



Introducing



...the 'Composite Can'

continue)



Packaging Applications

- ☞ Food
- ☞ Beverages
- ☞ Pharmaceuticals
- ☞ Detergents
- ☞ Pet Food
- ☞ Chemicals

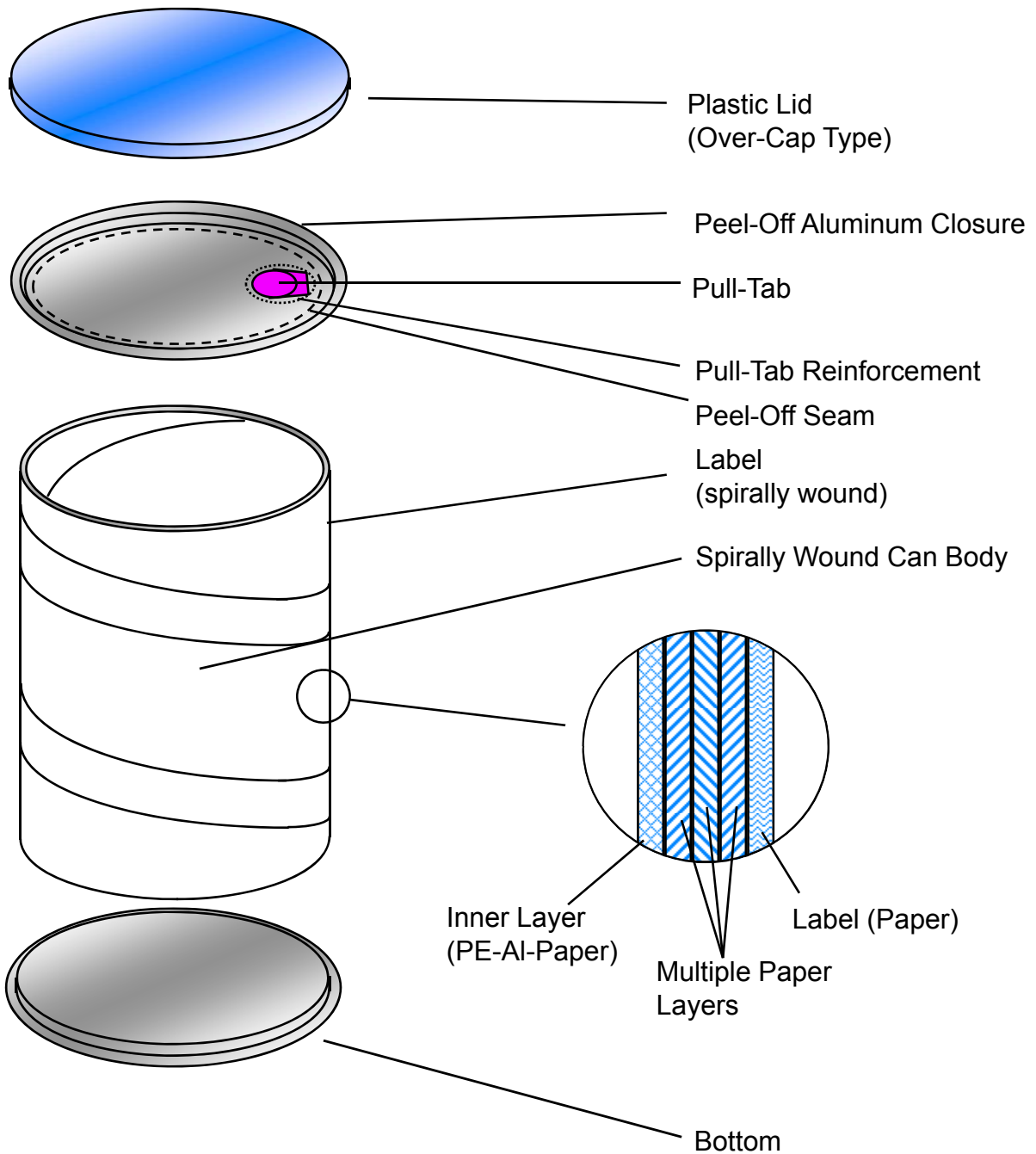


Advantages

- ❑ barrier attributes against humidity, gases (oxygen), light and odors
- ❑ resistant against aggressive filling goods
- ❑ suitable for food packaging
- ❑ easy processing in filling machines
- ❑ excellent filling good protection
- ❑ filling good enhancement through easy handling and overall appeal
- ❑ environment friendly

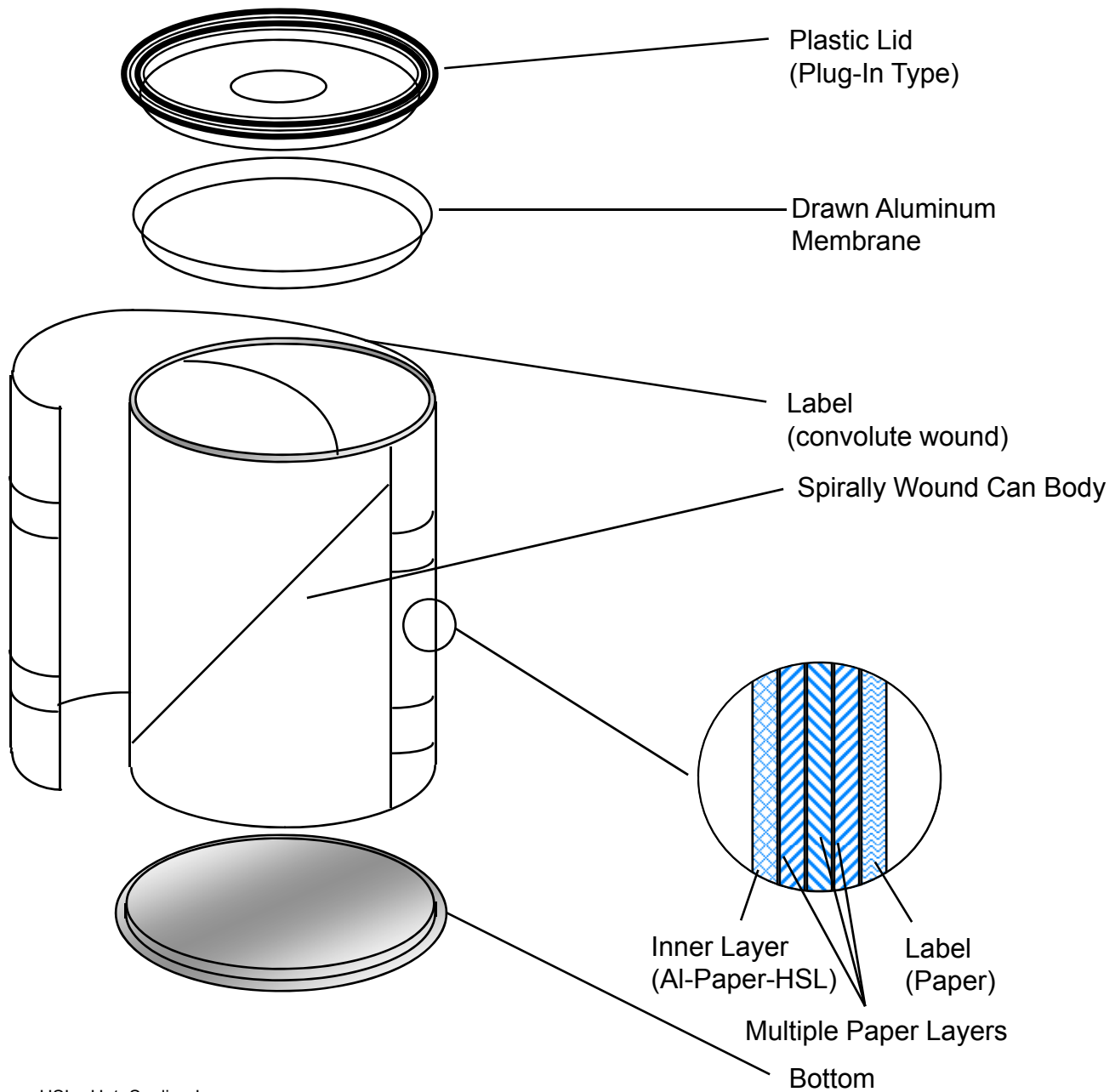


Closure with Pull-Tab





Closure without Pull-Tab



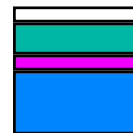
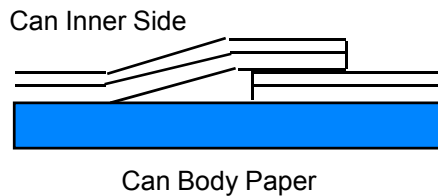
HSL= Hot Sealing Lacquer



Composites

1 Liner

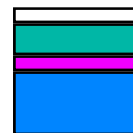
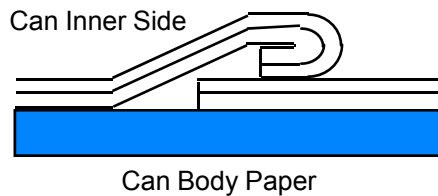
1.1 overlap, glued seam



Protective Lacquer
Al-Foil 9-15µm
Laminating Glue
Paper 40-60g/m²

dry filling
Products

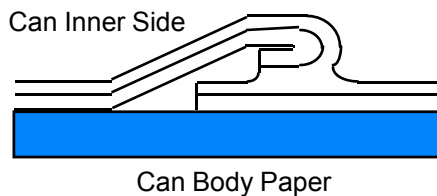
1.2 folded overlap, glued seam



Protective Lacquer
Al-Foil 9-15µm
Laminating Glue
Paper 40-60g/m²

dry filling
Products,
viscose
Products

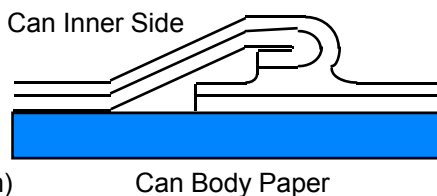
1.3 folded overlap seam, sealing lacquer sealed (Anaconda-Seam)



Hot-Sealing Lacquer
3 - 30 g/m²
Al-Foil 9-15µm
Laminating Glue
Paper 40-60g/m²

dry filling
Products,
viscose
Products,
Liquids

1.4 folded overlap seam, PE-sealed (Anaconda-Seam)



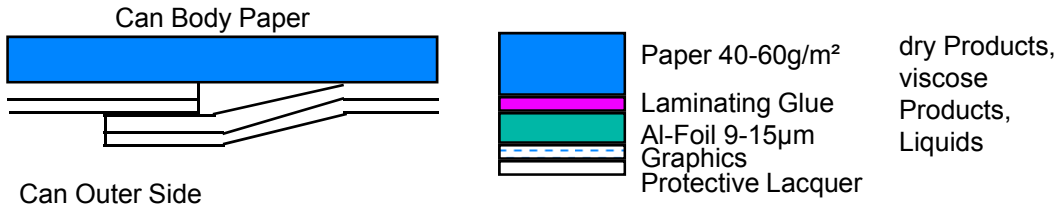
PE-Coating
30 g/m²
Al-Foil 9-15µm
Laminating Glue
Paper 40-60g/m²

dry filling
Products,
viscose
Products,
Liquids



Composites

2 Label





Can Body Structure

Comparison: Spirally Wound / Convolute Wound Body

- | | |
|--|--|
| <input type="checkbox"/> <u>Spirally Wound Body</u> | <input type="checkbox"/> <u>Convolute / Linear Formed Can Body</u> |
| <input type="checkbox"/> high output | <input type="checkbox"/> lower output |
| <input type="checkbox"/> no visible body overlap (smooth and even surface) | <input type="checkbox"/> visible body overlap |
| <input type="checkbox"/> no problems with membrane sealing | <input type="checkbox"/> problems with membrane sealing are possible |
| <input type="checkbox"/> low costs / high production speeds of up to 50 (tube) meters per minute | <input type="checkbox"/> high costs / low production speed, limited to 15 (tube) meters per minute |
| <input type="checkbox"/> machinery more versatile in respect to different can sizes | <input type="checkbox"/> machinery less versatile in respect to different can sizes |
| <input type="checkbox"/> restricted to round cans | <input type="checkbox"/> none-round cans possible |

Composite Cans



Liner for 'hermetically closed' Composite Cans



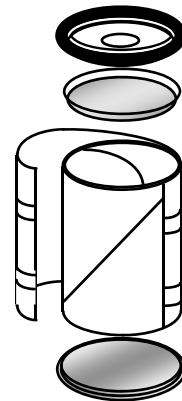
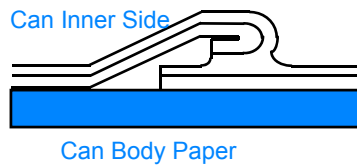
Can Features

- oil and grease resistant
- tight against gas (oxygen), light, humidity and odors
- can body made of either 'Kraft-Paper' or recycled paper

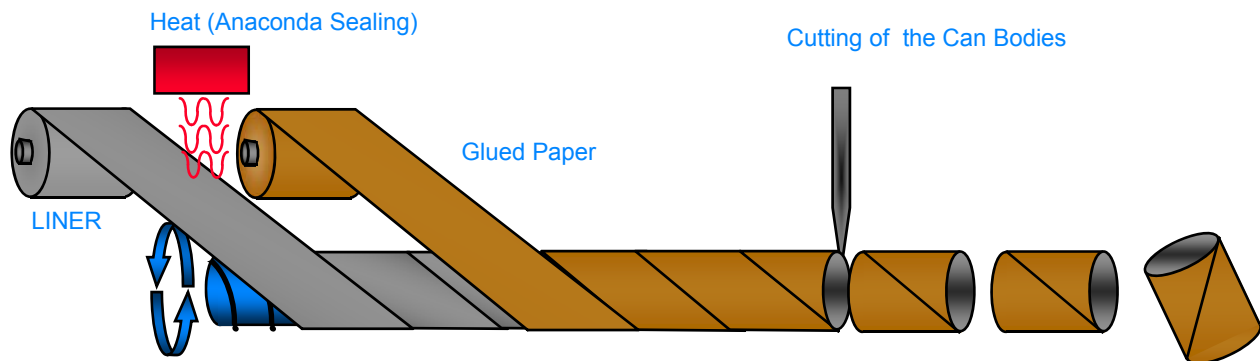
Process Information

- The can body is spirally wound
- The Liner is folded and overlap wound
- The overlap is sealed to secure the tightness of the can
- The sealed overlap is called 'Anaconda Seam'

Sketch:
'Anaconda Seam'



Spiral Winding Process

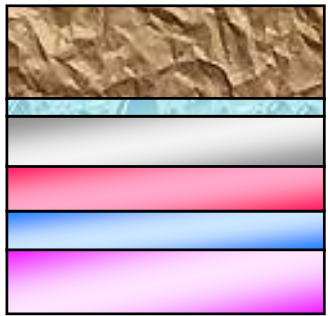


Composite Cans



Membrane foil for Composite Cans with outward curl

- Kraft-Paper 40 g/m²
- Lacquer Laminate
- Polyester Foil 12 µm
- EAA (Primer) 12 - 15 g/m²
- Aluminum Foil 9 µm
- Ionomer Coating 25 - 30 g/m²

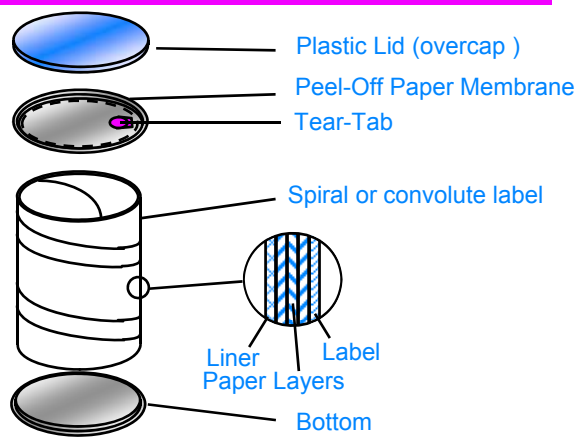


Features

- Membrane with paper attributes
- Can be used for additional advertising (printable)
- easy disposable
- easy handling and opening due to large pull-tab
- Tight and hermetically closed sealing possible through Ionomer Coating
- Tight against gas (oxygen), humidity, light, odors and micro-organisms through Aluminum Foil
- High tear resistance

Process Information

- Membrane manufacturing start from a roll of membrane foil
- The membrane is punched as part of the can finishing / closing process
- Manufacturing and sealing of a separate tear-tab is not required, - the tear-tab is integral part of the membrane
- The membrane is directly sealed against the coating of the liner foil, which is exposed to the outside of the can due to the outward curl



Membrane Manufacturing (part of the can finishing / closing)

Membrane punching pattern, starting from rolled membrane material

