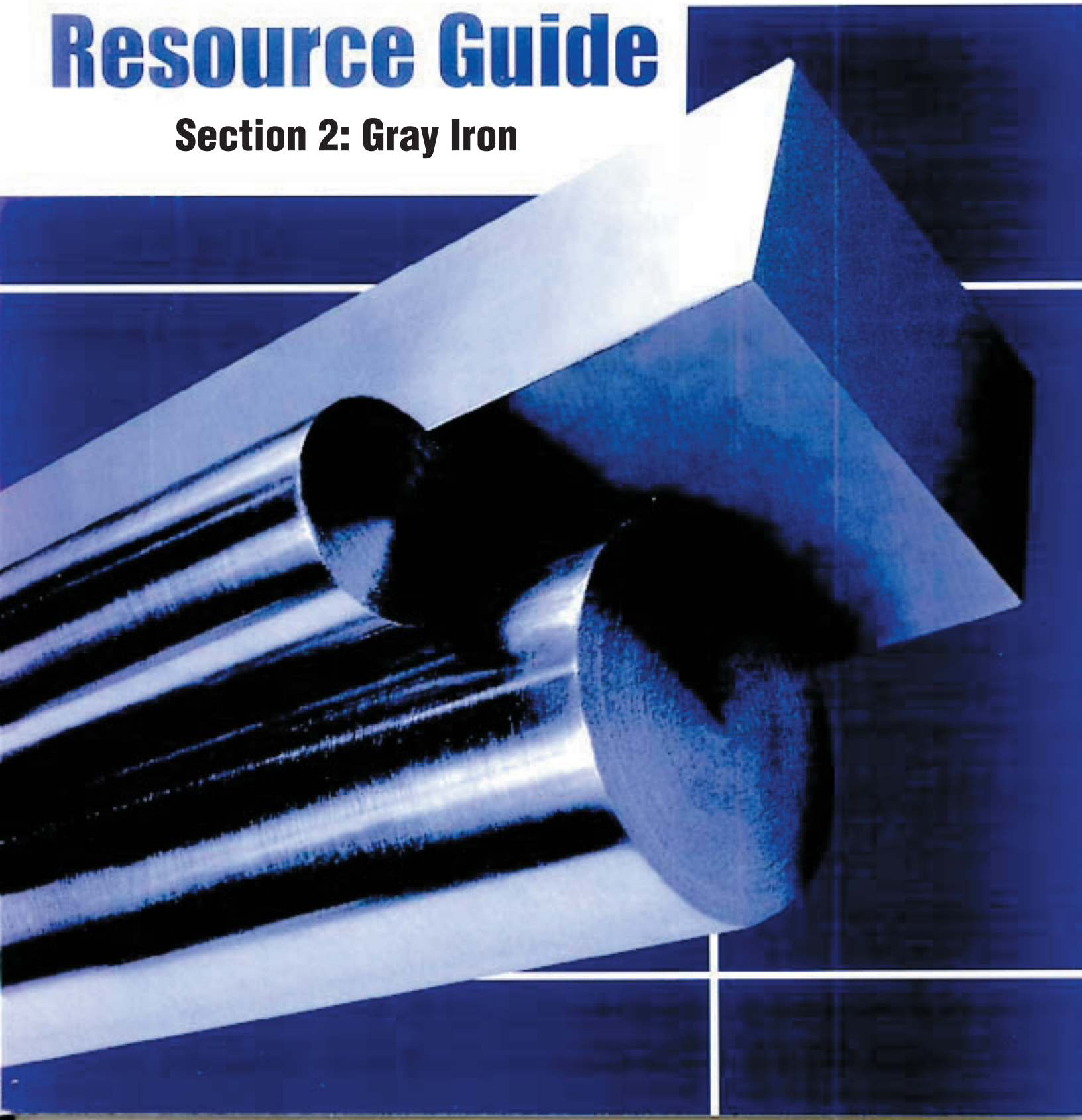
DURA-BAR®

Continuous Cast Iron Bar Stock

Resource Guide

Section 2: Gray Iron



Section 2

Gray Iron

Gray Iron Description of Grades

Dura-Bar continuous cast gray irons contain flake graphite in matrix structures that range from all pearlite to pearlite plus ferrite depending on the grades. The flake configuration corresponds to ASTM Type VII and is available in Type D, size 6-8 or Type A, size 4-6. Gray iron bars have strengths ranging from 20,000 psi to 40,000 psi.

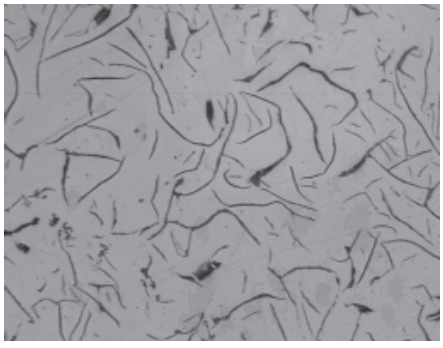
The matrix structure will influence machinability, strength, hardness and wear characteristics. In general, a fully pearlitic matrix will have the best mechanical properties and will be readily machinable. Bars containing ferrite in the matrix will be easier to machine but will be lower in strength and wear resistance.

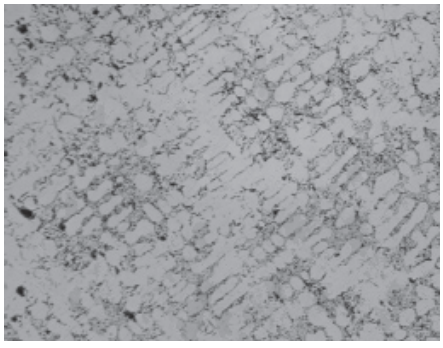
The graphite structure influences strength, surface finish and hardness. The most common gray iron specification will contain Type VII flakes, type A, size 4-6, as evaluated in ASTM A247. Dura-Bar G1 and G2 gray iron will contain this type of graphite distribution and will be best suited for applications requiring moderate strength, good vibration damping and thermal conductivity, along with optimal machining characteristics.

Irons containing finer flake sizes are available in the G1A and G2A grades. The graphite distribution is Type VII flakes, Type D, size 6-8, as per ASTM A247. Irons containing Type D graphite are most often specified for glass and other permanent mold applications when excellent surface finishes are required.

Fig. 1 (Left)
Type VII flake, type A, size 4-6 (100x, unetched)

Fig. 2 (Right)
Type VII flake, type D, size 6-8 (100x, unetched)





G1 Partially Ferritic Gray Iron

General Description

Dura-Bar G1 contains flake graphite in a matrix that is pearlitic with small amounts of ferrite. This is the softest grade of the Dura-Bar gray irons and is normally selected when excellent machinability is desired and the application requires moderate strength, hardness and resistance to wear. Excellent surface finishes can be achieved which is especially significant where lapping is involved.

This specification is similar to ASTM A48 class 30.

Microstructure

The microstructure will contain Type VII, type A, size 4-6, graphite as defined in ASTM A247. The matrix is pearlite with 5-20% ferrite. The rim will consist of Type D, size 6-8, graphite in a ferrite matrix with small amounts of pearlite. Chill carbides will be less than 5% in any field at 100x and will be well dispersed.

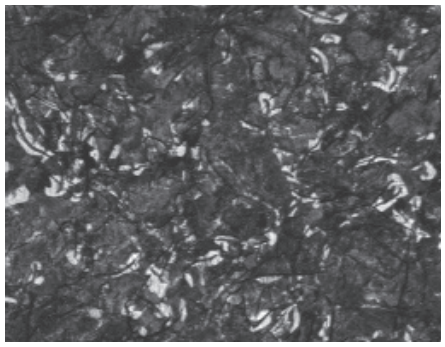


Fig. 1 (Left)
Typical microstructure in the center area (100x, etched in 5% Nitol)

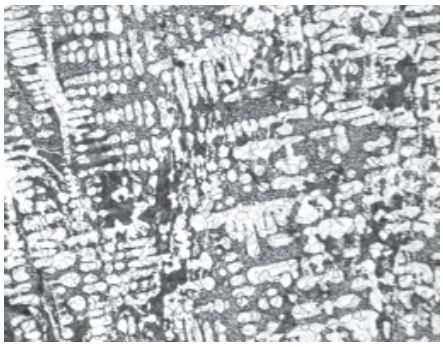


Fig. 2 (Right)
Typical microstructure in the rim area (100x, etched in 5% Nitol)

Chemical Composition

The general analysis of this material is as shown in Table 1 below.

Table 1
G1 chemical analysis

Element	Percentage
Carbon[1]	2.60 - 3.75%
Silicon[1]	1.80 - 3.00%
Manganese	0.30 - 0.65%
Sulfur	0.07% max.
Phosphorus	0.12% max.

[1] Carbon and silicon targets are specified for each bar size in order to control the size and shape of the graphite flake.

G1 Partially Ferritic Gray Iron

Mechanical Properties

Brinell hardness values for nominal as-cast diameters are shown in Table 2 below. Hardness properties listed are minimum, maximum across the bar. Hardness values for rec-tangles and shapes are a function of the height and width ratios and will be supplied on request.

Size Range		BHN	
Inches	mm	Min.	Max.
00.625 - 01.500	16 - 38	179	235
01.501 - 03.000	38 - 76	163	229
03.001 - 06.000	76 - 152	151	229
06.001 - 20.000	152 - 508	143	201

Table 2
G1 hardness table

The tensile strength of this material will be lower than the strengths in G2. Smaller bars will be approximately 30,000 psi; larger bars will be 20,000 psi. This grade is most commonly used in applications that have applied loads less than 15,000 psi.

Heat Treat Response

Dura-Bar G1 can be oil quench hardened from 1575°F (855°C) to a minimum hardness of 40 Rc on the outside of the bar. The inside diameter hardness will be less than 40 Rc. If quench hardness is critical to the application, G2 Dura-Bar is recommended. Dura-Bar G1 may be ferritize annealed to soften the material to approximately 130 BHN.

Typical Applications

Typical applications for G1 are listed below. They are classified by industry.

Fluid Power: Glands, manifolds, pistons, spools, & valves

Machinery: Bushings, gears, gibs, pulleys, rams, sheaves, side frames, slides, & ways

Transportation: Cylinder liners, gears, lash sdjusters, shock absorber pistons, & valve guides

Pump and Compressor: Liners, pistons, rollers, rotors, & seals

Miscellaneous: Aluminum mold plates, bushings, cams, chain sheaves, core boxes, dies, gears, pattern plates, pulleys, & wheels

Availability of Sizes and Shapes

Dura-Bar G1 is a non-inventoried item. A wide variety of sizes and shapes is available by special order.

G1A Ferritic Gray Iron

Color Code: Pink

General Description

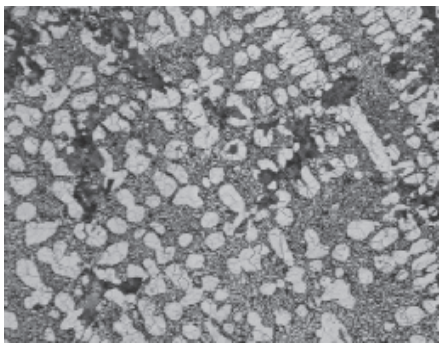
Dura-Bar G1A has Type D graphite in a predominantly ferrite matrix. This specification was originally developed for the glass mold industry where a fine grain structure and superior machining finish are needed. Dimensional growth due to repeated heating and cooling cycles is minimal due to the smaller graphite flake size and ferritic matrix structure.

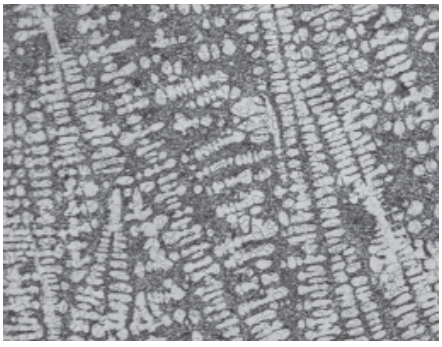
Microstructure

The microstructure will contain Type VII, type D, size 6-8, graphite as defined in ASTM A247. The matrix is predominantly ferrite. Chill carbides will be less than 5% in any field at 100x and will be well dispersed.

Fig. 1 (Left)
Typical microstructure in the center area (100x, etched in 5% Nitol)

Fig. 2 (Right)
Typical microstructure in the rim area (100x, etched in 5% Nitol)





Chemical Composition

The general analysis of this material is as shown in Table 1 below.

Table 1
G1A chemical analysis

Element	Percentage
Carbon[1]	2.60 - 3.75%
Silicon[1]	2.30 - 3.00%
Manganese	0.10 - 0.35%
Sulfur	0.025% max.
Phosphorus	0.12% max.

[1] Carbon and silicon targets are specified for each bar size in order to control the size and shape of the graphite flake.

Mechanical Properties

Brinell hardness values for nominal as-cast diameters are shown in Table 2 below. Hardness properties listed are minimum, maximum across the bar. Hardness values for rec-tangles and squares are a function of the height and width ratios and will be supplied on request.

Table 2
G1A hardness table

Size Range		BHN	
Inches	mm	Min.	Max.
01.000 - 01.500	25 - 38	159	229
01.501 - 03.000	38 - 76	156	201
03.001 - 07.000	76 - 178	143	201

The tensile strength will be approximately 25,000 psi, as determined from a longitu-dinal test specimen taken from mid-radius of the as-cast bar. The tensile data is not a minimum, but rather the typical expected tensile strength. Anticipated tensile data for shapes, including squares and rectangles, will be provided on request.

Heat Treat Response

G1A is not intended for hardening. The matrix structure may be softened slightly by heating to 1400°F (760°C) and furnace cooling to 400°F (205°C).

Typical Applications

Typical mold industry applications for G1A are listed below:

- Baffles
- Full molds
- Blank molds
- Bottom plates
- Discs
- Funnels
- Guide and neck rings
- Plungers
- Sleeves
- Thimbles

Availability of Sizes and Shapes

The stock listing for Dura-Bar G1A follows this section. Sizes and shapes not listed are available by special order.

G2 Highly Pearlitic Gray Iron

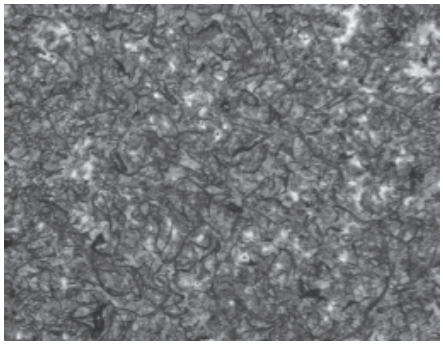
Color Code: Light Green

General Description

G2 is a pearlitic gray iron containing Type A graphite. Gray iron bars made to this specification will have optimal strength, wear and hardness when compared to the other gray iron grades. This material is well suited for applications requiring high resistance to wear and response to heat treatment. This specification is similar to ASTM A48 Class 40.

Microstructure

The microstructure will contain Type VII, type A, size 4-6, graphite as defined in ASTM A247. The matrix is fully pearlitic. The rim will consist of type D, size 6-8, graphite in a pearlite matrix with small amounts of ferrite. Chill carbides will be less than 5% in any field at 100x and will be well dispersed.



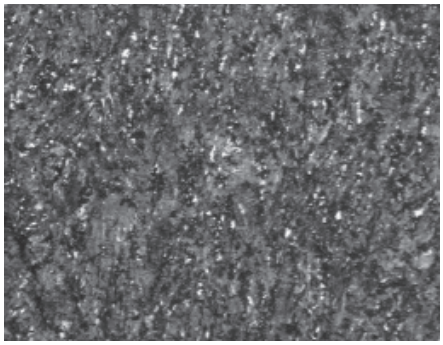


Fig. 1 (Left)
Typical microstructure in the center area (100x, etched in 5% Nitol)

Fig. 2 (Right)
Typical microstructure in the rim area (100x, etched in 5% Nitol)

Chemical Composition

The general analysis of this material is as shown in Table 1 below.

Table 1
G2 chemical analysis.

Element	Percentage
Carbon[1]	2.60 - 3.75%
Silicon[1]	1.80 - 3.00%
Manganese	0.60 - 0.95%
Sulfur	0.07% max.
Phosphorus	0.12% max.

Small amounts of alloying elements are used to stabilize the pearlitic structure.

[1] Carbon and silicon targets are specified for each bar size in order to control the size and shape of the graphite flake.

Mechanical Properties

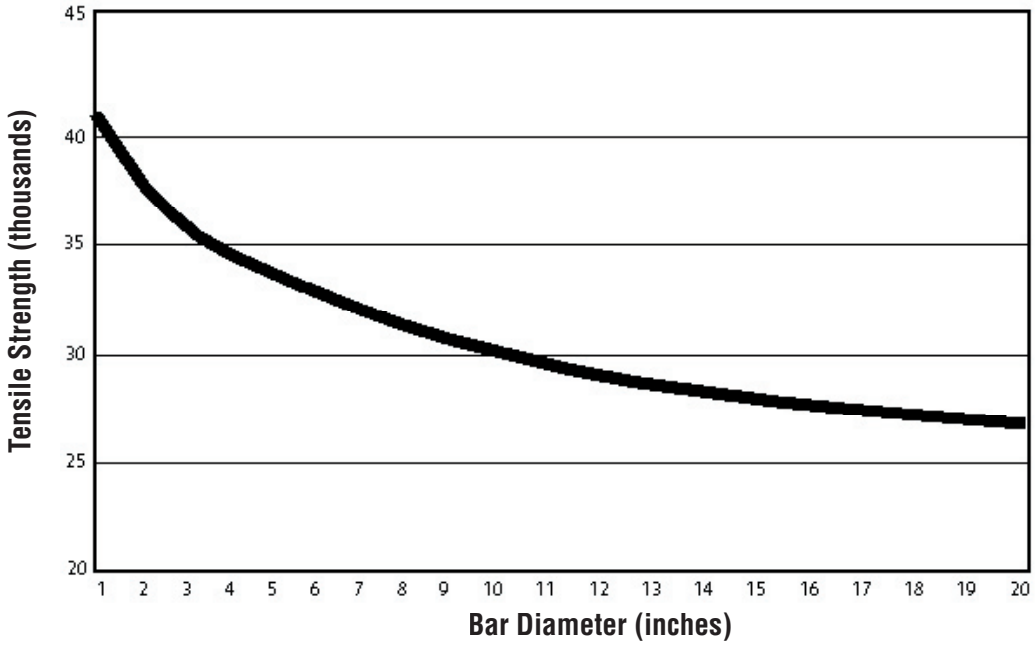
Brinell hardness values for nominal as-cast diameters are shown in Table 2 below. Hardness properties listed are minimum, maximum across the bar. Hardness values for rec-tangles and squares are a function of the height and width ratios and will be supplied on request.

Table 2.
G2 hardness data

Size Range		BHN	
Inches	mm	Min.	Max.
00.625 - 00.750	16 - 19	229	301
00.751 - 01.500	19 - 38	207	285
01.501 - 02.000	38 - 51	207	277
02.001 - 03.000	51 - 76	207	269
03.001 - 06.000	76 - 152	197	269
06.001 - 20.000	152 - 508	183	269

The tensile strength is determined from a longitudinal test specimen taken from the mid-radius of the continuous cast bar. Tensile strength varies with section thickness and bar diameter as shown in Figure 3. The tensile data plotted does not indicate a minimum, but rather the typical expected tensile strengths.

Fig. 3
Tensile strengths as a function of bar diameter; Dura-Bar G2 test bars from mid-radius of as-cast bars. (Plotted values are typical, not minimums.)



G2 Highly Pearlitic Gray Iron

Heat Treat Response

This iron can be hardened by fast methods, such as flame and induction hardening, in addition to conventional quench and temper methods.

G2 Dura-Bar can be oil quench hardened from 1600°F (870°C) to a minimum hardness of 50 Rc on the outside of the bar. The inside diameter hardness will be less than 50 Rc. Lower quench hardnesses on the inside diameters are a result of larger graphite flakes and not a loss of matrix hardness. Typical Jominy end quench test data are shown in the section on Heat Treating.

Typical Applications

Typical applications for G2 are listed below. They are classified by industry.

Fluid Power:	Cylinder blocks, glands, manifolds, pistons, spools, & valves
Machinery:	Bushings, gears, gibs, pulleys, rams, sheaves, side frames, slides, ways, spindles, & housings
Transportation:	Cylinder liners, gears, lash adjusters, shock absorber pistons, valve guides, valve seat inserts, & brake rotors
Pump and Compressor:	Liners, pistons, rollers, rotors, & seals
Oil and Gas:	Bridge plugs, cement plugs, cones, mandrels, retainers, & slips
Steel Mill:	Continuous caster rolls, foot rolls, table rolls, & torch rolls
Miscellaneous:	Aluminum mold plates, bushings, cams, chain sheaves, core boxes, dies, gears, pattern plates, pulleys, & wheels

Availability of Sizes and Shapes

The stock listing for Dura-Bar G2 follows this section. Sizes and shapes not listed are available by special order.

G2A Highly Pearlitic High-Strength Gray Iron

General Description

Dura-Bar G2A has Type D graphite in a predominantly pearlitic matrix. The fine graphite structure allows excellent surface finish and is normally used in permanent mold applications requiring optimal strengths and wear resistance.

Microstructure

The microstructure will contain Type VII, type D, size 6-8, graphite as defined in ASTM A247. The matrix is predominantly pearlite. The rim will be similar to the center. Chill carbides will be less than 5% in any field at 100x and will be well dispersed.

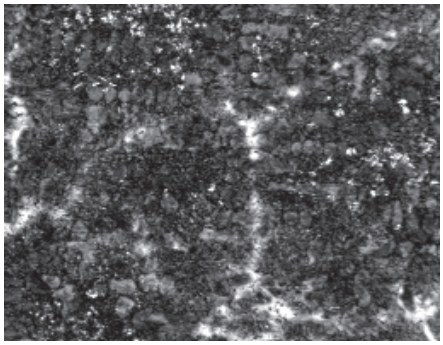


Fig. 1 (Left)
Typical microstructure in the center area (100x, etched in 5% Nitol)

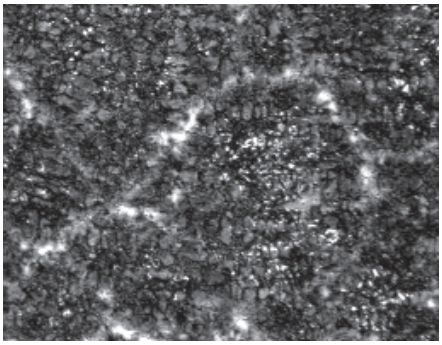


Fig. 2 (Right)
Typical microstructure in the rim area (100x, etched in 5% Nitol)

Chemical Composition

The general analysis of this material is as shown in Table 1 below.

Table 1
G2A chemical analysis

Element	Percentage
Carbon[1]	2.60 - 3.75%
Silicon[1]	2.00 - 3.00%
Manganese	0.20 - 0.40%
Sulfur	0.025% max.
Phosphorus	0.12% max.

[1] Carbon and silicon targets are specified for each bar size in order to control the size and shape of the graphite flake.

G2A Highly Pearlitic High-Strength Gray Iron

Mechanical Properties

Brinell hardness values for nominal as-cast diameters are shown in Table 2 below. Hardness properties listed are minimum, maximum across the bar. Hardness values for rectangles and squares are a function of the height and width radios and will be supplied on request.

Table 2
G2A hardness table

Size Range		BHN	
Inches	**mm**	**Min.**	**Max.**
00.750 - 20.000	19 - 508	248	311

The tensile strength will be approximately 40,000 psi as determined from a longitudinal test specimen taken from the mid-radius of the as-cast bar. The tensile data is not a minimum, but rather the typical expected tensile strength. Anticipated tensile data for shapes, including squares and rectangles, will be provided on request.

Heat Treat Response

G2A Dura-Bar can be oil quench hardened from 1600°F (870°C) to a minimum hardness of 50 Rc on the outside of the bar. The inside diameter hardness will be less than 50 Rc. Lower quench hardnesses on the inside diameters are a result of larger graphite flakes and not a loss of matrix hardness. Typical Jominy end quench test data will be comparable to the gray iron curve shown in the Heat Treating section *(page 5-6)*.

Typical Applications

Typical mold industry applications for G2A are listed below:

- Baffles
- Full molds
- Blank molds
- Bottom plates
- Discs
- Funnels
- Guide and neck rings
- Plungers
- Sleeves
- Thimbles

Availability of Sizes and Shapes

Dura-Bar G2A is a non-inventoried item. A wide variety of sizes and shapes is available by special order.

Sizes and Shapes

Stock listings for rounds, trepanned tubes, rectangles, and squares are listed on the following pages. Dura-Bar G2 and G1A are stock grades; G1 and G2A iron grades are non-inventory items.

Round bar stock is available in sizes ranging from 0.625" to 20.00" in diameter. Any size round bar in this category can be produced, although stock sizes are made to specific increments.

Round bars are sold to clean up at the nominal size. Additional stock is added to allow for out-of-round and normal imperfections in the as-cast surface. Stock allowance is a function of the bar diameter.

The stock listing for trepanned tubes contains the possible inside diameters for each stock size outside diameter. Any stock size can be trepanned to the inside diameter listed on the chart. Tubes are sold with clean-up stock on the inside and outside diameters.

Rectangles and squares are available in sizes ranging from 0.750" x 1.500" to 14.000" x 21.000". Stock sizes are made to specific increments within this range, although a wide range of height and width combinations can be produced.

Rectangles and squares are sold to an actual size with no allowance for machine stock added.

All custom shapes are special order and are quoted individually.

Stock List - Rounds

Nominal Diameter (Inches)	Stock Allowance (Inches)	Nominal Length (Inches)	Bundle Quantity	As-Cast			Cold-Finished*		
				Weight (Lbs./Ft.)	G2	G1A	Weight (Lbs./Ft.)	G2	G1A
0.625	0.085	72	74	1.2	■		1.0	■	
0.750	0.085	72	109	1.7	■		1.4	■	
0.875	0.085	72	95	2.3	■		1.9	■	
1.000	0.085	72	108	2.9	■		2.5	■	
1.125	0.085	72	92	3.6	■		3.2	■	
1.250	0.085	72	74	4.4	■		3.9	■	
1.375	0.090	72	63	5.3	■		4.7	■	
1.500	0.090	72	69	6.2	■		5.6	■	
1.625	0.090	72	63	7.2	■		6.5	■	
1.750	0.090	72	53	8.3	■		7.6	■	
1.875	0.090	72	51	9.5	■		8.7	■	
2.000	0.090	72	42	10.7	■	■	9.9	■	●
2.125	0.110	72	38	12.2	■		11.1	■	
2.250	0.110	72	45	13.6	■		12.5	■	
2.375	0.110	72	39	15.1	■		13.9	■	
2.500	0.110	72	38	16.7	■	■	15.4	■	●
2.625	0.110	72	33	18.3	■		17.0	■	
2.750	0.110	72	30	20.0	■	■	18.6	■	●
2.875	0.110	72	28	21.8	■		20.3	■	
3.000	0.110	72	26	23.7	■	■	22.1	■	●
3.125	0.125	72	23	25.9	■		24.0	■	
3.250	0.125	72	22	27.9	■	■	26.0	■	●
3.375	0.125	72	20	30.0	■		28.0	■	
3.500	0.125	72	18	32.2	■	■	30.1	■	●
3.625	0.125	72	18	34.5	■		32.3	■	
3.750	0.125	72	17	36.8	■	■	34.6	■	●
3.875	0.125	72	17	39.2			36.9		
4.000	0.125	72	14	41.7	■	■	39.3	■	●
4.125	0.140	72	14	44.6			41.8		
4.250	0.140	72	14	47.2	■		44.4	●	
4.375	0.140	72	11	50.0			47.0		
4.500	0.140	72	11	52.8	■	■	49.7	●	●
4.625	0.140	72	11	55.6			52.5		
4.750	0.140	72	11	58.6	■		55.4	●	

■ Available as stock item

● Available upon request

** Cold-finished bars in sizes 1.000" through 5.000" are centerless turned. All others available are centerless ground.*

Nominal Diameter (Inches)	Stock Allowance (Inches)	Nominal Length (Inches)	Bundle Quantity	As-Cast			Cold-Finished*		
				Weight (Lbs./Ft.)	G2	G1A	Weight (Lbs./Ft.)	G2	G1A
5.000	0.140	72	9	64.7	■		61.4	●	
5.250	0.155	72	9	71.6	■		67.7	●	
5.500	0.155	72	7	78.4	■		74.3	●	
5.750	0.155	72	7	85.4	■		81.2	●	
6.000	0.155	72	7	92.8	■	■	88.4	●	●
6.250	0.170	72	4	101.0	■				
6.500	0.170	72	4	109.0	■				
6.750	0.170	72	4	117.3	■				
7.000	0.170	72	3	126.0	■				
7.250	0.190	72	3	135.6	■				
7.500	0.190	72	3	144.9	■				
7.750	0.190	72	3	154.5	■				
8.000	0.190	72	3	164.4	■				
8.250	0.216	72	3	175.6	■				
8.500	0.216	72	3	186.2	■				
8.750	0.216	72	3	197.0	■				
9.000	0.216	72	2	208.1	■				
9.250	0.254	72	2	221.3	■				
9.500	0.254	72	2	233.1	■				
10.000	0.254	72	2	257.7	■				
10.250	0.400	72	2	277.9	■				
10.500	0.400	72	2	291.1	■				
11.000	0.400	72	2	318.5	■				
11.500	0.582	76	2	357.7	■				
12.000	0.582	72	2	387.9	■				
12.500	0.582	72	1	419.4	■				
13.000	0.582	72	1	452.0	■				
14.000	0.582	72	1	521.0	■				
15.000	0.582	72	1	595.0	■				
16.000	0.582	72	1	673.8	■				
17.000	0.762	72	1	773.1	■				
18.000	0.762	72	1	862.6	■				
19.000	0.762	57	1	957.0	■				
20.000	0.762	54	1	1056.0	■				

■ Available as stock item

● Available upon request

** Cold-finished bars in sizes 1.000" through 5.000" are centerless turned. All others available are centerless ground.*

Trepanned Tube Weights

Gray Iron

Outside Diameter (inches)	Inside Diameter (inches) 1.500	2.000	2.250	2.500	2.750	3.000	3.250	3.500	3.750
2.250	10								
2.375	11								
2.500	13								
2.625	15								
2.750	16	13							
2.875	18	14							
3.000	20	16	14						
3.125	22	18	16						
3.250	24	20	18	16					
3.375	26	23	20	18					
3.500	28	25	22	20	17				
3.625	31	27	25	22	19				
3.750	33	29	27	24	21	18			
3.875	35	32	29	27	24	21			
4.000	38	34	32	29	26	23	20		
4.125	41	37	35	32	29	26	23	19	
4.250	43	40	37	35	32	29	25	21	
4.375	46	42	40	38	35	31	28	24	
4.500	49	45	43	40	37	34	31	27	23
4.625	52	48	46	43	40	37	34	30	26
4.750	55	51	49	46	43	40	37	33	29
5.000	61	57	55	52	49	46	43	39	35
5.250	68	64	62	59	56	53	50	46	42
5.500	75	71	69	66	63	60	56	52	48
5.750	82	78	76	73	70	67	63	60	55
6.000	89	85	83	80	77	74	71	67	63
6.250				89	86	82	79	75	71
6.500				97	94	90	87	83	79
6.750				105	102	99	95	91	87
7.000				114	111	107	104	100	96
7.250				123	120	117	114	110	106
7.500				133	130	126	123	119	115
7.750				142	139	136	132	129	124
8.000				152	149	146	142	138	134
8.250				163	160	157	154	150	146
8.500				174	171	168	164	160	156
8.750				185	182	178	175	171	167
9.000				196	193	190	186	182	178

All weights expressed in lbs./ft.
0.250" concentricity tolerance between the inside diameter and average outside diameter

Inside Diameter (inches)									Outside Diameter (inches)
4.000	4.250	4.500	4.750	5.000	5.500	6.000	6.500	7.000	
									2.250
									2.375
									2.500
									2.625
									2.750
									2.875
									3.000
									3.125
									3.250
									3.375
									3.500
									3.625
									3.750
									3.875
									4.000
									4.125
									4.250
									4.375
									4.500
									4.625
24									4.750
30	26								5.000
37	32	27							5.250
44	39	34	29						5.500
51	46	41	36	30					5.750
58	54	49	43	38					6.000
67	62	57	51	46					6.250
75	70	65	59	54	41				6.500
83	78	73	68	62	50				6.750
92	87	82	76	71	58	45			7.000
101	96	91	86	80	68	55			7.250
110	106	101	95	90	77	64	49		7.500
120	115	110	105	99	87	73	59		7.750
130	125	120	115	109	97	83	69	53	8.000
141	136	131	126	120	109	95	80	64	8.250
152	147	142	137	131	119	105	90	75	8.500
163	158	153	147	142	129	116	101	85	8.750
174	169	164	159	153	141	127	112	96	9.000

All weights expressed in lbs./ft.
0.250" concentricity tolerance between the inside diameter and average outside diameter

Rectangle Stock List/Weights

G2 Gray Iron

As-Csdy Size (Inches)			Length (Inches)	Weight (Lbs./Ft.)	Finish Size (Inches)			Bundle Quantity
0.750	x	1.500	72	3.5	0.550	x	1.300	50
1.250	x	2.250	72	8.8	1.070	x	2.070	30
1.250	x	3.250	72	12.7	1.050	x	3.050	30
1.250	x	4.250	72	16.6	1.000	x	4.000	24
1.250	x	5.250	72	20.5	1.000	x	5.000	18
1.250	x	6.250	72	24.4	0.874	x	5.874	18
1.250	x	10.250	72	40.0	0.874	x	9.874	10
1.500	x	2.250	72	10.6	1.320	x	2.070	40
1.500	x	4.250	72	19.9	1.300	x	4.050	24
1.500	x	5.250	72	24.6	1.250	x	5.000	24
1.500	x	6.250	72	29.2	1.250	x	6.000	20
1.500	x	10.250	72	48.0	1.124	x	9.874	10
1.750	x	4.250	72	23.2	1.550	x	4.050	21
1.750	x	6.250	72	34.1	1.500	x	6.000	18
2.000	x	2.500	72	15.6	1.820	x	2.320	30
2.250	x	3.250	72	22.8	2.070	x	3.070	24
2.250	x	4.250	72	29.8	2.070	x	4.070	20
2.250	x	5.250	72	36.9	2.050	x	5.050	16
2.250	x	6.250	72	43.9	2.050	x	6.050	12
2.500	x	3.250	72	25.4	2.320	x	3.070	20
2.500	x	4.250	72	33.2	2.320	x	4.070	20
2.500	x	6.250	72	48.8	2.300	x	6.050	12
2.500	x	8.250	72	64.4	2.250	x	8.000	8
2.750	x	3.500	72	30.0	2.550	x	3.300	20
2.750	x	4.250	72	36.5	2.550	x	4.050	15
3.250	x	4.250	72	43.1	3.050	x	4.050	12
3.250	x	6.250	72	63.4	3.050	x	6.050	9
3.250	x	7.250	72	73.5	2.874	x	6.874	8
4.250	x	4.500	72	59.7	4.026	x	4.276	8
4.250	x	5.250	72	69.6	4.026	x	5.026	8
4.250	x	6.250	72	82.9	4.026	x	6.026	6
5.250	x	6.250	72	102.4	5.026	x	6.026	6
8.000	x	21.000	72	524.2	7.500	x	20.500	1
14.000	x	21.000	72	917.3	13.500	x	20.500	1

Square Stock List/Weights

As-Cast Size (Inches)			Length (Inches)	Weight (Lbs./Ft.)	Finish Size (Inches)			Bundle Quantity
1.500	x	1.500	72	7.0	1.320	x	1.320	50
2.250	x	2.250	72	15.9	2.070	x	2.070	30
2.500	x	2.500	72	19.5	2.320	x	2.320	25
3.000	x	3.000	72	28.1	2.800	x	2.800	20
3.250	x	3.250	72	33.0	3.050	x	3.050	20
4.250	x	4.250	72	56.4	4.026	x	4.026	9
5.250	x	5.250	72	86.0	5.026	x	5.026	8
6.250	x	6.250	72	121.9	6.000	x	6.000	4
7.250	x	7.250	72	164.0	7.000	x	7.000	4
8.250	x	8.250	72	212.4	8.000	x	8.000	2
9.250	x	9.250	72	267.0	8.874	x	8.874	2
10.250	x	10.250	72	327.8	9.874	x	9.874	2
12.250	x	12.250	72	468.2	11.750	x	11.750	1