

Cold rolled coils

Specifications:

Hindalco's cold rolled coils are precision-finished to match international standards. They have good shape, high tolerance, versatility and blemish-free surfaces. They are used in commercial and general engineering applications such as bus bodies, cladding and fan blades. The company meets the demands of its ever-growing clientele with continuous upgrades and process improvement.

Common alloys

Dimensions			
Parameter	Range	Standard	Tolerance
Thickness (mm)	0.16 — 4.00	-	for 0.16 to 0.29 +/-0.01
			for 0.30 to 0.71 +/-0.05
			for 0.72 to 1.40 +/-0.08
			for 1.41 to 2.00 +/-0.11
			for 2.01 to 4.00 +/-0.12
Width (mm)	50 — 1620	914, 1219, 1525	Slit coil: +2, -0
I.D (mm)	508, 203	-	-
Coil density (kg/mm)	6 max	-	-

Stucco embossed coils are also available in the thickness range of 0.30 — 1.10 mm.

Mechanical properties			
Alloy (AA)	Temper	UTS (mpa)	%E (min) (50mm gauge length)

		Min	Max	0.50 — 0.80	0.80 — 1.30	1.30 — 2.6	2.60 — 4.00
				mm	mm	0mm	mm
1050	O	55	95	22	25	29	30
1050	H14	95	125	4	5	6	6
1050	H18	125	-	3	3	4	4
1070	O	-	95	27	27	29	34
1070	H14	95	120	4	5	6	7
1070	H18	120	-	3	3	4	4
1200, 1100	O	70	110	20	25	29	30
1200, 1100	H14	105	140	3	4	5	5
1200, 1100	H16	125	150	2	3	4	4
1200, 1100	H18	140	-	2	2	3	3
3103, 3003	O	90	130	20	23	24	24
3103, 3003	H14	130	180	3	4	5	5
3103, 3003	H16	150	195	2	3	4	4
3103, 3003	H18	170	-	2	2	3	3
3105	O	95	145	14	14	15	16
3105	H14	150	200	4	4	5	5
3105	H16	175	215	2	2	3	4
3105	H18	195	-	1	1	1	2
8011	O	85	120	20	23	25	30
8011	H14	125	160	3	4	5	5

8011	H16	150	180	2	3	4	4
8011	H18	175	-	2	2	3	3

Chemical composition						
Alloy (%)	AA 1050	AA 1200	AA 3003	AA 3103	AA 3105	AA 8011
Fe	0.40	1.00	0.70	0.70	0.70	0.60 — 1.00
Si	0.25	(Fe + Si)	0.60	0.50	0.6	0.50 — 0.90
Mg	-	-	-	0.30	0.20 — 0.80	0.05
Mn	0.05	0.05	1.0 — 1.50	0.9 — 1.50	0.30 — 0.80	0.20
Cu	0.05	0.05	0.05 — 0.20	0.10	0.30	0.10
Zn	0.05	0.10	0.10	0.20	0.25	0.20
Ti	0.03	0.05	0.1 (Ti + Zr)	0.1 (Ti + Zr)	0.10	0.08
Cr	-	-	-	0.10	0.10	0.05
Each (others)	0.03	0.05	0.05	0.05	0.05	0.05
Total (others)	-	0.125	0.15	0.15	0.15	0.15
Al	99.50	99	Remainder	Remainder	Remainder	Remainder

Single number indicates maximum content

Strong alloys

Dimensions		
Parameter	Range	Tolerance
Thickness (mm)	0.3 — 2.00	for 0.30 to 0.71 +/-0.05
		for 0.72 to 1.4 +/-0.08
		for 1.41 to 2.00 +/-0.11
Width (mm)	50 — 1250	Slit coil: +2, -0
I.D (mm)	203, 305, 406 for thickness < 0.71	-
	406, 508 for thickness > 0.71	
Density (kg/mm)	3.5 max	-

Mechanical properties

Alloy (AA)	Temper	UTS (mpa)		%E (min) (50mm gauge length)
		Min	Max	
3004	O	150	200	10
3004	H32	193	240	1
3004	H34	220	260	1
3004	H36	240	280	1
3004	H38	260	-	1
5005	O	103	144	12
5005	H32	117	158	3
5005	H34	137	180	2
5005	H36	158	200	1
5005	H38	180	-	1
5052	O	170	210	14
5052	H32	210	260	4
5052	H34	230	280	3
5052	H36	255	300	2
5052	H38	268	-	2
5251	O	160	200	13
5251	H32	190	230	3
5251	H34	210	250	3
5251	H36	230	270	3
5251	H38	255	-	2

Chemical composition

Alloy (%)	AA 3004	AA 5005	AA 5052	AA 5251
Fe	0.70	0.70	0.40	0.50

Si	0.30	0.30	0.25	0.40
Mg	0.80 — 1.30	0.50 — 1.10	2.20 — 2.80	1.80 — 2.40
Mn	1.00 — 1.50	0.20	0.10	0.10 — 0.50
Cu	0.25	0.20	0.10	0.15
Zn	0.25	0.25	0.10	0.15
Ti	-	-	-	0.15
Cr	-	0.10	0.15 — 0.35	0.15
Each (Others)	0.05	0.05	0.05	0.05
Total (Others)	0.15	0.15	0.15	0.15
Al	Remainder	Remainder	Remainder	Remainder
Single number indicates maximum content				
Applicable standards				
ASTM - B -209M, Aluminium association — aluminium standards and data, Hindalco manufacturing limits (as applicable).				

Packing

The coils are packed in eye-to-sky or eye-to-wall position, wrapped in HDPE and hardboard, strapped with hoop iron and placed on wooden pallets. Moisture protection is provided by silica gel packets.

Applications:

- Bus cabins and bodies
- Insulation
- Cladding in buildings, aluminium composite panels, false ceilings and panelling (plain or colour-coated coils)
- Electrical busbar ducting, flexibles, transformer strips, etc