

Title:	Steel Specification	Division:	AC	Version:	AB	Code:	860B0117
Area:	Filters Materials			Document Origin:	ASTM A 1011	Date:	13-may-20
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Danfoss Code	860B0117		
Product used	Cup 16 cuin		
Part description	Punching and Forming		
Standard Material for reference	ASTM A 1011 DS Type B		
Steel Strip Designation	Low Carbon , Hot Rolled Steel		
Classification	Drawing Steel		
End Use	Punching and Forming		
Requirement	ASTM A 1011 DS Type B	Special Characteristic for Danfoss	
Chemical Composition (% weight)	C (Carbon)	0.02 - 0.08	-
	Mn(Manganese)	max 0.5	-
	P(Phosphorous)	max 0.02	-
	S(Sulphur)	max 0.03	-
	Si (Silicon)	-	-
	Al (aluminum)	min 0.01	-
	Cu (Copper)	max 0.2	-
	Cr(Chromium)	max 0.15	-
	Ni(Nikel)	max 0.2	-
	B (Boron)	-	-
	V (Vanadium)	max 0.008	-
	Nb / Cb	max 0.008	-
	Ti (Titanium)	max 0.025	-
N (Nitrogen)	-	-	
Mechanical Properties ASTM A370/E8	YP (Off 0.2%)	205-310 Mpa (30 - 45 ksi)	-
	TS	-	min 310 Mpa (45ksi) <F>
	EL (2")	min 28%	-
	HRB	max 65	30-60
Tolerance	Thickness (mm)	1.95 -0.0/+0.178	
	Width (mm)	147+/-0.1	
Flatness	maximum flatness	Bands	
Camber	Camber tolerance of Hot rolled Strip (ASTM A749)	5 mm In 2000 mm max	
Protective Oiling	Rolling mill lubricant.	50 mg/ft ² total (each side).	
Surface Roughness	typical	(0.50<Ra<1.3µm)	
Surface Defects	The surface of the strip must be free from rust, stains, scale holes, rolling in scale as primary/secondary or tertiary, seams, slivers, and other defects that would affect the end use.		
Coil Weight	Range 1	--	
	Range 2	--	
Inside Diameter	typical	--	
Edge	Type	Trimed edge	
Edge quality	Damaged Edges	None Accepted	
Packing	Protective Package	Package shall be effective to avoid Rust-Oxidation-Corrosion	
Certification	Every coil must have its own quality certificate (Chemestry , Mechanical properties and Hardness (HRB). The certificate shall contain : Grade of steel, Heat Number, Coil Number, Purchase Order,Width, Nominal Thickness,Net Weight		
Other Product Characteristics not covered on this document	Under specifications ASTM A-568		
Alternative Materials	JIS G3131 SPHD, IS 1079D, ASTM 1008-DS Type B		
Comments	Alternative material need to fulfill ASTM A 1011 DS Type B and Danfoss special characteristics. Each batch out of specifications need to be reviewed with Danfoss SQE and Product Engineering.		