



# **SPECIFICATION DATA SHEET**

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SUBJECT : APPROVAL SHEET

WE ARE VERY PLEASED TO PRESENT YOU OUR SPECIFICATION DATA SHEET FOR YOUR APPROVAL AS ATTACHED.

ATTACHED : ALUMINIUM FOIL SPECIFICATION DATA SHEET

1. Product range

This specification is regulated to the aluminium foil for film capacitor (Hereafter it's the foil).

## 2. Dimension and character (Material and degree)

The material and degree of the foil means the following table #1.

#### (Table #1) Material and degree

Material	ALLOY	TEMPER		
Aluminum foil	A1235	0		
	A8079			

#### 3. Quality control and inspection points

- 3-1 The foil has the cleaned finish and its stable quality and furthermore it has no any defects of its expansion, twisting, wrinkles, scratch, oil, durty, losed core join, pin hole, burr, etc. in its usage.
- 3-2 Appearance

At the appearance inspection, the foil has good surface status and any other things are not remained on the surface.

3-3 Extension

The foil has no any extension, wrinkles or any other defects in the usage after the foil is winded in the machine.

3-4 Tolerance of its dimension

The dimension tolerance of the foil is as the folling table #2.

spec	thickness(µ)	width (mm)	Standard	CORE inner	OD of foil roll	BURR
			length(m)	dia(mm)	(mm)	(μ)
4.5u		Required		40	150 (Min.)	
~	+/- 5%	width	4500 (Max.)	And	200 (Max.)	≥ 5
25u		±0.2		75		

#### (Table #2) Dimension and its tolerance

(Ex.1)The length of the foil can be followed by the customer's requirement.

(Ex.2)The thickness of the foil should be basically measured by the averaged level by thickness guage.

### 3-5 Feature

3-5-1 Tensile strength should be 6~9 Kgf/mm<sup>2</sup>.

3-5-2 Extension rate should be 1~3 %.

3-5-3 The hardness of the foil should be at least 56 DYNE in its center, 40 in its edge by measuring of DYNE pen.

3-6 Pin hole control

Pin hole should not be excessed from the following table #3.

(Table #3) Minimum pin hole number by the specification

spec(µ × mm)	Pin hole number(pc/10cm ×10cm)	Pin hole size range
4.5 × width	MAX. 25	
5 × width	MAX. 20	
6 × width	MAX. 15	
6.5 × width	MAX. 12	
7 × width	MAX. 10	
8 × width	MAX. 8	50 ~200 μ
9 × width	MAX. 6	
10 × width	MAX. 4	
15 × width	MAX. 2	
20 × width	MAX. 2	
25 × width	MAX. 2	

(Ex.3)It can be claimed by the customer in the production lot regardless the number of the pin hole if the pin hole size excesses 200  $\mu$ .

## 3-7 Chemical composition

Chemical composition of the foil is as the following table #4.

(Table #4)Chemical composition

(Table #4)Chemical composition								(%)			
ALLOY	TEMPER	Si	Fe	Cu	Mn	Mg	Ti	Zn	EACH	TOTAL	AI
A1235	0	0.	65	0.05	0.05	0.05	0.06	0.10	0.03		99.35
		M	٩X	MAX	MAX	MAX	MAX	MAX	MAX	-	MIN

3-8 Seperation and jointing method

3-8-1 The separated point of the foil should be maximum 1 point/REEL.

3-8-2 Its jointing method should be roulette.

3-9 Rolling method

The Roll of the foil should be made from the light side of the foil surface.

4. Quality assurance

The quality of the foil should be assured for 12 months from the shipping date subject to keeping under normal temperature and low humidity.

- 5. Testing and inspection
- 5-1 The appearance should be passed or rejected by the eye watching inspection.
- 5-2 Tensile strength and extension rate should be measured by KSD specification using the omnipotence tester of the material with a testing piece in every production lot.
- 5-3 The number and size pin hole should be checked by holding the foil of 10cm×10cm size against the light in the inspection room of the pin hole(dark place).
- 5-4 The chemical composition should be certificated by the authorized inspection testing organization once in every 6 months referring to the inspection data of the strip maker.
- 6. Packaging and marking
- 6-1 Package should be made by the paper can or paper box and any damage on it in shouldn't be made in its transportation.
- 6-2 The marks of foil dimension, quantity, lot no, production date and the name of the handling person should be indicated on the products using the label. Any other points not mentioned above can be discussed with the customer.