DME®

FROM PELLET TO PART
YOUR PARTNER
FOR PRODUCTIVITY
AND SUSTAINABILITY

DME NO. 7 STEEL

AISI 400 MODIFIED STAINLESS

DME Steel No.7 is an AISI 400 modified stainless steel that has stood the test of time across a variety of uses worldwide. Trusted for decades to give you the quality, durability, and corrosion resistance you need. This stainless provides the excellent machinability, ductility, flatness and weldability you need for a vast array of molding and mold-based applications. Available in saw cut plate (**SCP**), rotary ground cut (**RGC**), rotary ground (**RGM**) or finished ground (**FG**), and comes off-the-shelf to you when you need it.
DME - ready to support your steel needs today!

STEEL CHARACTERISTICS

PHYSICAL PROPERTIES (AT 68˚F)			
Temperature		68˚F (20˚C)	390˚F (200˚C)
Density	- lbs/cu.in.	0.264	0.282
	- fg/m³	7,800	7,750
Coefficient of Thermal Expansion			
	- per ˚F from 68˚	—	6.1 x 10^6
	- per ˚C from 20˚	—	11.0 x 10^6
Thermal Conductivity			
	- BTU in/ft² hr ˚F	202	205
	- J/m s ˚C	29.0	29.5
Modulus of Elasticity			
	- psi	29.0 x 10^6	27.6 x 10^6
	- N/mm²	20,000	19,000

MECHANICAL PROPERTIES - DME #7 Samples: round bar 3" (76mm) diameter. Hardness: 321HB		
Tensile Strength - Approximate values		
Testing temperature	68˚F (20˚C)	390˚F (200˚C)
Tensile strength		
psi	155,000	152,000
N/mm²	1069	1048
Yield strength		
psi	129,000	126,000
N/mm²	890	869
Reduction of area	34%	34%
Elongation in 2"	12%	12%
Impact Strength - Approximate values		
Joules	22	36
Ft-lbs.	16	26

Applications

Modified AISI 400 or equivalent series stainless steel for holder block applications. It is supplied pre-hardened to 32-36 HRC (302-340 Bhn) and generally no further heat treatment is required. This stainless steel offers corrosion-resistance and exceptional machinability. Ideal for humid environments, corrosive plastics, clean room or 100% stainless applications. Various application for this versatile steel formulation include but are not limited to:

- Injection Molds
- Compression Molds
- Die Casting Dies
- Structural Or Engineered Applications
- Other applications.
- Extrusion Molds
- Blow Molds

TOLERANCES All dimensions are in inches.		
	RGM	**6-SIDED FG**
Length and Width	-0.000 / +0.005	-0.000 / +0.005
Thickness 88 - 1518	+0.015 / +0.020	-0.001 / +0.001
- all other standard sizes	+0.023 / +0.031	—
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 SCP, RGC, RGM or Finish Ground.

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Machining Specifications

MILLING		
Carbide tool and high speed tools	**Rough Milling**	**Finish Milling**
Depth of cut (t) in	0.08 - 0.20	≤ 0.08
mm	2.00 - 5.00	≤2.00
	Carbide Tools	
ISO machining group	P20 - P40	P10 - P20
Cutting speed (v) f.p.m.	430 - 620	620- 820
mm/min.	130 - 190	190 - 250
	High Speed Steel Tools	
Cutting speed (v) f.p.m	—	35 - 40
m/min.	—	115 - 130

DRILLING					
Drill Diameter		Cutting Speed		Feed (f)	
mm	inch	m/min	f.p.m	mm/r	I.p.r
– 5	– 3/16	17–19″	56 – 62″	0.05 – 0.10	0.002 - 0.004
5 –10	3/16 – 3/8	17–19″	56 – 62″	0.10 – 0.20	0.004 - 0.008
10 –15	3/8 – 5/8	17–19″	56 – 62″	0.20 – 0.25	0.008 - 0.010
15 –20	5/8 – 3/4	17–19″	56 – 62″	0.25 – 0.30	0.010 - 0.014

* For coated HSS drill vc = 29–31 m/min (95–102 f.p.m.)
RPM = (3.82 x SFM) / Tool Dia. Feed Rate = RPM x IPR

Plate Services Available

- SCP - Saw Cut Plate
- RGC - Rotary Ground 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

DME No. 7 PLATE SIZES

Plate Size			Plate Thickness				
Measurement in inches.			7/8	1 3/8	1 7/8	2 3/8	2 7/8
DME #	W	L	7	13	17	23	27
88	7.875	7.875	◆	◆	◆	◆	
812	7.875	11.875	◆	◆	◆	◆	◆
108	9.875	8	◆	◆	◆	◆	
1012	9.875	11.875	◆	◆	◆	◆	◆
1016	9.875	16	◆	◆	◆	◆	◆
1020	9.875	20	◆	◆			
1112	10.875	12	◆	◆	◆		
1114	10.875	14	◆	◆	◆	◆	
1118	10.875	18	◆	◆	◆	◆	
1123	10.875	23.5					
1212	11.875	12	◆	◆	◆		
1215	11.875	15	◆	◆	◆	◆	◆
1220	11.875	20					
1223	11.875	23.5					
1315	13.375	15	◆	◆	◆	◆	
1318	13.375	18	◆	◆	◆	◆	◆
1321	13.375	20.75		◆	◆	◆	◆
1323	13.375	23.5			◆		
1326	13.375	26					
1329	13.375	29.5					
1518	14.875	17.875	◆	◆	◆	◆	
1524	14.875	23.75		◆		◆	
1529	14.875	29.5					
1616	15.875	16					
1620	15.875	20		◆	◆	◆	◆
1623	15.875	23.5					
1626	15.875	26		◆		◆	
1629	15.875	29.5					
1635	15.875	35.5					
1724	16.5	23.5					
1729	16.5	29.5					
1818	17.875	18					
1820	17.875	20	◆	◆	◆	◆	◆
1823	17.875	23.5				◆	◆
1826	17.875	26					
1829	17.875	29.5					
1835	17.875	35.5					
1924	19.5	23.75	◆		◆	◆	
1929	19.5	29.5					
1935	19.5	35.5					
2424	23.75	23.75					
2429	23.75	29.5					
2435	23.75	35.5					

DME Company LLC
42827 Irwin Dr., Harrison Twp., MI 48045
800-626-6653 *toll-free tel*
248-398-6000 *tel*
www.DME.net *web*
DME@DME.net e-mail

DME Canada
5345 Outer Dr. - Unit 3, Oldcastle, Ontario Canada N9G 0C4
800-387-6600 *toll-free tel*
905-677-6370 *tel*
DME_Canada@DME.net e-mail

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