

## 6. Cold-rolled electrical steel

### 6.2. COLD-ROLLED (ISOTROPIC) NON-GRAIN ORIENTED ELECTRICAL STEEL SHEET

#### 6.2.1 Cold-rolled isotropic electrical steel thin sheet (fully-processed)

Table 6.4. Product mix

Description	Standard	Thickness, mm	Grade
Cold-rolled electrical isotropic steel sheet	GOST 21427.2	0,27	2421
		0,35	2413; 2412; 2411
		0,50	2414; 2413; 2412; 2411; 2312; 2216; 2215; 2214; 2213; 2212; 2211; 2112; 2111; 2013; 2012; 2011
Cold-rolled steel sheet and slit strip, non-grain oriented, delivered fully processed	EN 10106	0,35	M250-35A; M270-35A; M300-35A; M330-35A
		0,50	M270-50A; M290-50A; M310-50A; M330-50A; M350-50A; M400-50A; M470-50A; M530-50A; M600-50A; M700-50A; M800-50A; M940-50A
		0,65	M330-65A; M350-65A; M400-65A; M470-65A; M530-65A; M600-65A; M700-65A; M800-65A; M1000-65A
		1,00	M1000-100A; M1300-100A
Standard specification of electrical non-grain oriented steel, fully processed types	ASTM A677	0,35	367F145, 36F155, 36F165, 36F175, 36F185
		0,47	47F165, 47F180, 47F190, 47F200, 47F210, 47F240, 47F280, 47F400, 47F450
		0,64	64F320, 64F500; 64F550
Cold-rolled magnetic steel slit strips (laminations), non-grain oriented	GB/T 2521	0,35	35W250; 35W270; 35W300; 35W330
		0,50	50W270; 50W290; 50W310; 50W350; 50W400; 50W470; 50W540; 50W600; 50W700; 50W800; 50W1000; 50W1300
		0,65	65W600; 65W700; 65W800; 65W1000
Magnetic steel sheet and slit strip with non-oriented grain structure	JIS 2552	0,35	M250-35; M270-35; M300-35; M330-35
		0,50	M270-50; M290-50; M310-50; M330-50; M350-50; M400-50; M470-50; M530-50; M600-50; M700-50; M800-50; M940-50; M1000-50
		0,65	M350-65; M400-65; M470-65; M530-65; M600-65; M700-65; M800-65; M1000-65
Electrical cold-rolled isotropic steel sheet with higher magnetic induction (Class AP)	TU-14-106-706-2005 (EN 10106)	0,50	M400-50AP; M530-50AP; M600-50AP; M700-50AP; M800-50AP
		0,65	M700-65AP
Electrical cold-rolled isotropic alloyed steel sheet with higher magnetic induction (Class AP)	TU-14-106-727-2005 (EN 10106)	0,50	M310-50AP; M330-50AP
Electrical cold-rolled isotropic steel sheet Grade 2315	TU 14-1-4225-87	0,5	2315T
Electrical cold-rolled isotropic steel sheet Grade 2215P for electric motor laminations	TU 14-1-3496-96	0,5	2215T
Electrical cold-rolled isotropic steel sheet Grade 2216	TU 14-1-4261-87	0,5	2216T
Electrical cold-rolled isotropic steel sheet Grade 2214 with improved properties	TU 14-106-641-2001	0,5	2214T
Thin cold-rolled electrical NGO (isotropic) steel, grade M400-50A with improved magnetic properties	TU 14-106-734-2005	0,50	M400-50A
Thin cold-rolled electrical isotropic steel flats, grades 2411, 2412	TU 14-106-731-2006	0,35	2411
		0,50	2412; 2411

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On customer's demand rolled steel may be produced to special magnetic and mechanical properties requirements.

The rolled material can be supplied as coils or slit strip, coated or uncoated; the available coatings are organic or non-organic electro-insulating coatings of Classes C3, C5, C6 per AISI.

Thickness: 0.27; 0.35; 0.47; 0.50; 0.64; 0.65; 1.00 mm.

Width of material supplied as:

coils is 500 to 1200 mm incl.

slit strip is 90 to 500 mm.

Inner coil diameters are 500; 600 mm.

Rolled steel with other dimensional requirements may be produced to special order upon additional agreement.

Coil weight — up to 15 t.

Mass of one piece in a slit strip coil shall not be less than the mass calculated as 0.5 kg per 1 mm of strip width.

#### 6.2.2. Cold-rolled isotropic electrical steel sheet (semi-processed)

**Table 6.5. Product mix**

Standard, TU	Steel grade
EN 10126	M1200-65D, M1000-65D, M800-65D, M1050-50D, M890-50D, M660-50D
EN 10165	M630-65E, M520-65E, M450-65E, M390-65E, M560-50E, M450-50E, M390-50E, M340-50E
EN 10341	M1200-65K, M1000-65K, M800-65K, M630-65K, M520-65K, M450-65K, M390-65K, M1050-50K, M890-50K, M660-50K, M560-50K, M450-50K, M390-50K, M340-50K
ASTM A726M	47D440M, 47D510M, 47D600M, 47D730M, 47D840M, 64D570M, 64D640M, 64D790M, 64D950M, 64D1080M
ASTM A683M	47S165, 47S175, 47S190, 64S210, 64S220, 64S230, 64S200
Contract	SFX, XC, SFX- 0,50; 0,65; 0,70; 1,0 XC- 0,50; 0,60; 0,65; 0,80
TU 14-106-735-2005 (ASTM A683/A683M)	47S165

The rolled material is supplied as uncoated coils.

Available thicknesses are 0.47; 0.50; 0.64; 0.65 mm.

Width of supplied material: 1000, 1200 mm.

Inner coil diameter — 500; 600 mm.

Coil weights — up to 12 t.

Rolled steel with other dimensional requirements may be produced to special order upon additional agreement.