

Ductile Iron

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Typical Applications

Valves, Pump Bodies, Gears and Rollers, Spring Hangers, Suspension Parts, Wheel Hubs, Bearing Caps, Pole Line Hardware, Universal Joints, Threadless Connectors and Flanges, Various Automotive and Agricultural Items.



Advantages

Higher tensile strength. Less deflection under load conditions. No straightening required in most instances. No problems with hot tears and cracks. Good machinability. Easier feeding of difficult designs.

Specifications	Class	Tensile	Yield	Elong	BHN
ASTM A536, A395	60-40-18	60,000	40,000	18	143-187
SAE J434	D4018	60,000	40,000	18	170 max.
ASTM A536	65-45-12	65,000	45,000	12	156-217
SAE J434	D4512	65,000	45,000	12	156-217
ASTM A536	80-55-06	80,000	55,000	6	187-255
SAE J434	D5506	80,000	55,000	6	187-255
ASTM A536	100-70-03	100,000	70,000	3	241-302
SAE J434	D7003	100,000	70,000	3	241-302
ASTM A536	120-90-02	120,000	90,000	2	255-302

— Austempered Ductile Iron

Typical Applications

Austempered Ductile Iron is a high strength, wear resistant, heat treated Ductile Iron which exhibits twice the strength of conventional Ductile Iron for a similar level of difficulty. ADI can replace most steel forgings at a reduced cost.



Advantages

Higher tensile and yield strength. Lower weight than steel forgings. Excellent wear resistance. Excellent impact strength.

Specifications	Prior Designation	Grade	Tensile	Yield	Elong	Impact	BHN
ASTM A897		750-500-11	110,000	70,000	11	80	241-302
	1	900-650-09	130,000	90,000	9	75	269-341
	2	1050-750-07	1150,000	110,000	7	60	302-375
	3	1200-850-04	175,000	125,000	4	45	341-444
	4	1400-1100-02	200,000	155,000	2	25	388-477
	5	1600-1300-01	230,000	185,000	1	15	402-512