

**UNE 36.093 AP 11 steel plate/sheet for stamping and cold forming steels**

AP 11 steel plate/sheet, under UNE 36.093 standard, we can regard AP 11 steel plate/sheet as stamping and cold forming steels. UNE 36.093 AP 11 is mainly used as stamping and cold forming steels.

UNE 36.093 AP 11 steel plate/sheet is stamping and cold forming steels, it is suitable for non-structural presswork and forming. This kind of steel is identical to UNI: NFA 36-301, DIN:DD11, JIS:SPHD, BS:HR3 and so on.

<p>AP11 UNE36.093 Number: 1.0332</p>	Comparison of steel grades	
	NFA 36-301	1C
	EN10111	DD11
	DIN 1614/2	StW 22
	JIS G 3131	SPHD
	ASTM-SAE	A621DQ-SAE1010
	UNI5867	FEP11
	BS1449	HR3

Chemical analysis -% by mass\*

Mechanical properties

Chemical elements	C	Si max	Mn max	P max.	S max.
AP11	0.12	--	0.60	0.045	0.045

thickness	Yield Strength ReH [N/mm <sup>2</sup> ] transv. min.	Tensile Strength Rm [N/mm <sup>2</sup> ] transv.	Fracture Elongation[%]transv. min.	Bending Test transv. bending mandrel Ø angle = 180° s = plate thickness
t ≤ 16mm t > 16mm	170-340			1 S
t < 3mm t ≥ 3mm		440		
Up to 1.5mm 1.51-2.00mm 2.01-2.50mm 2.51-2.99mm ≥ 3mm			23 A80 24 A80  28 A5	

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