

DME STEEL PLATES

DME-NO.1 Medium Carbon



DME No.1 steel is a medium carbon steel that is machinable, has good weldability, good tensile strength. This quality steel is a great value for cost effective mold steel alternatives. Available in rotary ground (RGM) or finished ground (FG), and comes off-the-shelf to you when you need it – immediately. **DME - ready to support your steel needs today!**

STEEL CHARACTERISTICS

PHYSICAL PROPERTIES (AT 68°F)

Temperature	68°F (20°C)	390°F (200°C)	750°F (400°C)
Density - lbs/cu.in. - fg/m ³	0.282 7,800	0.280 7,750	0.277 7,700
Coefficient of Thermal Expansion - per °F from 68° - per °C from 20°	— —	7.0 x 10 ⁶ 12.7 x 10 ⁶	7.5 x 10 ⁶ 13.6 x 10 ⁶
Thermal Conductivity - BTU in/ft ² hr °F - J/m s °C	202 29.0	205 29.5	216 31.0
Modulus of Elasticity - psi - N/mm ²	29.7 x 10 ⁶ 205 000	29.0 x 10 ⁶ 200 000	26.8 x 10 ⁶ 185 000
Specific Heat - Btu/lbF - J/kg °C	0.110 460	— —	— —

MECHANICAL PROPERTIES - DME #1

Samples: round bar 1" (25mm) diameter. Hardness: 310HB

Tensile Strength - Approximate values

Testing temperature	68°F (20°C)	390°F (200°C)	750°F (400°C)
Tensile strength psi N/mm ²	146,000 1010	138,000 950	115,000 790
Yield strength psi N/mm ²	116,000 800	109,000 750	91,000 630
Reduction of area	60%	63%	65%
Elongation in 2"	20%	22%	25%

Impact Strength - Approximate values

Joules	50	55	65
Ft-lbs.	37	41	48

Applications

DME No.1 Steel is a quality steel with approximately 25% greater tensile strength than typical low-carbon warehouse steel. It machines easily and is available in both RGM and Finish Ground. Various applications for this steel formulation include but are not limited to:

- Injection Molds
- Extrusion Molds
- Blow Molds
- Other applications such as clamp supports, backers, bolsters, rails, and more.

TOLERANCES

All dimensions are in inches.

	RGM	FG
Length and Width	-0.000 / +0.005	-0.000 / +0.005
Thickness 88 - 1518 - all other standard sizes	+0.015 / +0.020 +0.023 / +0.031	-0.001 / +0.001 —
Flatness	0.002 / ft	0.0007 / ft
Parallelism	0.003	0.0005
Chamfer	0.095 x 45*TYP / 0.125 x 45*	0.060 x 45*TYP / 0.100 x 45*

See Page 2 for Machining Characteristics.

PLATES FOR THE ENTIRE MARKET

DME Steel is readily available for **all markets** – more than just mold industry applications. Our steels machinability, uniformity, and consistency make it ideal for a wide variety of uses. Our exclusive supply from the best steel mills allow DME to maintain readily accessible quality stock. This availability means DME can deliver product to you quicker and easier.

All DME steel is available in standard and custom widths, lengths and thicknesses, in RGM or Finish Ground.



DME NO. 1 STEEL

Machining Specifications

MILLING		
Carbide tool and high speed tools	Rough Milling	Finish Milling
Depth of cut (t) in	min. 0.08	max 0.08
mm	min 2.0	max 2.0
Carbide Tools		
ISO machining group	P30 - P40	P10 - P20
Cutting speed (v) f.p.m.	230 - 330	295-380
mm/min.	70 - 100	90 - 115
High Speed Steel Tools		
Cutting speed (v) f.p.m	50 - 100	65 - 115
m/min.	15 - 30	20 - 35

DRILLING				
Diameter	Depth of Hole			
	2xD	6xD	8xD	10xD
in/mm	rpm/feed (rev. mm/in)			
0.16/4	1720/.003 .080	1435/.003 .080	1310/.002 .050	1190/.002 .040
0.32/8	1080/.006 .140	1435/.004 .110	1310/.003 .080	1190/.003 .070
0.64/16	570/.019 .250	475/.003 .080	435/.002 .050	395/.002 .040
1.0/25	370/.012 .290	310/.009 .220	285/.007 .170	260/.006 .150

Plate Services Available

- Saw Cut
- RGM - Rotary Ground
- FG - Finish Ground
- Lift Holes
- Pry Bar Slots
- Gun Drilling
- Drilling & Tapping
- Milling/Boring
- Rough or Finish Machined
- Radius Edges
- And More

Key Benefits

- Cost effective
- Weldable
- Good strength
- Easy to machine
- Heat treatable to hardened surface
- Chamfered edges standard

Contact Milacron - DME

For more information or delivery options contact at:
800-626-6653 (U.S.), 800-387-6600 (Canada) or 248-398-6000 (worldwide).
www.dme.net
<https://store.milacron.com>

Keyword search: **STEEL PLATE**



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SP1-rev9.6.17

Standard Available Sizes

NOMINAL SIZE	WIDTH (IN)	LENGTH (IN)
67	6.000	7.000
69	6.000	9.000
611	6.000	10.875
88	7.875	7.875
812	7.875	11.875
99	9.000	9.000
912	9.000	11.875
108	9.875	8.000
1012	9.875	11.875
1016	9.875	16.000
1020	9.875	20.000
1024	9.875	23.750
1112	10.875	12.000
1114	10.875	14.000
1118	10.875	18.000
1123	10.875	23.500
1212	11.875	12.000
1215	11.875	15.000
1217	11.875	17.500
1220	11.875	20.000
1223	11.875	23.500
1229	11.875	29.500
1315	13.375	15.000
1318	13.375	18.000
1321	13.375	20.750
1323	13.375	23.500
1326	13.375	26.000
1329	13.375	29.500
1518	14.875	17.875
1524	14.875	23.750
1529	14.875	29.500
1616	15.875	16.000
1620	15.875	20.000
1623	15.875	23.500
1626	15.875	26.000
1629	15.875	29.500
1635	15.875	35.500
1724	16.500	23.750
1729	16.500	29.500
1818	17.875	18.000
1820	17.875	20.000
1823	17.875	23.500
1826	17.875	26.000
1829	17.875	29.500
1835	17.875	35.500
1924	19.500	23.750
1929	19.500	29.500
1935	19.500	35.500
2424	23.750	23.750
2429	23.750	29.500
2435	23.750	35.500

Over 508 standard plate sizes.

- Standard plate thickness for immediate delivery are: 7/8", 1-3/8", 1-7/8", 2-3/8", 2-7/8", 3-3/8", 3-7/8", (4-7/8" and 5-7/8" Available upon request.)
- **Additional and custom sizes available upon request.**
- Nominal sizes above shown in grey are off-the shelf and ready for delivery.