

# 1235 Lichen Aluminum Foil



HENAN LICHEN ALUMINIUM CO LTD

SUBJECT	Alumium Foil	SPEC. No	
		REV. No	
APPLY TO	Production and Inspection for Aluminium Foil	EFFECTIVE	Feb. 15 <sup>th</sup> , 2021
		PAGE	5

## 1. PURPOSE

This specification covers production and inspection for aluminium foil products and describes the quality attributes of the foil rolls.

## 2. OBJECTIVE

To establish definitive quality standards on foil rolls, thereby minimizing claims attributable to any lack of understanding between supplier and customer.

## 3. PHYSICAL REQUIREMENTS

### 3.1 ALLOY AND TEMPER

Alloy and temper should correspond to Table 1.

Table 1

Alloy	Temper
1030B、1070、1070A、1060、1050、1050A、1235、1145、1100、3003、8011、8079、	O、H14、H18、H19、H22、H24、H26

### 3.2 SPECIFICATION AND TOLERANCE

The specification is as below Table 2.

Table 2

Gauge mm	Width mm	Gauge Tolerance %	Width Tolerance mm	ID mm	OD mm	Core Material
0.005-0.2	40-1650mm	+/-5%	+/-1	76, 152	100-950	Aluminum or Steel

### 3.3 CHEMICAL COMPOSITION

Here the chemical composition covers alloy 8011 or alloy 1235. (see Table 3)

Table 3

Alloy		8011	1235
Chemical Composition (max %)	Si	0.50-0.9	(Si+Fe):0.65
	Fe	0.6-1.0	
	Cu	0.10	0.05
	Mn	0.20	0.05
	Mg	0.05	0.05
	Cr	0.05	-----
	Zn	0.10	0.10
	Ti	0.08	0.06
	Others	-----	V:0.05
	Al	Remainder	≧99.35

Remark: Foil covered herein is 8011/1235 alloy aluminum master rolls at specified gauges of 0.005-0.050mm nominal thickness.

### 3.4 MECHANICAL PROPERTIES

Mechanical properties should correspond to Table 4.

Table 4

Product	Gauge	Alloy-Temper	Mechanical Properties	
			Tensile Strength (Mpa)	Elongation (δ%)
Flexible Packaging Foil	0.006-0.007	1235-O	60~80	>0.5
	>0.007-0.009		60~80	>1.0
	>0.009-0.020		60~80	>1.0
	0.009-0.030	8011-O	80~100	>2.0
Pharmaceutical Foil	0.006-0.009	1235-O	60~80	≥1.0
	>0.009-0.020		60~80	≥1.0
	>0.020-0.030		60~80	≥1.0
	0.018-0.030	8011-H18	≥180	≥2.0
	0.009-0.08	8011-O	≥75	≥3.0
Beer Bottle Wrapping Foil	0.009-0.010	8011-O	80~105	≥2.0
	>0.010-0.0115		80~105	≥3.0

Toothpaste Tube Foil	0.009-0.011	8011-O	$\geq 70$	$\geq 2.0$
	0.011-0.016		$\geq 80$	$\geq 3.0$
	0.016-0.03		$\geq 80$	$\geq 3.0$
Retort Pouch	0.006-0.009	1235-O	50~85	$\geq 1.0$
Tetra Pack	0.006-0.0066	1235-O	55~70	$\geq 1.0$
Cigarette Foil	0.006-0.007	1235-O	70~90	$\geq 1.0$
Foil for Laminating with Paper Board	0.006-0.007	1235-O	50~70	$\geq 2.0$
Container Foil	0.030-0.130	3003-H24	140~190	$\geq 6.0$
Hot Seal or Lidding Foil	0.020-0.060	8011-O	70~105	$\geq 4.0$
Adhesive Tape Foil	0.0065-0.012	1235-O	$\geq 50$	$\geq 1.5$
	0.010-0.050	8011-O	$\geq 55$	$\geq 2.0$
Aluminium Flexible Air Ducts (bare)	0.006-0.007	1235-O	60~80	$> 1.0$
Aluminium Flexible Air Ducts (coated)	0.06-0.08	1100-H22	90~135	$> 3.0$
Household Foil	0.010-0.050	8011-O 1235-O	80~110	$\geq 2.5$
Power Capacitor Foil	0.005-0.009	1235-O	$\geq 60$	$\geq 1.0$
Cable Foil	0.0065-0.050	1235-O 1145-O 8011-O	40~80	$\geq 2.0$
Fin Stock	0.08-0.20	1030B-H26 8011-H24 3102- H22 1100-H26	130~160	$\geq 5.0$

### 3.5 SURFACE CONDITION

3.5.1 The surface shall be cleaned and free from inclusions, scratches, wrinkles, cracks, overlapping or other internal defects.

#### 3.5.2 Pin-holes

The pin-holes should correspond to Table 5.

Table 5

Denomination Gauge(mm)	Pinholes/ m2 (max)			
	Cigarette Foil &Foil for laminating with paper board &Capacitor Foil	Flexible Packaging Foil	Pharmaceutical Foil	Beer Bottle Wrapping Foil
0.005	2000	/	/	/
0.006	1500	800	/	/
0.0065	1000	400	400	/
0.007	800	300	150	/
0.0075	600	50	50	/
0.009	500	30	30	50
0.009-0.011	200	20	20	30
0.011-0.015	200	10	5	10
0.015—0.020	60	5	1	/
0.020—0.050	30	0	0	/
>0.050	0	0	0	/

#### 3.5.3 Spices

The splices are as below Table 6.

Table 6

Roll Diameter, mm	Splices
≤400	≤1
>400	≤2

- a) All splices to be ultrasonic/tape.
- b) It is allowed one splice per roll. (Max. once per 2000m)
- c) Marked at the roll edge with a film, placed close to the splice.

#### 3.5.4 Wettability

The wettability corresponds to A-C quality.

### 4. PACKING AND SHIPPING REQUIREMENTS

**4.1 Quantities** – As specified on the purchase order with a tolerance of +/- 10% unless otherwise stated on the order.

**4.2 Packaging** – Foil rolls are to be packed in collapsible aluminum racks or steel racks as specified in such a manner that normal handling by common carrier will ensure safe transportation without damage to the foil. This includes wrapping to protect the foil from water stain and corrosion.

**4.3 Identification** – Each roll shall be identified with the following:

- a) Order number (release number)
- b) Part number (from RMC Purchase Order)
- c) Gauge (mm)
- d) Width (mm)
- e) Net weight (kg)