 in.	Ceramic or Quarry Tile 3/4-in.	Linoleum 1/4-in.	Mastic 3/4-in.	Hardwood //8-in.	Softwood 3/4-in.			ROOFS	Copper or tin	Corrugated steel	3-ply felt and gravel	5-niv felt and gravel		Shingles	Mood	Asphalt	Clay tile	Slate 1/4 in.		Sheathing	Wood 3/4 in.	Gypsum 1 in.		Insulation 1 in.	Doursed	Rigid		For weights of other materials used in	MA.

Example 1

Determine the controlling load combinations(s) using AISC-LRFD for a building column subject to the following service or nominal (unfactored) axial compressive loads: D = 30 k, L = 50 k, $L_r = 10$ k, W = 25 k, E = 40 k

Using a spreadsheet analysis:		
LRFD (ASCE-7)		FACTORED LOAD
1.4D		
1.4D	=	42 kips
$1.2D + 1.6L + 0.5(L_r \text{ or } S \text{ or } R)$		<u>^</u>
$1.2D + 1.6L + 0.5L_r$	=	121
$1.2D + 1.6(L_r \text{ or } S \text{ or } R) + (L \text{ or } 0.5W)$		
$1.2D + 1.6L_r + L$	=	102
$1.2D + 1.6L_r + 0.5W$	=	64.5
$1.2D + 1.6L_r - 0.5W$	=	39.5
$1.2D + 1.0W + L + 0.5(L_r \text{ or } S \text{ or } R)$		
$1.2D + 1.0W + L + 0.5L_r$	=	116
$1.2D - 1.0W + L + 0.5L_r$	=	66
1.2D + 1.0E + L + 0.2S		
1.2D + 1.0E + L	=	126
1.2D - 1.0E + L	=	46
0.9D + 1.0W		
0.9D + 1.0W	=	52
0.9D - 1.0W	=	2
0.9D + 1.0E		
0.9D + 1.0E	=	67
0.9 <i>D</i> - 1.0 <i>E</i>	=	-13
	Critical Factored Load	126 kips (C)
		-13 kips (T)

Example 2

EXAMPLE 2-4

Determine factored loads for the beam shown in Figure 2–16.

Solution

For the left half of the beam:

$$w_{u1} = 1.2w_D + 1.6w_L$$

 $w_{u1} = 1.2 \times 1.0 + 1.6 \times 2.0 = 4.4 \text{ kip/ft}$

For the right half of the beam:

$$w_{u2} = 1.2w_D + 1.6w_L$$

 $w_{u2} = 1.2 \times 1.0 + 1.6 \times 0 = 1.2 \text{ kip/ft}$



The concentrated load is a live load only:

$$P_u = 1.2P_D + 1.6P_L$$

 $P_u = 1.2 \times 0 + 1.6 \times 10 = 16 \text{ kip}$

The factored loads on the beam are shown in Figure 2–17.

×