



Premium packaging for quality food



THE TINPLATE COMPANY OF INDIA LIMITED  
A **TATA** Enterprise

# THE GREEN PACKAGING MEDIUM

Tinplate continues to be the most preferred packaging medium, both for food products like fresh and processed edibles, beverages and in non-food applications such as paints, aerosols, battery jackets, chemicals, closures, etc. It is a green packaging medium, 100% bio-degradable and eco-friendly, perfectly suited for an age in which commercial success depends on sound environmental credentials. Tata Tinplate offers a wide variety of world class tinplate for packaging, especially for edibles.

## Advantages of Tinplate as a Packaging Medium

**Tinplate is globally preferred as the best packaging solution. Here are just a few reasons why:**

- Long shelf life
- Ultra violet ray & bacterial protection
- Aroma & flavour retention
- Pilfer & tamper proof
- Excellent printability
- Eco-friendliness

## Electrolytic Tinplate (ETP)

Electrolytic Tinplate (ETP) undoubtedly enjoys the pride of place as a packaging medium especially for food. The steel base provides the necessary strength and formability for can fabrication. The tin-iron alloy layer provides the bond between the steel and free tin layer. The free tin layer is not only responsible for the attractive bright finish but is also non-toxic – a factor of vital importance in food packaging!

## Open Top Sanitary Can (OTSC) Tinplate

OTSC Tinplate from Tata Tinplate is differentially coated, available in both Single/Double Reduced forms, and ideally suited for packaging processed foods like mango pulp, baked beans, pineapple rings, fruits and juices, mushroom, fish, meat, etc.

### Tin Coating

OTSC Tinplates from Tata Tinplate are available in the following grades:

D 8.4 / 2.8    D 11.2 / 5.6  
D 8.4 / 5.6    D 11.2 / 2.8

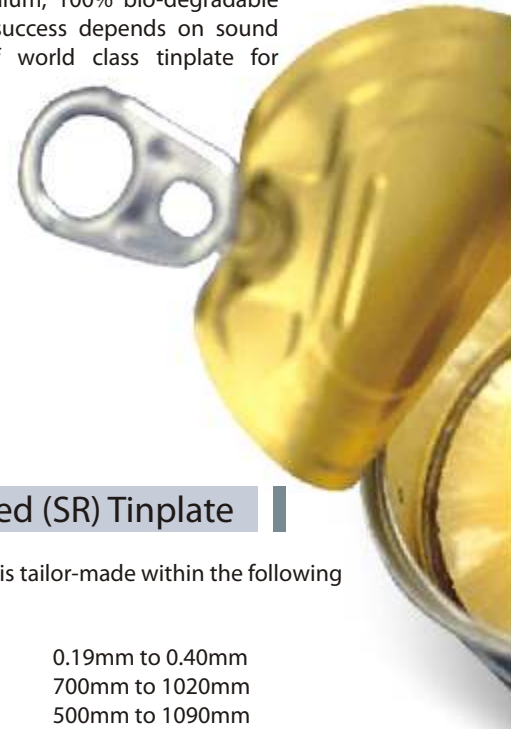
### Special Properties:

ISV = 20 micrograms max.

Tin Grain Size = ASTM 9 or less numerically

**Note: Above properties are guaranteed on the heavier coated side.**

Coating weight tolerances are as per IS 1993 : 2006



## Single Reduced (SR) Tinplate

Tata Tinplate SR variety is tailor-made within the following ranges:

Thickness	-	0.19mm to 0.40mm
Width	-	700mm to 1020mm
Cut Length	-	500mm to 1090mm

**Note:** Tolerances are as per IS 1993 : 2006

Available in batch annealed condition in 4 categories of temper classification as per IS 1993 : 2006

Temper Classification	Rockwell Hardness (Hr 30T)
T 52	52 + 4 - 4
T 55	55 + 4 - 3
T 57	57 + 4 - 3
T 61	61 + 4 - 4

## Coating Grades

Tata Tinplate Single Reduced / Double Reduced Electrolytic Tinplate is available either equally coated or differentially coated in the following grades:

Type	Coating Code	Nominal Coating Mass (gm / m <sup>2</sup> )		Ranges of Mass (m) per surface (gm / m <sup>2</sup> )	Permissible deviation for sample average from nominal coating mass (gm/m <sup>2</sup> )
		Per Surface	Total Both Surface		
Equally Coated	E 0.56/0.56	0.56	1.12	1.0 ≤ m < 1.5	- 0.25
	E 1.12/1.12	1.12	2.24	1.5 ≤ m < 2.8	- 0.30
	E 2.8/2.8	2.8	5.60	2.8 ≤ m < 4.1	- 0.35
	E 5.6/5.6	5.6	11.20	4.1 ≤ 7.6	- 0.50
	E 8.4/8.4	8.4	16.80	7.6 ≤ 10.1	- 0.65
	E 11.2/11.2	11.2	22.40	10.1 ≤ m	- 0.90
Differentially Coated		Heavily Coated Surface	Lightly Coated Surface		
	D 5.6/2.8	5.6	2.8		
	D 8.4/2.8	8.4	2.8		
	D 8.4/5.6	8.4	5.6		
	D 11.2/2.8	11.2	2.8		
	D 11.2/5.6	11.2	5.6		





## Double Reduced (DR) Tinplate

Double Reduced (DR) Tinplate is normally

- **Thinner**
- **Stronger**
- **Brighter**, as compared to conventional Single Reduced Tinplate
- **Gives more cans** from each ton of Tinplate.



DR Tinplates from Tata Tinplate are available as per following specifications:

Thickness in mm	Classification	Proof Stress (0.2% non proportional elongation) longitudinal in N/sq.mm.	Rockwell Hardness (HR 30T)
0.15 to 0.21	DR 480	480+70 -70	65+3 -3
	DR 550 (DR 08)	550+70 -70	73+3 -3

## Tin Free Steel (TFS)

Tin Free Steel is an electrolytic chrome plated steel, consisting of a thin layer of metallic chromium and a layer of chromium oxide deposited on the steel base which gives it a beautiful, lustrous metallic finish on both sides. TFS offers outstanding corrosion resistance, lacquer adhesion as well as printability. No wonder it is an economical and high quality replacement for tinplate, especially for the screw and crown cap market. Tata Tinplate TFS is available in the same range of dimensions / temper / mechanical properties and oil film as that of ETP.

**Average chromium / chromium in oxide coating mass**

Form of Chromium	Average coating mass on each surface (mg/sq.mtr.)	
	Min.	Max.
Metallic Chromium	50	140
Chromium in oxides	7	35

Coating as per IS 12591 : 2006



### Both Tinplate and TFS from Tata Tinplate are available in the following finishes:

- Stone = 0.45 +/- 0.1 Micron CLA
- Silver / Matt = 1.0 +/- 0.2 Micron CLA

## Typical End Uses of Tata Tinplate - Gaugewise

### Double Reduced (DR)

Thickness in mm	End use & Top/Bottom of Cans
0.15 0.16	Coconut Oil
0.17	Body for Instant Coffee Can, No. 1 Tall Built-up Can, Body for Edible Oil, Vanaspati and Ghee
0.18	Body for Instant Coffee Can, Baby Food, Edible Oil, Ghee and Vanaspati
0.19 0.20	Baby Food, Edible Oil, Ghee and Vanaspati
0.21	15Kg. Tin Container for Cooking Medium Packaging

### Single Reduced (SR)

Thickness in mm	End use & Top/Bottom of Cans
0.19	Lids for Welded Baby Food Cans, Baby Food Can, Condensed Milk Can Body, Components (Ends) for Baby Food Cans
0.20	Welded Baby Food Cans and Components, Aerosol Body
0.21	5Kg. Oil Containers, Ghee Containers, Aerosol Body
0.22	2Kg. Ghee Containers, 2 Kg. (Ends) Components, No. 1 Tall Cheese / Butter Can, Lugcaps
0.24	Crown Corks, 5 Kg. Ghee Containers, A 2 1/2 Cans & Components
0.25	Crown Corks, A 2 1/2 Body
0.28	15Kg. Containers, A-10, OTS Cans, A-79, 16.5Kg. Cashew Tins, 15Kg. Containers Top / Bottom





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