


MATERIAL SPECIFICATIONS

FAMILY OF IRONS	ASTM					SAE																																			
	STD	GRADE	UTS	YS	ELONG.	HARDNESS GRADE	HARDNESS GRADE	HARDNESS																																	
			(psi min)	(psi min)	(% min)				(Mpa / Mpa)	(Mpa Min)																															
GRAY IRON	A48	20	20 000	---	---	---	G7	0,070	H10	1000																															
		25	25 000	---	---	---	G9	0,090	H11	1100																															
		30	30 000	---	---	---	G10	0,100	H12	1200																															
		35	35 000	---	---	---	G11	0,110	H13	1300																															
		40	40 000	---	---	---	G12	0,120	H14	1400																															
		J431 (Actual standard since 1999)				G13	0,130	H15	1500																																
								H16	1600																																
								H17	1700																																
								H18	1800																																
								H19	1900																																
					H20	2000																																			
					H21	2100																																			
					H22	2200																																			
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<p>***The casting grades is a combination of the iron grade and the hardness grade. For example, G10H18</p>																																									
<table border="1"> <thead> <tr> <th>STD</th> <th>GRADE</th> <th>UTS (psi min)</th> <th>YS (psi min)</th> <th>ELONG. (% min)</th> <th>HARDNESS (BHN)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">J431 (Former standard, prior to 1999)</td> <td>G1800</td> <td>17 800</td> <td>---</td> <td>---</td> <td>120-187</td> </tr> <tr> <td>G2500</td> <td>24 500</td> <td>---</td> <td>---</td> <td>170-229</td> </tr> <tr> <td>G3000</td> <td>29 500</td> <td>---</td> <td>---</td> <td>187-241</td> </tr> <tr> <td>G3500</td> <td>35 400</td> <td>---</td> <td>---</td> <td>207-255</td> </tr> <tr> <td>G4000</td> <td>39 500</td> <td>---</td> <td>---</td> <td>217-269</td> </tr> </tbody> </table>										STD	GRADE	UTS (psi min)	YS (psi min)	ELONG. (% min)	HARDNESS (BHN)	J431 (Former standard, prior to 1999)	G1800	17 800	---	---	120-187	G2500	24 500	---	---	170-229	G3000	29 500	---	---	187-241	G3500	35 400	---	---	207-255	G4000	39 500	---	---	217-269
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	G4000	39 500	---	---	217-269																																				
DUCTILE IRON	A536	60-40-18	60 000	40 000	18	---	J434	D4018	58 000	40 000	18	143-170																													
		65-45-12	65 000	45 000	12	---		D4512	65 000	45 000	12	156-217																													
		80-55-06	80 000	55 000	6	---		D5504	80 000	55 000	4	217-269																													
		100-70-03	100 000	70 000	3	---		D7003	102 000	65 000	3	241-302																													
A.D.I.	A897	110/70/11	110 000	70 000	11	241-302	J2477	AD 750	110 000	70 000	11	241-302																													
		130/90/09	130 000	90 000	9	269-341		AD 900	130 000	90 000	9	269-341																													
		150/110/07	150 000	110 000	7	302-375		AD1050	150 000	110 000	7	302-375																													
		175/125/04	175 000	125 000	4	341-444		AD1200	175 000	125 000	4	341-444																													
		200/155/02	200 000	155 000	2	388-477		AD1400	200 000	155 000	2	388-477																													
		230/185/01	230 000	185 000	1	402-512		AD1600	230 000	185 000	1	402-512																													

