

# Steel Plate & Sheet

## Steel Plate, Floor Plate & Sheet Products

<b>Hot Rolled Plate</b> .....	3-2 thru 3-4
<b>100XF Temper Plate</b> .....	3-5
<b>ASTM A-514 Plate</b> .....	3-6 thru 3-7
<b>High Strength</b> .....	3-8 thru 3-9
<b>Pressure Vessel Quality</b> .....	3-9 thru 3-10
<b>Free Machining Plate</b> .....	3-11 thru 3-12
<b>Abrasion Resisting Plate</b> .....	3-13
<b>Manganese Plate</b> .....	3-14
<b>Floor Plate</b> .....	3-15
<b>Safety Plate Products</b> .....	3-16 thru 3-17
<b>Tolerances</b> .....	3-18 thru 3-19
<b>Hot Rolled Sheets / P&amp;O</b> .....	3-20 thru 3-21
<b>Cold Rolled Sheets</b> .....	3-22
<b>Galvanized Sheets</b> .....	3-23
<b>Galvannealed Sheets</b> .....	3-24
<b>Aluminized Sheets</b> .....	3-25
<b>Sheared Sheet Blanks</b> .....	3-25
<b>HR &amp; CR Sheet Tolerances</b> .....	3-26

## ASTM A-36 Hot Rolled Plate

A-36 is a structural quality carbon steel used in a variety of general construction applications including; bolted, riveted, or welded construction of bridges and buildings.

Typical Analysis*	ASTM A-36				
	Up thru 3/4"	Over 3/4 thru 1-1/2	Over 1-1/2 thru 2-1/2	Over 2-1/2 thru 4	Over 4
Carbon (C) max %	0.25	0.25	0.26	0.27	0.29
Manganese (Mn) %	-	.80/1.20	.85/1.20	.85/1.20	.85/1.20
Phosphorus (P) max %	.04	.04	.04	.04	.04
Sulphur (S) %	.05	.05	.05	.05	.05
Silicon (Si) %	.40 max	.40 max	.15/.40	.15/.40	.15/.40
Copper (Cu) min % when copper steel is specified	.20	.20	.20	.20	.20
Tensile Strength	58,000-80,000 psi				
Min. Yield Strength	36,000 psi (Over 8" 32,000 psi)				
Elongation in 2"	23%				

\*For each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted up to the maximum of 1.35%

## C1020 Hot Rolled Plate

The controlled carbon range of 1020 improves the machinability of this grade. Good formability and weldability are also characteristic.

Typical Analysis	AISI 1020
Carbon (C)	.18/.23
Manganese (Mn)	.30/.60
Phosphorus (P)	.04 max
Sulphur (S)	.05 max

## C1045 Hot Rolled Plate

### Work Hardening Steel

1045 is silicon killed with a higher carbon content for greater strength. Strength can be improved in the lighter and medium thicknesses by heat treatment. Machinability is good, while forming and welding properties are limited.

Typical Analysis	AISI 1045
Carbon (C)	.43/.50
Manganese (Mn)	.60/.90
Phosphorus (P)	.04 max
Sulphur (S)	.05 max

## ASTM A1011/1018 HR CS Type B

Hot rolled commercial quality steel is suitable for many applications where normal surface imperfections are not objectionable. Heat treatment and other processing operations must be properly performed so as to not detrimentally affect the properties of the steel. Commercial steel will follow the bend test requirements of ASTM E290

Typical Analysis	
Carbon (C)	.10
Manganese (Mn)	.25/.50
Phosphorus (P)	.04 max
Sulphur (S)	.05 max

## Hot Rolled Plate

Size (Thick)	Weight (lbs/sqft)	ASTM A-36	ASTM A-36 Pickled & Oiled	C1020	C1045	CS Type B Pickled & Oiled
3/16	7.66	●	●	●	●	●
1/4	10.21	●	●		●	●
5/16	12.76	●	●		●	●
3/8	15.31	●	●	●	●	●
7/16	17.85	●				
1/2	20.42	●	●	●	●	●
9/16	22.97	●				
5/8	25.52	●		●	●	
3/4	30.63	●		●	●	
7/8	35.74	●		●	●	
1	40.84	●		●	●	
1-1/8	45.94	●		●	●	
1-1/4	51.05	●		●	●	
1-3/8	56.15	●		●		
1-1/2	61.26	●		●	●	
1-5/8	66.36	●		●	●	
1-3/4	71.47	●		●	●	
1-7/8	76.57	●				
2	81.50	●		●	●	
2-1/8	86.60	●				
2-1/4	91.89	●		●	●	
2-1/2	102.10	●		●	●	
2-5/8	107.20	●				
2-3/4	112.31	●		●	●	
2-7/8	117.41	●				
3	122.52	●		●	●	
3-1/8	127.62	●				
3-1/4	132.72	●			●	
3-1/2	142.93	●		●	●	
3-3/4	153.15	●			●	
4	163.36	●		●	●	

- Standard lengths: 96", 120", 144" and 240".
- Other custom lengths available upon request.

## Hot Rolled Plate

Size (Thick)	Weight/ (lbs/sqft)	ASTM A-36	ASTM A-36 Pickled & Oiled	C1020	C1045	CS Type B Pickled & Oiled
4-1/4	173.56	●				
4-1/2	183.77	●		●	●	
4-3/4	193.98	●				
5	204.20	●		●	●	
5-1/4	214.41	●				
5-1/2	224.61	●		●	●	
5-3/4	234.83	●				
6	245.03	●		●	●	
6-1/4	255.24	●				
6-1/2	265.46	●			●	
7	285.87	●		●	●	
7-1/2	306.29	●				
8	326.71	●		●	●	
8-1/2	347.13	●				
9	367.55	●		●		
10	408.38	●		●	●	
10-1/2	428.64	●				
11	449.22	●				
12	490.06	●				
12-1/2	510.48	●				
13	530.90	●				
14	571.73	●				

- Standard lengths: 96", 120", 144" and 240".
- Other custom lengths available upon request.

## 100XF Temper Levelled Plate

100XF steel plate has been developed for applications where increased strength-to-weight ratios are required. It has physical properties similar to those of ASTM A514 even though its manufacturing process does not require heat treatment.

100XF is available as temper levelled, cut-to-length plate. Temper leveling improves flatness and surface quality, and eliminates coil memory, all of which enhance laser and plasma cutting quality. It also offers good weldability, formability, toughness, and weathering resistance. This excellent combination of properties is possible because of the low-carbon chemistry and the thermo-mechanical controlled processing used in the manufacture of 100 XF.

### Typical Applications

Applications for 100XF include transport trailers, construction equipment, crane booms, mobile manlifts, agriculture equipment, heavy vehicle frames, and chassis.

Typical Analysis	100XF Temper Levelled
Carbon (C)	.10
Manganese (Mn)	2.00
Molybdenum (Mo)	.50
Sulphur (S)	.006
Phosphorus (P)	.02
Silicon (Si)	.40
Aluminum (Al)	.06
Ti+Nb+V	.025
.2% Offset Yield Strength ksi (Mpa)	100 (690)
Tensile Strength ksi (Mpa)	110 (760)
Elongation in 2 in.	16%

## 100XF Temper Levelled Plate

### Stock Lengths: 24 foot

**Flatness:** Guaranteed to meet 1/2 ASTM A6 flatness tolerances.

Size (inches)	Width (inches)	Weight (lbs./sqft.)
3/16 x	72	7.66
1/4 x	72	10.21
5/16 x	72	12.76
3/8 x	72	15.31
	96	15.31
1/2 x	72	20.42
5/8 x	96	25.52
3/4 x	96	30.63

*Custom lengths available upon request.*

# ASTM A-514 Plate

## Grade B, Grade H, Grade F and Grade Q

The A-514 plate steels are a group of quenched and tempered alloys with attractive advantages and characteristics. The most important are high yield strength at 90 or 100 ksi minimum, weldability, and good toughness at low atmospheric temperatures. Designed for a wide range of structural uses as well as machinery and equipment, these alloy steels offer help with selecting the optimum in strength, toughness, corrosion resistance, impact-abrasion resistance, and long-term economy.

Typical Analysis	A-514			
	Grade B*	Grade H*	Grade F, Q*	Grade Q*
Type of Steel	Alloy	Alloy	Alloy	Alloy
Requirements for Delivery	A6	A6	A6	A6
Tensile Strength (ksi)	110/130	110/130	110/130	100/130
Yield Strength (Min. ksi)	100	100	100	90
Spec. Thickness (Max. in.)	1-1/4	2	2-1/2	6
Chemical Composition (%)				
Carbon (Max.)	.12/.21	.12/.21	.10/.20	.14/.21
Manganese	.70/1.00	.95/1.30	.60/1.00	.98/1.30
Phosphorous (Max.)	.035	.035	.035	.035
Sulphur (Max.)	.035	.035	.035	.035
Silicon	.20/.35	.20/.35	.15/.35	.15/.35
Chromium	.40/.65	.40/.65	.40/.65	1.00/1.50
Nickel	--	.30/.70	.70/1.00	1.20/1.50
Molybdenum	.15/.25	.20/.30	.40/.60	.40/.60
Copper	--	--	.15/.50	
Other Elements	.03/.08 V	.03/.08 V	.03/.08 V	
	.01/.03 Ti	.0005/.005 B	.0005/.006 B	
	.0005/.005B			
Heat Treatment Required	Q&T	Q&T	Q&T	Q&T

*\*This grade of steel may be susceptible to cracking in the heat-affected zone of welds during post-weld heat treatment (stress relief). Careful consideration should be given by competent welding engineers before stress relieving to weldments of this grade.*

# ASTM A-514 Plate

## Tensile and Hardness Requirements

### Tensile and Hardness Requirements

**Note 1**—See the Orientation and Preparation subsections in the Tension Tests section of Specification A6/A 6M.

**Note 2**—Where "... " appears in this table there is no requirement.

Thickness inches [mm]	Tensile Strength ksi [MPa]	Yield Strength ksi [MPa]	Elongation in 2 inches [50 mm] min <sup>50c</sup> , %	Reduction of Area min <sup>50c</sup> , %	Brinell Hardness Number <sup>F</sup>
To 3/4 [20], incl	110-130 [760-895]	100 [690]	18	40 <sup>F</sup>	235 to 293 HBW
Over 3/4 [20] to 2 1/2 [65], incl	110-130 [760-895]	100 [690]	18	40 <sup>F</sup> , 50 <sup>G</sup>	...
Over 2-1/2 [65] to 6 [150], incl	110-130 [760-895]	100 [620]	16	50 <sup>G</sup>	...

<sup>A</sup>Measured at 0.2% offset or 0.5% extension under load as described in the Determination of Tensile Properties section of Test Methods and Definitions A 370.

<sup>B</sup>Elongation and reduction of area need not be determined for floor plates.

<sup>C</sup>For plates tested in the transverse direction, the elongation requirement is reduced by two percentage points and the reduction of area minimum requirement is reduced by five percentage points.

<sup>D</sup>If measured on the Fig. 3 (Test Methods and Definitions A 370) 1-1/2" [40mm] wide tension test specimen, the elongation is determined in a 2" [50mm] gage length that includes the fracture and shows the greatest elongation.

<sup>E</sup>See 7.2.

<sup>F</sup>If Measured on the Fig. 3 (Test Methods and Definitions A370) 1-1/2" [40mm] wide tension test specimen.

<sup>G</sup>If Measured on the Fig. 4 (Test Methods and Definitions A370) 1/2" [12.5mm] round tension test specimen.

## High Strength

### ASTM A-656 Gr. 80

ASTM A-656 Gr. 80 combines outstanding toughness, ease of fabrication and positive strength to cost relationships when compared to A572-50 and A-36. Applications such as telescopic cranes, truck trailers, railroad cars, construction equipment and transmission towers; or any other extreme load-bearing job where the economy of superior strength and weight are paramount.

Typical Analysis	ASTM A656 Gr. 80
Carbon max. <sup>A</sup>	.18
Manganese max. <sup>A</sup>	1.65
Phosphorus max.	.025
Sulphur max.	.035
Silicon max.	.60
Vanadium max.	.15 <sup>B</sup>
Nitrogen max.	.020
Columbium	.10 max. <sup>B</sup>
Yield Point min. ksi (Mpa)	80 (550)
Tensile Strength min. ksi (Mpa)	90 (620)
Elongation in 8"	12%
Elongation in 2"	15%

<sup>A</sup> For each reduction of 0.01 percentage point below the specified maximum for carbon, an increase of 0.06 percentage points above the specified maximum for manganese is permitted, up to a maximum of 1.75% for Grades 50, 60, 70 and up to a maximum of 1.90% for Grade 80.

<sup>B</sup> The contents of columbium and vanadium shall additionally be in accordance with one of the following:

Columbium 0.0008 - 0.10% with vanadium <0.008%;

Columbium <0.008% with vanadium 0.008 - 0.15%; or

Columbium 0.008 - 0.10% with vanadium 0.008 - 15% and columbium plus vanadium not in excess of .20%.

## High Strength

### ASTM A-588 Gr. A/B

ASTM A-588 Gr. A/B steel plate offers all the advantages of ASTM A572-50 but is produced with elevated levels of copper to add corrosion resistance. Because of the self-repairing, natural oxide patina, this "weathering" grade is often used in unpainted applications such as bridges, utility sign/ poles and highway structures.



## High Strength

### ASTM A-572 Gr. 50

This high strength, low alloy steel plate offers an optimum combination of strength, weldability and notch toughness. Applications include: bridges, buildings, automotive and truck parts, railroad cars, cargo containers, tote boxes, construction equipment, structural tubing, lighting standards and transmission poles.

Typical Analysis*	A-572 Grade 50	
	Up thru 1½"	Over 1½ to 4"
Carbon (C) max %	.23	.23
Manganese (Mn) max %	1.35**	1.35**
Phosphorus (P) max %	.04	.04
Sulphur (S) max %	.05	.05
Silicon (Si) %	.40 max	.15/.40
Other Elements	.01/.15 V	.01/.15 V
Min. Tensile Strength		65,000 psi
Min. Yield Strength (Yield Point if designated YP)		50,000 psi
Elongation in 2"		21%

\* Post-weld heat treatment may degrade heat-affected zone strength and toughness. Pretesting of specific welding and post-weld heat treating procedures is recommended to assure optimization of final property levels.

\*\*1.50 max. Mn permissible with reduction of carbon maximum of .03%

## ASTM A-516 Gr. 70 (PVQ)

### ASME SA516-70

Intended primarily for service in welded pressure vessels where improved notch toughness is required, this grade of ASTM A516/ASME SA516-70 is normally found in moderate and lower temperature applications. Supplementary testing such as Charpy, Impacts, Ultrasonic Examination and Carbon Equivalency are available.

Typical Analysis	A-516 Grade 70			
	Up thru ½"	Over ½ thru 2"	Over 2 thru 4"	Over 4"
Carbon (C) max %** A, B	.27	.28	.30	.31
Manganese (Mn) %** B	.85/1.20	.85/1.20	.85/1.20	.85/1.20
Phosphorus (P) max %	.035	.035	.035	.035
Sulphur (S) %	.035	.035	.035	.035
Silicon (Si) max %	.15/.40	.15/.40	.15/.40	.15/.40
Tensile Strength	70,000-90,000 psi			
Min. Yield Strength (Yield Point if designated YP)	38,000 psi			
Elongation in 2"	21%			
Elongation in 8"	17%			

<sup>A</sup> Applies to both heat and product analyses

<sup>B</sup> For each reduction of 0.01 percentage point below the specified maximum for carbon, an increase of 0.06 percentage point above the specified maximum for manganese is permitted, up to a maximum of 1.50% by heat analysis and 1.60% by product analysis.

## High Strength - PVQ

Size (inch)	Weight (lbs./sqft.)	High Strength					PVQ	
		ASTM A-514 Gr. B/H/F/Q Q&T	ASTM A-656 Gr. 80 Controlled Rolled	ASTM A-572 Gr. 42	ASTM A-572 Gr. 50 As Rolled	ASTM A-588 Gr. A/B	ASTM A-516 Gr. 70 As Rolled	ASTM A-516 Gr. 70 Norm.
3/16	7.66	●	●		●	●	●	
1/4	10.21	●	●		●	●	●	
5/16	12.76	●	●		●		●	●
3/8	15.31	●	●		●	●	●	●
1/2	20.42	●	●		●	●	●	●
5/8	25.52	●			●	●	●	●
3/4	30.63	●			●	●	●	●
7/8	35.74	●					●	
1	40.84	●			●	●	●	●
1-1/8	45.91				●			
1-1/4	51.05	●			●	●	●	●
1-3/8	56.15	●			●		●	●
1-1/2	61.26	●			●	●	●	●
1-5/8	66.36				●			
1-3/4	71.47	●			●	●		●
2	81.68	●			●	●		●
2-1/4	91.89	●			●			●
2-1/2	102.00	●			●	●		●
2-3/4	112.30	●			●			●
3	122.52	●			●	●		●
3-1/4	132.72	●			●			●
3-1/2	142.92	●			●	●		●
3-3/4	153.15						●	
4	163.35	●			●	●		●
4-1/4	173.56					●		●
4-1/2	183.80	●		●				●
4-3/4	193.00							●
5	204.20	●		●				●
5-1/2	224.61	●						●
6	245.03	●		●				●
6-1/2	265.46							●
7	285.87	●						●
8	326.71						●	
8-1/2	347.13							●
9	367.56							●
10	408.38							●
11	449.22							●
12	490.06							●

## Free Machining Plate (Low & Medium Carbon)

### 1144 Modified

1144 Modified offers high strength and hardness and is applicable where resistance to deformation and wear are essential. It may be flame hardened to further enhance surface properties. It is frequently used as an economical replacement for more expensive quenched-and-tempered alloy grades.

#### Typical Applications

Typical applications include cams, dies, gears, machine ways, molds, and sprockets.

Typical Analysis	1144 Carbon Steel
Carbon (C)	.40/.48
Manganese (Mn)	1.35/1.65
Phosphorus (P)	.04 max
Sulphur (S)	.24/.33

### Clean-Cut 20<sup>®</sup>/LFM 20/FM 15<sup>®</sup>/1119 Modified

The Clean-Cut/LFM 20 families of plate steel were developed for improved machining. Produced by a special calcium treatment and a controlled sulphur process, Clean-Cut steels contain sulfide inclusions which are predominately calcium modified to make them smaller and more uniformly distributed. The result: enhanced machinability.

Typical Analysis	Clean Cut 20/LFM 20	Type FM15 <sup>®</sup>	Type 1119 Modified
Carbon (C)	.14-.22	.14-.20	.17-.23
Manganese (Mn)	1.20-1.50	1.00-1.30	1.00-1.30
Phosphorus (P)	.04 max	.04 max	.04 max
Sulphur (S)	.06-.12	.24-.33	.23-.33
Silicon (Si)	.10-.40	.30 max	.30 max

## Free Machining Plate (Low & Medium Carbon)

Thickness	Weight (lbs/sqft.)	FM 15/1119 Modified HR	Clean-Cut 20 <sup>o</sup> /LFM 20 HR	1144 Modified HR
1/2	20.42	●		●
5/8	25.52	●		●
3/4	30.63	●		●
7/8	35.73	●		
1	40.84	●	●	●
1-1/8	45.94	●	●	
1-1/4	51.05	●	●	●
1-3/8	56.15	●	●	
1-1/2	61.26	●	●	●
1-5/8	66.36	●	●	
1-3/4	71.47	●	●	●
1-7/8	76.57	●	●	
2	81.68	●	●	●
2-1/8	86.78	●	●	
2-1/4	91.89	●	●	●
2-3/8	96.99	●	●	
2-1/2	102.10	●	●	●
2-5/8	107.20	●	●	
2-3/4	112.31	●	●	●
2-7/8	117.41	●		
3	122.52	●	●	●
3-1/8	127.62	●		
3-1/4	132.72	●	●	●
3-3/8	137.83	●		
3-1/2	142.93	●	●	●
3-5/8	147.90	●	●	
3-3/4	153.14	●	●	
4	163.35	●	●	●
4-1/4	173.56	●	●	
4-1/2	183.77	●	●	
4-3/4	193.98			
5	204.19	●	●	
5-1/2	224.61	●	●	
6	245.03	●	●	●
6-1/2	265.20		●	
7	285.60		●	
8	326.40			
9	367.55			
10	408.38			

Steel Plate  
and Sheet

## Abrasion Resisting Plate

Abrasion Resisting Steel was designed to satisfy the demand for a grade of steel that would give prolonged service life where abrasion is the primary cause of failure. The surface hardness of Abrasion Resisting Steel will vary by grade from 200-500 BRINELL.

Hardox® 450 is an abrasion resistant brand with a hardness of 450 bhn. This brand of abrasion resistant plate is intended for higher, impact, wear applications where cold-bending and very good weldability are beneficial. Hardox® 450 is a quenched and tempered produced plate that is used in dump bodies, crushers, feeders, cutter edges, buckets, etc.

Typical Analysis*	AR 235	AR 400F	AR 450F	AR 500	Hardox® 450
Carbon (C) %	.40/.50	.12/.16	.21/.23	.27/.34	.21/.26
Manganese (Mn) max %	.60/.90	1.55	1.60	.35/.6	1.60
Phosphorus (P) max %	.040	.025	.025	.035	.025
Sulphur (S) max %	.050	.005	.010	.010	.010
Chromium (Cr) max %	-	.55	.30/1.00	.8/1.15	.25/1.40
Nickel (Ni) %	-	1.00	.30	-	.25/1.00
Molybdenum (Mo) max %	-	.55	.25	.15/.25	.25/.60
Silicon (Si) %	.10/40	.35/.55	.70	.15/.40	.70
Vanadium (V) %	-	-	-	-	-
Boron (B) %	-	.0005/.005	.0005	.0005 min	.004
Surface Brinell Hardness (HB)	Typical 200-250	360/444	409-492	444 min	425-475

## Armor Plate - MIL-A-46100 (e)

A popular high hardness armor grade (HHA), 46100 is selected for use by all departments and agencies of the Department of Defense. This grade is produced to 2 inches (51mm) thick with hardness requirements of 477-534 BHN and Charpy Impact testing on every plate.

## Abrasion Resisting Plate

Thickness	Weight (lbs./sqft.)	AR 235	AR 400F	AR 450F	AR 500F	Armor	Hardox® 450
1/8	5.10		●				
3/16	7.66	●	●		●	●	
1/4	10.21	●	●	●	●	●	●
5/16	12.76		●	●		●	
3/8	15.31	●	●	●	●	●	
1/2	20.42	●	●	●	●	●	●
5/8	25.52	●	●	●	●	●	
3/4	30.63	●	●	●	●	●	●
1	40.84	●	●	●	●	●	●
1-1/4	51.05		●	●	●		
1-1/2	61.26		●	●	●		
1-3/4	71.47		●				
2	81.68		●	●			
2-1/2	102.10		●				
3	122.52		●				

## Manganese Plate (11% - 14% Manganese)

Manganese plate is a nonmagnetic steel that work hardens to a 650 Brinell. It is a 12-Mn austenitic steel with an exceptionally high level of wear-resistance when subject to work-hardening by shocks or high pressures in service.

### Wear Resistance

Severe wear on the surface has a work-hardening effect on the austenitic structure of this steel. This leads to an increase from the initially low hardness (about 200 BHN) to a service hardness of at least 500 BHN. This work-hardening maintains itself through in-service life. The underlayers not work-hardened maintain a very high resistance to shock.

### Sizes

Alro's thickness range is 3/16" - 1/2"

### Applications

Manganese Plate is the ideal solution for cases where severe wear is combined with shocks or high pressure capable of work-hardened its austenitic structure. Used in jaws of crushers, hammers or pulverizers, cutting edges of large excavators, liners of shotblasting units, cores and wall of parpen moulds, and screens.

Alro stocks Manganese Plate in pattern sizes in 3/16", 1/4", & 3/8".

Typical Analysis	Manganese Plate
Carbon (C) max %	1.15
Silicon (Si) MAX %	0.6
Manganese (Mn) max %	12

## Beveled parts are available from Alro Steel

Alro's Plasma Cutting System provides tighter tolerances, minimizes machining on finished parts and provides greater part accuracy than standard flame cutting.

O2 Plasma means a smaller, heat affected zone and reduced edge cracking when forming.

PC-based control technology increases control in shape cutting.

Advantages include:

- High quality edge cuts
- Higher precision than conventional plasma
- Minimal clean up
- Smaller kerf than conventional plasma
- Small heat affected zone
- Low cost per foot of cut



Our HPR 400 plasma cutting machine with bevel cutting capabilities.

Our advanced plasma cutting machine, with five axis bevel capabilities is capable of cutting 2" thick carbon plate with less than 1 degree bevel.



To request a burning quote for your existing CAD drawing please send it along in an email, to: [burnprints@alro.com](mailto:burnprints@alro.com)

## Floor Plate

Floor Plate is an economical safety flooring that gives long life under the most severe usage. Its raised lug pattern is scientifically designed to resist skidding and slipping in any direction and makes possible safer and faster movement of men and materials.

Size & Gauge	Weight per Sheet
<b>16 ga x (3.00 lbs./sqft.)</b>	
48 x 96	96.00
48 x 120	120.00
<b>14 ga x (3.75 lbs./sqft.)</b>	
48 x 96	120.00
48 x 120	150.00
48 x 144	180.00
60 x 120	187.50
<b>12 ga x (5.25 lbs./sqft.)</b>	
48 x 96	168.00
48 x 120	210.00
48 x 144	252.00
60 x 96	210.00
60 x 120	262.50
60 x 144	315.00
<b>1/8 x (6.16 lbs./sqft.)</b>	
48 x 96	197.10
48 x 120	246.40
48 x 144	295.70
60 x 96	246.40
60 x 120	308.00
60 x 144	369.60
72 x 120	369.60
72 x 144	443.52
<b>3/16 x (8.71 lbs./sqft.)</b>	
48 x 96	278.70
48 x 120	348.40
48 x 144	418.10
60 x 96	348.40
60 x 120	435.50
60 x 144	522.60
72 x 96	418.10
72 x 120	522.60
72 x 144	627.10
96 x 240	1393.60
<b>1/4 x (11.26 lbs./sqft.)</b>	
48 x 96	360.30
48 x 120	450.40
48 x 144	540.50
60 x 96	450.40
60 x 120	563.00
60 x 144	675.60
60 x 240	1126.00
72 x 96	540.48
72 x 120	675.60
72 x 144	810.70
72 x 240	1351.20
96 x 240	1801.60

Size & Gauge	Weight per Sheet
<b>5/16 x (13.81 lbs./sqft.)</b>	
48 x 96	441.90
48 x 120	552.40
48 x 144	662.88
60 x 120	690.50
72 x 120	828.60
<b>3/8 x (16.37 lbs./sqft.)</b>	
48 x 96	523.80
48 x 120	654.80
48 x 144	785.76
60 x 120	818.50
60 x 144	982.20
72 x 120	982.20
72 x 144	1178.64
72 x 240	1964.40
96 x 240	2619.20
<b>1/2 x (21.47 lbs./sqft.)</b>	
48 x 96	687.00
48 x 120	858.80
48 x 144	1030.56
60 x 120	1073.50
60 x 144	1288.20
60 x 240	2147.00
72 x 120	1288.20
72 x 144	1545.84
96 x 240	3435.20
<b>5/8 x (26.58 lbs./sqft.)</b>	
96 x 240	4252.80
<b>3/4 x (31.68 lbs./sqft.)</b>	
96 x 240	5068.8
<b>1 x (41.89 lbs./sqft.)</b>	
96 x 240	6702.40

## Safety Plate Products

**SlipNOT®** is a surface treatment performed on a variety of metals through a plasma stream deposition. Plasma stream deposition is the application of a molten metal alloy to a metallic surface. The extreme temperature of this method assures maximum adhesion to the base surface. It results in a Martensitic (hard alloy) product. This is not a grit simply rolled or coated onto the base plate!

SlipNOT® can be utilized in the following applications:

- Floors
- Floor Armor
- Wet Decks
- Pump Platforms
- Drill Platforms
- Walkways
- Pump Platforms
- Trench Covers
- Flume Covers
- Bridge Decking
- Ladder Rungs
- Pit Covers
- Machine Platforms
- Ramps
- Mezzanines
- Stair Treads
- Catwalks

### File Hard

Extreme wear longevity is the product of the Martensitic formation of the super-alloy, allowing a hardness of up to 62 on the Rockwell "C" scale.

### Random Hatch Matrix

This stacked hatched surface means the continuous presentation of new sharp faces as the surface slowly wears.

### Weldable

In that the wear surface is uncoated steel integral with the base plate, SlipNOT® can be directly welded to with no surface preparation of any kind.

### Bond Strength

The bond strength of SlipNOT® to plate exceeds 4,450 psi. The "coated-on" grit product claims only 710 psi maximum.

### Fabrication

Shear, flame cut, drill, and punch right through the face for complete versatility in shop or field.

### Maintenance

SlipNOT® can be cleaned by all standard industrial cleaning methods.

### Availability

SlipNOT® provides the design flexibility to offer unique combinations of different metals for your unique applications, such as merging the toughness of steel with the light weight of aluminum.

	STEEL	STAINLESS	ALUMINUM
■	■	■	STEEL
■	■	■	STAINLESS
■	■	■	ALUMINUM

### Grade Availability

**Grade 1:** A fine surface with minimum surface depth variation for comfort where pedestrian traffic flow is not directional only, but requires a lot of turning and reversing and is subject to only moderate thin liquid accumulation.

**Grade 2:** A medium surface particularly applicable to heavier and more viscous accumulations. This is the all-purpose surface.

**Grade 3:** A coarse surface applicable for extremely heavy traffic and higher debris accumulation and high viscosity fluids.



## Safety Grating Products

### Specifying SlipNOT® Products

#### SlipNOT® Grip Plate®

**Steel on Steel:** available in sizes to 6' by 12' and thickness of 1/8" and up.

**Finishes:** 1. Shop Coat 2. Acrylic 3. Zinc Rich 4. Mop Coat 5. Hot Dip Zinc

**Steel on Aluminum:** (for hard wear and light weight) can be produced on available sheet or plate to 6' by 12'

**Aluminum on Aluminum:** where specified - can be produced on available sheet or plate to 6' by 12'

**Stainless on Stainless:** where specified - can be produced on available sheet or plate to 6' by 12'

#### SlipNOT® Grip Grate®

**Steel on Steel:** available on all standard and special bar grating in lengths to 12'.

**Steel on Aluminum:** for hard wear and light weight

**Aluminum on Aluminum:** where specified

**Stainless on Stainless:** where specified

*SlipNot®, Grip Grate®, Grip Plate®, Mop Coat®, Flex-Grip® and Grid Grate® are trademarks of W.S. Molnar Company and are used by permission of the W.S. Molnar Company. Products of W.S. Molnar Company are manufactured under U.S. Patent No. 5,077,137 and U.S. Patent No. 4,961,973.*

#### Grade 1 - Fine

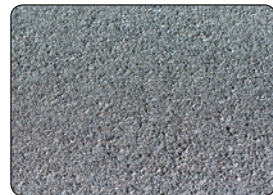
A fine surface with minimum surface depth variation for comfort where pedestrian traffic flow is not directional only, but requires a lot of turning and reversing and is subject to only moderate thin liquid accumulation



Grade 1 - Fine

#### Grade 2 - Medium

A medium surface particularly applicable to heavier and more viscous accumulations. This is the all-purpose surface.



Grade 2 - Medium

#### Grade 3 - Coarse

A coarse surface applicable for extremely heavy traffic and higher debris accumulation and high viscosity fluids



Grade 3 - Coarse

## Carbon and Alloy Plate Tolerances

Specified Thickness (inches)	Tolerance Over Specified Thickness for Widths Given (inches)							
	Up thru 48	Over 48 up to 60	60 up to 72	72 up to 84	84 up to 96	96 up to 108	108 up to 120	120 up to 132
Up thru 1/4	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Over 1/4 up to 5/16	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
5/16 up to 3/8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
3/8 up to 7/16	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
7/16 up to 1/2	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
1/2 up to 5/8	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
5/8 up to 3/4	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
3/4 up to 1	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05
1 up to 2	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.10
2 up to 3	0.09	0.09	0.09	0.10	0.10	0.11	0.12	0.13
3 up to 4	0.11	0.11	0.11	0.11	0.11	0.13	0.14	0.14
4 up to 6	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
6 up to 10	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24
10 up to 12	0.29	0.29	0.33	0.33	0.33	0.33	0.33	0.33
12 thru 15	0.29	0.29	0.35	0.35	0.35	0.35	0.35	0.35

\*Permissible variations in thickness for rectangular carbon, high strength, low alloy, and alloy-steel plates, when ordered to thickness.

Note<sup>1</sup>: Permissible variation under specified thickness - 0.01".

Note<sup>2</sup>: Thickness to be measured at 3/8" to 3/4" from the longitudinal edge.

Note<sup>3</sup>: For thickness measured at any location other than that specified in Note 2, the permissible maximum over tolerance shall be increased by 75%, rounded to the nearest 0.01".

Specified Dimensions (inches)		Variations over Specified Width and Length <sup>a</sup> for Thicknesses, in., and Equivalent Weights, lb./ft <sup>2</sup> , Given							
Length	Width	Up to 3/8		3/8 up to 5/8		5/8 up to 1		1 thru 2	
		Width	Length	Width	Length	Width	Length	Width	Length
Up to 120	Up to 60	3/8	1/2	7/16	5/8	1/2	3/4	5/8	1
	60 up to 84	7/16	5/8	1/2	11/16	5/8	7/8	3/4	1
	84 up to 108	1/2	3/4	5/8	7/8	3/4	1	1	1-1/8
	108 and over	5/8	7/8	3/4	1	7/8	1-1/8	1-1/8	1-1/4
120 up to 240	Up to 60	3/8	3/4	1/2	7/8	5/8	1	3/4	1-1/8
	60 up to 84	1/2	3/4	5/8	7/8	3/4	1	7/8	1-1/4
	84 up to 108	9/16	7/8	11/16	15/16	13/16	1-1/8	1	1-3/8
	108 and over	5/8	1	3/4	1-1/8	7/8	1-1/4	1-1/8	1-3/8
240 up to 360	Up to 60	3/8	1	1/2	1-1/8	5/8	1-1/4	3/4	1-1/2
	60 up to 84	1/2	1	5/8	1-1/8	3/4	1-1/4	7/8	1-1/2
	84 up to 108	9/16	1	1-1/16	1-1/8	7/8	1-3/8	1	1-1/2
	108 and over	11/16	1-1/8	7/8	1-1/4	1	1-3/8	1-1/4	1-3/4
360 up to 480	Up to 60	7/16	1-1/8	1/2	1-1/4	5/8	1-3/8	3/4	1-5/8
	60 up to 84	1/2	1-1/4	5/8	1-3/8	3/4	1-1/2	7/8	1-5/8
	84 up to 108	9/16	1-1/4	3/4	1-3/8	7/8	1-1/2	1	1-7/8
	108 and over	3/4	1-3/8	7/8	1-1/2	1	1-5/8	1-1/4	1-7/8

<sup>a</sup>Permissible variation under specified width and length - 1/4".

Reprinted under permission of ASTM A-6

## Carbon and Alloy Plate Tolerances

Permissible variations in width for Mill Edge Strip Mill Carbon and High-Strength Low-Alloy Plate

Specified Width (inches)	Variations Over Specified Width (inches)	Variations Under Specified Width (inches)
35 up to 50	1-1/4	-0
50 up to 60	1-1/2	-0
60 up to 65	1-5/8	-0
65 up to 70	1-3/4	-0
70 up to 80	1-7/8	-0

Permissible variations in width and length for Rectangular Plate When Gas Cutting is Specified or Required

Specified Thickness (inches)	Alloys	Carbon
	Variations Over for All Specified Widths or Lengths (inches)	Variations Over for All Specified Widths or Lengths (inches)
Up to 2	3/4	1/2
2 up to 4	1	5/8
4 up to 6	1-1/8	3/4
6 up to 8	1-5/16	7/8
8 up to 15	1-1/2	1

*Note: These variations may be taken all under or divided over and under, if so specified.*

## ASTM A1011 CS Type B Hot Rolled Sheets

### Hot Rolled Pickled & Oiled Sheets

A prime quality low carbon sheet suitable for forming, punching, welding, etc. Sheets will be furnished in standard mill edge unless sheared edge is specified. Hot rolled sheets are commercial quality and in most sizes temper flat to improve flatness and relieve internal stress.

## High-Strength-Low-Alloy (HSLA) Sheets

### Specification: HR A1011 HSLA-F Temper Flat \*GR 50

High Strength Sheet Steels have higher strength properties along with improved formability, weldability and/or atmospheric corrosion resistance than normally obtained from conventional carbon sheet steels. These desirable properties are obtained through selected chemical composition and controlled mill processing. **High strength steels lend themselves to applications where weight reduction is a major factor.**

## Hot Rolled Sheets/Pickled & Oiled

Gauge	Size (inches)	Nominal Thickness Decimal (inches)	Est. Wt. Per Sq. Ft. (lbs.)	Est. Wt. Per Sheet (lbs.)	A1011 CSB	A1011 CSB P&O	A1011 HSLA-F GR 50	A606
6	48 x 96	0.1943	8.125	260.00		●		
	48 x 120	0.1943	8.125	325.00		●		
7	36 x 96	0.1793	7.500	180.00	●	●		
	36 x 120	0.1793	7.500	225.00	●	●		
	36 x 144	0.1793	7.500	270.00	●	●		
	48 x 96	0.1793	7.500	240.00	●	●	●	●
	48 x 120	0.1793	7.500	300.00	●	●	●	●
	48 x 144	0.1793	7.500	360.00	●	●		●
	60 x 96	0.1793	7.500	300.00	●	●		●
	60 x 120	0.1793	7.500	375.00	●	●		●
	60 x 144	0.1793	7.500	450.00	●	●		●
	72 x 96	0.1793	7.500	360.00	●	●		
	72 x 120	0.1793	7.500	450.00	●	●		
	72 x 144	0.1793	7.500	540.00	●	●		
72 x 240	0.1793	7.500	900.00	●	●			
8	48 x 96	0.1644	6.875	220.00	●	●		
	48 x 120	0.1644	6.875	275.00	●	●		
	60 x 120	0.1644	6.875	344.00	●	●		
9	48 x 96	0.1495	6.250	200.00		●		
	48 x 120	0.1495	6.250	250.00		●		
10	36 x 96	0.1345	5.625	135.00	●	●		
	36 x 120	0.1345	5.625	168.75	●	●		
	36 x 144	0.1345	5.625	202.50	●	●		
	48 x 96	0.1345	5.625	180.00	●	●	●	●
	48 x 120	0.1345	5.625	225.00	●	●	●	●
	48 x 144	0.1345	5.625	270.00	●	●		●
	60 x 96	0.1345	5.625	225.00	●	●		●
	60 x 120	0.1345	5.625	281.25	●	●		●
	60 x 144	0.1345	5.625	337.50	●	●		●
	72 x 96	0.1345	5.625	270.00	●	●		
	72 x 120	0.1345	5.625	337.50	●	●		
	72 x 144	0.1345	5.625	405.00	●	●		
	72 x 240	0.1345	5.625	675.60	●	●		
96 x 240	0.1345	5.625	900.80	●	●			

## Hot Rolled Sheets/Pickled & Oiled

Gauge	Size (inches)	Nominal Thickness Decimal (inches)	Est. Wt. Per Sq. Ft. (lbs.)	Est. Wt. Per Sheet (lbs.)	A1011 CSB	A1011 CSB P&O	A1011 HSLA-F GR 60	A606
11	36 x 96	0.1196	5.000	120.00	●	●		
	36 x 120	0.1196	5.000	150.00	●	●		
	36 x 144	0.1196	5.000	180.00	●	●		
	48 x 96	0.1196	5.000	160.00	●	●	●	●
	48 x 120	0.1196	5.000	200.00	●	●	●	
	48 x 144	0.1196	5.000	240.00	●	●		●
	60 x 96	0.1196	5.000	200.00	●	●		●
	60 x 120	0.1196	5.000	250.00	●	●		●
	60 x 144	0.1196	5.000	300.00	●	●		●
	72 x 96	0.1196	5.000	240.00	●	●		
	72 x 120	0.1196	5.000	300.00	●	●		
	72 x 144	0.1196	5.000	360.00	●	●		
	72 x 240	0.1196	5.000	600.00	●	●		
96 x 240	0.1196	5.000	800.00	●	●			
12	36 x 96	0.1046	4.380	105.12	●	●		
	36 x 120	0.1046	4.380	131.40	●	●		
	36 x 144	0.1046	4.380	157.68	●	●		
	48 x 96	0.1046	4.380	140.16	●	●	●	●
	48 x 120	0.1046	4.380	175.20	●	●	●	●
	48 x 144	0.1046	4.380	210.24	●	●		●
	60 x 96	0.1046	4.380	175.20	●	●		●
	60 x 120	0.1046	4.380	219.00	●	●		●
	60 x 144	0.1046	4.380	262.80	●	●		●
	72 x 96	0.1046	4.380	210.24	●	●		
	72 x 120	0.1046	4.380	262.80	●	●		
	72 x 144	0.1046	4.380	315.36	●	●		
	72 x 240	0.1046	4.380	525.60	●	●		
13	48 x 96	0.0897	3.750	120.00	●	●		
	48 x 120	0.0897	3.750	150.00	●	●		
14	36 x 96	0.0747	3.125	75.00	●	●		
	36 x 120	0.0747	3.125	93.75	●	●		
	36 x 144	0.0747	3.125	112.50	●	●		
	48 x 96	0.0747	3.125	100.00	●	●	●	●
	48 x 120	0.0747	3.125	125.00	●	●	●	●
	48 x 144	0.0747	3.125	150.00	●	●		●
	60 x 96	0.0747	3.125	125.00	●	●		
	60 x 120	0.0747	3.125	156.25	●	●		
	60 x 144	0.0747	3.125	187.50	●	●		
	72 x 96	0.0747	3.125	150.00	●	●		
	72 x 120	0.0747	3.125	187.50	●	●		
72 x 144	0.0747	3.125	225.00	●	●			
16	36 x 96	0.0598	2.500	60.00	●	●		
	36 x 120	0.0598	2.500	75.00	●	●		
	36 x 144	0.0598	2.500	90.00	●	●		
	48 x 96	0.0598	2.500	80.00	●	●	●	●
	48 x 120	0.0598	2.500	100.00	●	●	●	●
	48 x 144	0.0598	2.500	120.00	●	●		●
	60 x 96	0.0598	2.500	100.00	●	●		
	60 x 120	0.0598	2.500	125.00	●	●		
60 x 144	0.0598	2.500	150.00	●	●			
18	48 x 96	0.0478	2.000	64.00		●		
	48 x 120	0.0478	2.000	80.00		●		

## Cold Rolled Sheets

### Commercial Steel (CS) ASTM A1008

These sheets are rolled to a close thickness tolerance and possess a fine surface finish. Cold Rolled Sheets are suitable for stamping, forming and moderate drawing operations. Very desirable nickel or chrome plating results can be secured. Also, Cold Rolled Sheets provide an excellent base for baked enamel and lacquer finishes.

Gauge	Size (inches)	Nominal Thickness Decimal (inches)	Est. Wt. Per Sq. Ft. (lbs.)	Est. Wt. Per Sheet (lbs.)
10	36 x 96	0.1345	5.625	135.00
	36 x 120	0.1345	5.625	168.75
	48 x 96	0.1345	5.625	180.00
	48 x 120	0.1345	5.625	225.00
	48 x 144	0.1345	5.625	270.00
	60 x 120	0.1356	5.625	281.50
11	36 x 96	0.1196	5.000	120.00
	36 x 120	0.1196	5.000	150.00
	48 x 96	0.1196	5.000	160.00
	48 x 120	0.1196	5.000	200.00
	48 x 144	0.1196	5.000	240.00
	60 x 120	0.1196	5.000	250.00
12	36 x 96	0.1046	4.380	105.12
	48 x 96	0.1046	4.380	140.16
	48 x 120	0.1046	4.380	175.20
	48 x 144	0.1046	4.380	210.24
	60 x 120	0.1046	4.380	219.00
13	48 x 96	0.0897	3.750	120.00
	48 x 120	0.0897	3.750	150.00
14	36 x 96	0.0747	3.125	75.00
	36 x 120	0.0747	3.125	93.75
	48 x 96	0.0747	3.125	100.00
	48 x 120	0.0747	3.125	125.00
	48 x 144	0.0747	3.125	150.00
	60 x 120	0.0747	3.125	156.25
	72 x 120	0.0747	3.125	187.50
	72 x 144	0.0747	3.125	225.00
16	36 x 96	0.0598	2.500	60.00
	36 x 120	0.0598	2.500	75.00
	48 x 96	0.0598	2.500	80.00
	48 x 120	0.0598	2.500	100.00
	48 x 144	0.0598	2.500	120.00
	60 x 120	0.0598	2.500	125.00
	72 x 120	0.0598	2.500	150.00
	72 x 144	0.0598	2.500	180.00
18	36 x 96	0.0478	2.000	48.00
	36 x 120	0.0478	2.000	60.00
	48 x 96	0.0478	2.000	64.00
	48 x 120	0.0478	2.000	80.00
	48 x 144	0.0478	2.000	96.00
	60 x 120	0.0478	2.000	100.00
20	36 x 96	0.0359	1.500	36.00
	36 x 120	0.0359	1.500	45.00
	48 x 96	0.0359	1.500	48.00
	48 x 120	0.0359	1.500	60.00
	60 x 120	0.0359	1.500	75.00
22	48 x 96	0.0299	1.250	40.00
	48 x 120	0.0299	1.250	50.00
24	48 x 96	0.0239	1.000	32.00
	48 x 120	0.0239	1.000	40.00

## Galvanized Sheets

### Commercial Quality (Lock Form Quality)

A continuous mill annealing and galvanizing process produces sheets with a tight, even coat of spangle that will not flake or peel in forming operations. Normally stocked in a G-90 coating weight.

Size (gauge)	Nom. Thick (inches)	Sheet Sizes (inches)	Est. Weight (lbs./sqft.)	Est. Weight (lbs./sheet)
7	0.1800	48 x 96	7.660	245.12
7	0.1800	48 x 120	7.660	306.40
8	0.1650	48 x 96	7.030	224.96
8	0.1650	48 x 120	7.030	281.20
10	0.1382	48 x 96	5.781	184.99
10	0.1382	48 x 120	5.781	231.24
10	0.1382	48 x 144	5.781	277.49
10	0.1382	60 x 96	5.781	231.20
10	0.1382	60 x 120	5.781	289.05
10	0.1382	60 x 144	5.781	346.80
11	0.1233	48 x 96	5.156	164.99
11	0.1233	48 x 120	5.156	206.24
11	0.1233	48 x 144	5.156	247.48
11	0.1233	60 x 96	5.156	206.24
11	0.1233	60 x 120	5.156	257.80
11	0.1233	60 x 144	5.156	309.36
12	0.1084	36 x 96	4.531	108.74
12	0.1084	36 x 120	4.531	135.93
12	0.1084	48 x 96	4.531	144.99
12	0.1084	48 x 120	4.531	181.24
12	0.1084	60 x 96	4.531	181.24
12	0.1084	60 x 120	4.531	226.55
12	0.1084	60 x 144	4.531	271.86
13	0.0897	48 x 96	3.906	124.99
13	0.0897	48 x 120	3.906	156.24
14	0.0785	36 x 96	3.281	78.74
14	0.0785	36 x 120	3.281	98.43
14	0.0785	48 x 96	3.281	104.99
14	0.0785	48 x 120	3.281	131.24
14	0.0785	48 x 144	3.281	157.49
14	0.0785	60 x 96	3.281	131.20
14	0.0785	60 x 120	3.281	164.05
14	0.0785	60 x 144	3.281	196.80
16	0.0635	36 x 96	2.656	63.74
16	0.0635	36 x 120	2.656	79.68
16	0.0635	48 x 96	2.656	84.99
16	0.0635	48 x 120	2.656	106.24
16	0.0635	48 x 144	2.656	127.49
16	0.0635	60 x 96	2.656	106.24
16	0.0635	60 x 120	2.656	132.80
16	0.0635	60 x 144	2.656	159.60

Size (gauge)	Nom. Thick (inches)	Sheet Sizes (inches)	Est. Weight (lbs./sqft.)	Est. Weight (lbs./sheet)
18	0.0516	36 x 96	2.156	51.74
18	0.0516	36 x 120	2.156	64.68
18	0.0516	48 x 96	2.156	68.99
18	0.0516	48 x 120	2.156	86.24
18	0.0516	48 x 144	2.156	103.49
18	0.0516	60 x 96	2.156	86.40
18	0.0516	60 x 120	2.156	107.80
18	0.0516	60 x 144	2.156	129.60
20	0.0396	36 x 96	1.656	39.74
20	0.0396	36 x 120	1.656	49.68
20	0.0396	48 x 96	1.656	52.99
20	0.0396	48 x 120	1.656	66.24
20	0.0396	48 x 144	1.656	79.49
20	0.0396	60 x 96	1.656	66.40
20	0.0396	60 x 120	1.656	82.80
20	0.0396	60 x 144	1.656	99.60
22	0.0336	36 x 96	1.406	33.74
22	0.0336	36 x 120	1.406	42.18
22	0.0336	48 x 96	1.406	44.99
22	0.0336	48 x 120	1.406	56.24
22	0.0336	48 x 144	1.406	67.49
22	0.0336	60 x 96	1.406	56.40
22	0.0336	60 x 120	1.406	70.30
22	0.0336	60 x 144	1.406	84.60
24	0.0276	36 x 96	1.156	27.74
24	0.0276	36 x 120	1.156	34.68
24	0.0276	48 x 96	1.156	36.99
24	0.0276	48 x 120	1.156	46.24
24	0.0276	48 x 144	1.156	55.49
24	0.0276	60 x 96	1.156	46.24
24	0.0276	60 x 120	1.156	57.80
26	0.0217	36 x 96	0.906	21.74
26	0.0217	36 x 120	0.906	27.18
26	0.0217	48 x 96	0.906	28.99
26	0.0217	48 x 120	0.906	36.24
26	0.0217	48 x 144	0.906	43.49
26	0.0217	60 x 120	0.906	45.30
28	0.0187	36 x 96	0.781	18.74
28	0.0187	36 x 120	0.781	23.43
28	0.0187	48 x 96	0.781	24.99
28	0.0187	48 x 120	0.781	31.24
30	0.0157	36 x 96	0.657	15.77
30	0.0157	36 x 120	0.657	19.71

## Galvannealed Sheets

### Commercial Quality

Galvannealed sheet is carbon steel coated with zinc on both sides by the continuous hot dip process. Immediately as the strip exits the coating bath, the zinc coating is subjected to an in-line heat treatment that converts the entire coating to a zinc iron alloy, giving the sheet a better surface for painting. Normally stocked in an A-60 coating weight.

Gauge	Size (inches)	Nominal Thickness Decimal (inches)	Est. Wt. Per Sq. Ft. (lbs.)	Est. Wt. Per Sheet (lbs.)
10	48 x 96	0.1382	5.781	184.96
	48 x 120	0.1382	5.781	231.20
	60 x 120	0.1382	5.781	289.00
11	48 x 96	0.1233	5.156	164.99
	48 x 120	0.1233	5.156	206.24
	48 x 144	0.1233	5.156	247.49
	60 x 120	0.1233	5.156	257.80
12	48 x 96	1.0840	4.531	144.99
	48 x 120	1.0840	4.531	181.24
	60 x 120	1.0840	4.531	226.55
14	48 x 96	0.0785	3.281	104.99
	48 x 120	0.0785	3.281	131.24
	48 x 144	0.0785	3.281	157.49
	60 x 120	0.0785	3.281	164.05
16	48 x 96	0.0635	2.656	84.99
	48 x 120	0.0635	2.656	106.24
	48 x 144	0.0635	2.656	127.49
	60 x 120	0.0635	2.656	132.80
18	48 x 96	0.0516	2.156	68.99
	48 x 120	0.0516	2.156	86.24
	48 x 144	0.0516	2.156	103.49
	60 x 120	0.0516	2.156	107.80
20	48 x 96	0.0396	1.656	52.99
	48 x 120	0.0396	1.656	66.24
	48 x 144	0.0396	1.656	79.49
22	48 x 96	0.0336	1.406	44.99
	48 x 120	0.0336	1.406	56.24
	48 x 144	0.0336	1.406	67.49
24	48 x 96	0.0276	1.156	36.99
	48 x 120	0.0276	1.156	46.24
	48 x 144	0.0276	1.156	55.49



## Aluminized Sheets

### Commercial Quality

Aluminized coated carbon steel sheets have an aluminum and silicon alloy coating on both sides. They are principally used in heat-resisting applications and also where corrosion and heat are involved.

Gauge	Size (inches)	Nominal Thickness Decimal (inches)	Est. Wt. Per Sq. Ft. (lbs.)	Est. Wt. Per Sheet (lbs.)
11	48 x 96	0.1234	5.180	165.76
	48 x 120	0.1234	5.180	207.20
12	48 x 96	0.1084	4.533	145.25
	48 x 120	0.1084	4.533	181.32
	60 x 120	0.1084	4.533	226.65
14	48 x 96	0.0785	3.283	105.05
	48 x 120	0.0785	3.283	131.32
	60 x 120	0.0785	3.283	164.15
16	36 x 96	0.0635	2.656	63.74
	36 x 120	0.0635	2.656	79.68
	48 x 96	0.0635	2.656	84.99
	48 x 120	0.0635	2.656	106.24
	60 x 96	0.0635	2.656	106.24
	60 x 120	0.0635	2.656	132.80
18	36 x 96	0.0516	2.156	51.74
	36 x 120	0.0516	2.156	64.68
	48 x 96	0.0516	2.156	68.99
	48 x 120	0.0516	2.156	86.24
	60 x 96	0.0516	2.156	86.32
	60 x 120	0.0516	2.156	107.80
20	36 x 96	0.0396	1.656	39.74
	36 x 120	0.0396	1.656	49.68
	48 x 96	0.0396	1.656	52.99
	48 x 120	0.0396	1.656	66.24
	60 x 120	0.0396	1.656	82.80

## Sheared Sheet Blanks

Investment conscious customers rely on Alro Steel to provide them with sheared sheet blanks. A battery of shears, working around the clock, assure availability of material to meet production schedules. This results in reduced inventory and handling costs, less in-plant scrap accumulations, and provides customers with quality blanks ready for immediate processing.

# Hot and Cold Rolled Sheet Tolerances

## Manufacturers' Standard Gage

Hot Rolled, HR P&O, Cold Rolled				Galvanized, Galvannealed				
Gauge	Decimal Equiv. (inches)	Tolerance Range (inches)		Pounds Per Square Foot	Gauge	Decimal Equiv. (inches)	Tolerance Range (inches)	Pounds Per Square Foot
		HR P&O	CR					
4	.2242	.2332 .2152		9.376	4	....	....	....
5	.2092	.2182 .2002		8.748	5	....	....	....
6	.1943	.2033 .1853		8.125	6	....	....	....
7	.1793	.1873 .1713		7.498	7	....	....	....
8	.1644	.1724 .1564		6.875	8	....	....	....
9	.1495	.1575 .1415		6.252	9	....	....	....
10	.1345	.1425 .1265	.1405 .1285	5.624	10	.1382	.1472 .1292	5.779
11	.1196	.1276 .1116	.1256 .1136	5.001	11	.1233	.1323 .1143	5.156
12	.1046	.1126 .0966	.1106 .0986	4.374	12	.1084	.1174 .0994	4.533
13	.0897	.0967 .0827	.0947 .0847	3.751	13	.0934	.1014 .0854	3.906
14	.0747	.0817 .0677	.0797 .0697	3.124	14	.0785	.0865 .0705	3.283
15	.0673	.0733 .0613	.0723 .0623	2.814	15	.0710	.0770 .0650	2.969
16	.0598	.0658 .0538	.0648 .0548	2.501	16	.0635	.0695 .0575	2.655
17	.0538	.0598 .0478	.0578 .0498	2.250	17	.0575	.0625 .0525	2.405
18	.0478	.0528 .0428	.0518 .0438	1.999	18	.0516	.0566 .0466	2.158
19	.0418		.0458 .0378	1.748	19	.0456	.0506 .0406	1.907
20	.0359		.0389 .0329	1.501	20	.0396	.0436 .0356	1.656
21	.0329		.0359 .0299	1.376	21	.0366	.0406 .0326	1.531
22	.0299		.0329 .0269	1.250	22	.0336	.0376 .0296	1.405
23	.0269		.0299 .0239	1.125	23	.0306	.0346 .0266	1.280
24	.0239		.0269 .0209	.999	24	.0276	.0316 .0236	1.154
25	.0209		.0239 .0179	.874	25	.0247	.0287 .0207	1.033
26	.0179		.0199 .0159	.749	26	.0217	.0247 .0187	.907
27	.0164		.0184 .0144	.686	27	.0202	.0232 .0172	.845
28	.0149		.0169 .0129	.623	28	.0187	.0217 .0157	.782
29	.0135		.0155 .0115	.562	29	.0172	.0202 .0142	.719
30	.0120		.0140 .0100	.500	30	.0157	.0187 .0127	.657

Guideline only. Some products are not produced in all gauge ranges.

Steel Plate  
and Sheet