

GALVANIZED DQ-40 PIPE



ASTM F 1043, GROUP 1C
FEDERAL SPECIFICATION RR-F-191/3E, CLASS 1, GRADE B
AASHTO M-181, GRADE 2

FENCE SPEC DATA SHEET

BASIC USE

DQ-40 galvanized steel fence framework, as distributed by Master Halco, performs well for use as fence structures such as end, corner or line posts and rails. Common applications for DQ-40 products are commercial, industrial and institutional installation in both the private and public sectors, such as airports, prisons, highways, military and secure government facilities, parks, schools and commercial projects. DQ-40 is typically used in conjunction with zinc coated or aluminum coated chain link fabric. However, it may also be specified for use with other types of fabric such as PVC coated chain link and welded wire. DQ-40 framework is available with an optional supplemental color coating to combine with PVC coated chain link fabric to provide a complete color coated system.

COMPOSITION AND MATERIALS

DQ-40 pipe is manufactured using cold rolled steel strip providing 50,000 psi yield strength which exceeds the yield strength and tensile strength of Schedule 40 pipe. The pipe is triple coated to provide a smooth, lustrous protective finish.

TECHNICAL DATA

GENERAL

The manufacturer or distributor, if requested, will supply certification that materials furnished will be in compliance with applicable specifications.

The information contained herein for high yield/high tensile strength pipe covers the requirements for fence industry pipe sizes 1-3/8" O.D. to 4" O.D.

STRENGTH CHARACTERISTICS

Load Strength - The strength of line, end, corner and pull posts shall be determined by the use of 4' or 6' cantilevered bend test. The top rail shall be determined by a 10' free-supported beam test. See Table below.

YIELD STRENGTH

DQ-40 pipe shall be cold rolled with a minimum yield strength of 50,000 psi.

This unique process yields a stronger yet lighter product than Schedule 40 pipe.

COATING REQUIREMENTS

The exterior coating of DQ-40 pipe has a triple coating process that provides protection and appearance. The three coatings consist of a metallic zinc coating, an intermediate conversion coating and a clear polymer coating that provides a smooth, lustrous protective finish, conforming to ASTM F 1043, Type B exterior coating requirements.

The interior coating of the pipe shall conform to ASTM F 1043, Type B or Type D coating requirements that provides a high level of corrosion protection to the interior of the pipe.

STANDARD SPECIFICATIONS

ASTM Specification F 1043 Group 1C Standard Specification for strength and Protective Coatings.

Federal Specifications RR-F-191/2E and RR-F-191/3E, Class 1, Grade B

AASHTO M-181-American Associations of State Highway and Transportation Officials, Grade 2

FAA – Federal Aviation Administration, Item F-162.

UFGS – Army Corps of Engineers.

U.S. Department of Justice – Federal Bureau of Prisons

AVAILABILITY

DQ-40 pipe is available for shipment throughout the United States. Mill lengths may range from 18 ft. to 24 ft. or posts are available cut-to-length.

INSTALLATION

Install fence posts in accordance with ASTM Practice 567.

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MAINTENANCE

Periodic inspection is recommended but no routine maintenance is required

LEED CREDITS

Steel fence products are a net contributor to the LEED recycled content points.

SUPPLEMENTAL COLOR COATING:

DQ-40 pipe, when requested, is available with a supplemental color coating per ASTM F 1043, para. 7.3 (Optional Supplemental Color Coating).

The polymer coating shall be PVC or polyolefin elastomer 10-mils minimum or polyester 3-mils minimum coating and is to be applied to the exterior surface of tubular shapes. Unless otherwise specified, color of the coating shall be in accordance with Specification F934.

TECHNICAL SERVICES

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DIMENSIONS AND STRENGTH CHARACTERISTICS

FENCE INDUSTRY	DECIMOL O.D. EQUIVALENT		PIPE WALL THICKNESS		WEIGHT		SECTION MODULUS	X	MIN. YIELD STRENGTH	=	MAX. BENDING MOMENT	CALCULATED LOAD (LB.)		
												10' FREE SUPPORTED	CANTILEVER	
													4'	6'
O.D.	IN	MM	IN	MM	LB/FT	KG/M	IN ³	X	PSI	=	LB.IN.			
1-3/8"	1.315	33.40	0.104	2.64	1.35	2.01	0.1111	x	50,000	=	5,555	185	116	77
1-5/8"	1.660	42.16	0.111	2.82	1.84	2.74	0.1961	x	50,000	=	9,810	327	204	136
1-7/8"	1.900	48.26	0.120	3.05	2.28	3.39	0.2810	x	50,000	=	14,050	468	293	195
2-3/8"	2.375	60.33	0.130	3.30	3.12	4.64	0.4881	x	50,000	=	24,405	814	508	339
2-7/8"	2.875	73.03	0.160	4.06	4.64	6.90	0.8778	x	50,000	=	43,890	1463	914	610
3-1/2"	3.500	88.90	0.160	4.06	5.71	8.50	1.3408	x	50,000	=	67,040	2235	1,397	931
4"	4.000	101.60	0.160	4.06	6.56	9.76	1.7819	x	50,000	=	89,095	2970	1,856	1,237