

Product and Application

TruWEAR AR400 Flat Bar is a low alloy steel flat bar, heat treated to a nominal hardness of 400 HBW. Product is intended for use in applications requiring a combination of high abrasion resistance and weldability.

Available in thicknesses from 0.250" - 1", widths 2" - 10" and lengths up to 20'.

Mechanical Properties

Surface Hardness 360 - 440 HBW (aim 400 HBW)

Mechanical tests performed in accordance with ASTM A370, latest revision. Material to be tested per heat, size and per heat treat lot. 90% through hardness.

Dimensional Tolerances

Cross-Sectional Dimensions Per ASTM A6, Table 26

Length Per ASTM A6, Table 30

Straightness 1/8" in 5' maximum

Chemical Composition

	C	Mn	P	S	Si	Cu	Ni	Cr	Mo
Max	0.20	1.00	-	-	-	-	-	0.35	0.15
Min	0.28	1.5	0.040	0.035	0.35	0.35	0.25	0.70	0.28
CE* (typical):			0.61 - 0.64		*Carbon Equivalency calculated using the following formula: CEV = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15				

Recommended Welding Practices

TruWEAR AR400 flat bar can be welded by conventional processes such as SMAW, SAW and GMAW, provided the weld procedures used are suitable for this grade and design of the welded structure. Proper weld procedures should include the following:

1. Low Hydrogen conditions must be used.
2. Excessive preheating (>350 °F) should be avoided to prevent softening.
3. Slow cooling rates should be avoided to prevent low toughness in the heat-affected zone (HAZ).

*These statements are general guidelines. CMC Impact Metals is not responsible for the results of any welding work performed. Contact your CMC Impact Metals representative to receive more detailed technical information about any fabrication or machining processes.

Standard Delivery Conditions

Test Reports Supplied with heat number and chemical analysis of all elements listed from ladle analysis. Brinell hardness value per heat/thickness/heat treat lot. Additional testing is available upon request.