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# Aluminium foils Specification

# Aluminium household Foil

# **1. PURPOSE**

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

# **2. OBJECTIVE**

This specification covers 8011 or 1235 alloy foil master rolls for household foil and describes the quality attributes of the master foil rolls. The roll can be cut into small rolls and be used to pack and freshen the household food.

# 3. PHYSICAL REQUIREMENTS

## **3.1 ALLOY AND TEMPER**

Alloy and temper should correspond to Table 1.

Alloy	Temper
8011	0
1235	0

# 3.2 SPECIFICATION AND TOLERANCE

The specification is as below Table 2.

Gauge mm	Gauge Tolerance mm	Width mm	Width Tolerance mm	ID mm	OD mm
0.010~0.050	±5%	40~ 1600	±1	Ø 76.2	600max to ID 76.2
				Ø 150	900max to ID 150 & 152
				Ø 152	

Note: When the customer has special requirement, it has to be negotiated with supplier and demander.

# **3.3 CHEMICAL COMPOSITION**

The chemical composition should correspond to Table 3.

		Chemical Composition											
	%												
Alloy	Si	Fe	Cu	Mn	Mg	Zn	Ti	Other					
								Single	Total	Al			
								Single	up				
8011	0.58~0.66	0.63~0.85	0.05	0.03	0.03	0.10	0.02~0.04	0.05	0.15	Remainder			



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1235	0.12~0.16	0.45~0.52	0.02	0.01	0.01	0.01	0.02	0.03		>99.35

#### **3.4 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 4.

Alloy-Temper	Gauge mm	Tensile Strength Mpa	Elongation %
	0.010-0.025	80-110	≥1.5
8011/1235-O	0.025-0.05	80-110	≥2.5

## **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 There will be no adhesion or tearing when the roll is unfolded, and the free uncoiling length should be 1.5m max.

3.5.3 One side is bright, the other side is dull. The bright surface is usually at the outer side of the roll, and the dull surface is at the inner side of the roll.

#### 3.5.4 Pin-holes

The pin-holes should correspond to Table 5.

Gauge	0.010~0.012	>0.012~0.015	>0.015~0.020	>0.020					
Pinholes/m2(max)	100	50	20 0						
Note: When the customer has special requirement, it has to be negotiated with supplier and demander.									

#### 3.5.5 Spice

The splices are as below Table 6.

Roll Diameter, mm	Splices
$\leq 400$	≤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.

3.5.6 Wettability

The wettability corresponds to A grade quality.

# **4. PACKINGAND SHIPPING REQUIREMENTS**

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

a) **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.



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# Aluminium Container Foil

#### 1. PURPOSE

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

2. OBJECTIVE

This specification covers 3003 alloy foil master rolls for container foil and describes the quality attributes of the master foil rolls.

3. PHYSICAL REQUIREMENTS

#### 3.1 ALLOY AND TEMPER

Alloy and temper should correspond to Table 1.

Alloy	Temper
3003	H24

#### 3.2 SPECIFICATION AND TOLERANCE

The		:	1 1	Table 2
	pecification	15 as	DEIOW	1 auto 2.

Gauge	Gauge Tolerance	Width	Width Tolerance	ID	OD	Core Material
mm	mm	mm	mm	mm	mm	
0.03~0.13	±5%	200~ 1200	±1	Ø 76.2	600max to ID 76.2	Aluminium
				Ø 150	900max to ID 150 & 152	&
				Ø 152		Steel

#### 3.3 CHEMICAL COMPOSITION

The chemical composition should correspond to Table 3.

						Others		
Alloy	Si	Fe	Cu	Mn	Zn	Single	Total	Al
							Op	
3003	0.6	0.7	0.05~0.20	1.0~1.5	0.10	0.05	0.15	>99.35

#### 3.4 MECHANICAL PROPERTIES

Mechanical properties should correspond to Table 4.

Alloy	Temper	Gauge mm	Tensile Strength Mpa	Elongation %	Erichsen mm
3003	H24	0.03~0.13	140-190	≥6.0	≥4.5

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.

Gauge	0.030~0.050	0.050~0.13
Pinholes/m <sup>2</sup>	≤30	0



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# 3.5.3 Spice

The splices are as below Table 6.							
Gauge, mm	Splices						
≤0.06	≤1						
>0.06	0						

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.

4. PACKINGAND 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)



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# **ALUMINIUM CAPACITOR FOIL**

## 1. PURPOSE

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

## 2. OBJECTIVE

This specification covers 1235 alloy foil master rolls for capacitor foil and describes the quality attributes of the master foil rolls.

## 3. PHYSICAL REQUIREMENTS

**3.1 ALLOY AND TEMPER** 

Alloy and temper should correspond to Table 1.

Alloy	Temper		
1235	O/H19		

# 3.3 SPECIFICATION AND TOLERANCE

The specification is as below Table 2.

Gauge mm	Gauge Tolerance mm	Width mm	Width Tolerance mm	ID mm	OD mm	Core Material
0.005~0.009	±5%	40~ 1600	±1	Ø 76	180-500	Aluminium & Steel

Note: When the customer has special requirement, it has to be negotiated with supplier and demander. The core should longer than the width of aluminum foil, but it cannot longer above 5mm.

The roll diameter cannot shorter than 20% of specified roll diameter, (If not mentioned, the outer diameter should be 260mm.)

# **3.3 CHEMICAL COMPOSITION**

## The chemical composition should correspond to Table 3.

	Chemical Composition %									
Alloy	Si	Fe	Cu	Mn	Mg	Zn	Ti	Othe Single	er Total up	AI
1235	0.12~ 0.16	0.45~ 0.52	0.0 2	0.0 1	0.0 1	0.01	0.02	0.03		>99.35

# **3.4 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 4.

Alloy-Temper	Gauge	Tensile Strength	Elongation
	mm	Mpa	%
1235-O/H19	0.005-0.009	≥60	≥1.5



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## **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 There will be no adhesion or tearing when the roll is unfolded, and the free uncoiling length should be 1.5m max.

## 3.5.3 Pin-holes

The pin-holes should correspond to Table 5.

Gauge	0.005	0.0055	0.006 0.0065		0.007~	0.009
					0.0075	
Pinholes/m <sup>2</sup>	≤1500	≤1300	≤1000	≤800	≤600	≤500
0 = 1 0 1						

3.5.4 Spice

The splices are as below 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.

3.5.5 Wettability

The wettability for temper O should correspond to A-B grade quality.

4. PACKINGAND 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)



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# **ALUMINIUM HOT SEAL FOIL**

#### 1. PURPOSE

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

2. OBJECTIVE

This specification covers 8011alloy foil master rolls for hot seal foil and describes the quality attributes of the master foil rolls.

3. PHYSICAL REQUIREMENTS

#### **3.1 ALLOY AND TEMPER**

Alloy and temper should correspond to Table 1.

Alloy	Temper
8011	0

#### 3.4 SPECIFICATION AND TOLERANCE

The specification is as below Table 2.

Table 2

Gauge mm	Gauge Tolerance mm	Width mm	Width Tolerance mm	ID mm	OD mm	Core Material
0.02~0.06	±5%	200~ 850	±1	Ø 76.2	600max to ID 76.2	Aluminium
				Ø 150	900max to ID 150 & 152	&
				Ø 152		Steel

#### 3.3 CHEMICAL COMPOSITION

The chemical composition should correspond to Table 3.

	Chemical Composition %									
Alloy		_				_		Othe	er	
	Si	Fe	Cu	Mn	Mg	Zn	Ti	Single	Total up	Al
8011	0.58~0.66	0.63~0.85	0.05	0.03	0.03	0.10	0.02~0.04	0.05	0.15	Remainder



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#### **3.4 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 4.

Alloy	Temper	Gauge mm	Tensile Strength Mpa	Elongation %
8011	0	0.02~0.06	70-105	≥4.0

#### **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 There will be no adhesion or tearing when the roll is unfolded, and the free uncoiling length should be 60cm max when the width is below 500mm, and 120cm max when the width is from 500mm to 850mm.

#### 3.5.3 Pin-holes

The pin-holes should correspond to Table 5.

Gauge	0.020~	0.050~0.060
	0.050	
Pinholes/m <sup>2</sup>	≤30	0

#### 3.5.4 Spice

The splices are as below Table 6.

Gauge, mm	Splices
≤0.04	≤1
>0.04	0

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.

3.5.5 Wettability

The wettability corresponds to A grade quality.

4. PACKINGAND 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)



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# FLEXIBLE PACKAGING FOIL

#### 1. PURPOSE

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

2. OBJECTIVE

This specification covers 1235 or 8011 alloy foil master rolls for flexible packaging foil and describes the quality attributes of the master foil rolls.

Table 2

3. PHYSICAL REQUIREMENTS

#### 3.1 ALLOY AND TEMPER

Alloy and temper should correspond to Table 1.

Table 1

Alloy	Temper
1235、8011	0

#### **3.2 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 2.

Alloy	Temper	Gauge, mm Tensile Strength Mpa		Elongation, %					
		0.006-0.007	60-80	≥0.5					
1235	0	0.007-0.009	60-80	≥1.0					
		0.009-0.02	60-80	≥1.0					
8011	0	0.009-0.03	80-100	≥2.0					

3.3 SPECIFICATION AND TOLERANCE The specification is as below Table 3.

Table 3										
Gauge	Gauge Tolerance	Gauge Tolerance Width Width Tolerance ID		ID	OD					
mm	mm	mm	mm	mm	mm					
0.009~0.030	±5%	40~ 1600	±1	Ø 76.2	600max to ID 76.2					
				Ø 150	900max to ID 150 & 152					
				Ø 152						

Note: When the customer has special requirement, it has to be negotiated with supplier and demander.

#### 3.4 CHEMICAL COMPOSITION

The chemical composition should correspond to Table 4. ( Unit: % )

Table 4											
Alloy	C:	Го	<u></u>	Mn	Ма	Ma Zn	т	Domork	Others		A1
Аноу	31	L.e	Cu		ivig	211	- 11	Reillaik	Single	Total up	A
1235	0.12~0.16	0.45~0.52	0.02	0.01	0.01	0.01	0.02	Fe/Si=2.5~4	0.03		>99.35
8011	0.30~1.1	0.40~1.0	0.10	0.10	0.05	0.10	0.08		0.05	0.15	Remainder



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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

	-									
Gauge mm	0.006	0.0065	0.007	0.007~0.0075	0.009	>0.009~0.011	>0.011~0.015	>0.015~0.020	>0.020	
Pinholes/m <sup>2</sup>	≤800	≤400	≤200	≤100	≤50	≤20	≤5	≤1	0	
Noto: Whon the	Note: When the systemer has aposial requirement, it has to be pagetisted with supplier and demander									

Note: When the customer has special requirement, it has to be negotiated with supplier and demander.

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 grade quality.

4. PACKINGAND 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)



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# FOIL MASTER ROLLS FOR ADHESIVE TAPE FOIL

## 1. PURPOSE

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

## 2. OBJECTIVE

This specification covers 1235 or 8011 alloy foil master rolls for adhesive tape foil and describes the quality attributes of the master foil rolls.

- 3. PHYSICAL REQUIREMENTS
- 3.1 ALLOY AND TEMPER

Alloy and temper should correspond to Table 1.

Alloy	Temper			
1235、8011	0			

## **3.2 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 2.

Alloy	Temper	Gauge, mm	Tensile Strength Mpa	Elongation, %
1235	0	0.0065-0.012	≥50	≥1.5
8011	0	0.010-0.050	≥55	≥2.0
0 0 0 D E		D TOUED ANIOE		

3.3 SPECIFICATION AND TOLERANCE

Table 3										
Gauge mm	Gauge Tolerance mm	Width mm	Width Tolerance mm	ID mm	OD mm					
0.09~0.050	±5%	40~ 1600	±1	Ø 76.2	600max to ID 76.2					
				Ø 150	900max to ID 150 & 152					
				Ø 152						
Note: When	the evetements		wirement it he	a ta ha nanatia	ted with even lier and					

Note: When the customer has special requirement, it has to be negotiated with supplier and demander.

# 3.4 CHEMICAL COMPOSITION

The chemical composition should correspond to Table 4. (Unit: %)

									Oth	ners	
Alloy	Si	Fe	Cu	Mn	Mg	Zn	Ti	Remark	Single	Total up	AI
1235	0.12~ 0.16	0.45~ 0.52	0.02	0.01	0.01	0.01	0.02	Fe/Si=2.5 $\sim$ 4	0.03		>99.35
8011	0.30~1.1	0.40~1.0	0.10	0.10	0.05	0.10	0.08		0.05	0.15	Remaind er



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## **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

Gauge mm	0.006 5	0.007	0.007~ 0.0075	0.009	>0.009~ 0.011	>0.011~ 0.015	>0.015~ 0.020	>0.020~ 0.050
Pinholes/ m <sup>2</sup>	≤100 0	≤800	≤600	≤500	≤200	≤100	≤50	≤30

Note: When the customer has special requirement, it has to be negotiated with supplier and demander.

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 grade quality.

4. PACKINGAND 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)



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# **ALUMINIUM CABLE FOIL**

#### 1. PURPOSE

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

#### 2. OBJECTIVE

This specification covers 8011, 1235 or 1145 alloy foil master rolls for cable foil and describes the quality attributes of the master foil rolls. Among the cable foils, it covers video cable foil when the thickness is 0.009mm- 0.012mm and 0.04mm -0.05mm.

#### 3. PHYSICAL REQUIREMENTS

#### **3.1 ALLOY AND TEMPER**

Alloy and temper should correspond to Table 1.

Table 1

Alloy	Temper
8011/1235/1145	0

#### 3.5 SPECIFICATION AND TOLERANCE

The specification is as below Table 2.

Table 2

Gauge mm	Gauge Tolerance mm	Width mm	Width Tolerance mm	ID mm	OD mm	Core Material
0.09~0.050	±5%	40~ 1600	±1	Ø 76.2	600max to ID 76.2	Aluminium
				Ø 150	900max to ID 150 & 152	&
				Ø 152		Steel

#### 3.3 CHEMICAL COMPOSITION

The chemical composition should correspond to Table 3.

	Chemical Composition %									
Alloy			Cu	Mn	Mg	Zn	Ti	Other		
	Si	Fe						Single	Total	Al
									up	
8011	0.58~0.66	0.63~0.85	0.05	0.03	0.03	0.10	0.02~0.04	0.05	0.15	Remainder
1235	0.12~0.16	0.45~0.52	0.02	0.01	0.01	0.01	0.02	0.03		>99.35
1145	0.55, Fe+ Si		0.05	0.05	0.05	0.05	0.03	0.03		>99.45

#### **3.4 MECHANICAL PROPERTIES**

Mechanical properties should correspond to Table 4.

Alloy	Temper	Gauge mm	Tensile Strength Mpa	Elongation %
8011/1235/1145	0	0.0065~	40-80	≥2.0
		0.05		



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#### 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 There will be no adhesion or tearing when the roll is unfolded, and the free uncoiling length should be 1.5m max. 3.5.3 Pin-holes

The pin-holes should correspond to Table 5.

					l able 5				
Gauge	0.006	0.0065	0.007	0.007~	0.009	0.009~	0.010~	0.020~	0.050
				0.0075		0.010	0.020	0.050	
Pinholes/m <sup>2</sup>	≤1000	≤800	≤600	≤500	≤300	≤200	≤50	≤30	0

3.5.4 Spice

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.

3.5.5 Wettability

Wettability should correspond to A-B grade quality.

4. PACKINGAND 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)