

## Recycling Information for ROPP Closures

### Aluminium ROPP



Aluminium is a metal with a wide range of uses including; food and drinks cans, bottle tops, trays, automotive components, walkways, pans, tubes etc.

The recognised Recycling Code for Aluminium is as per Figure 1.



Figure 1.

Aluminium can be recycled where collection and re-processing facilities exist. Aluminium retains its properties post recycling and can be recycled into many different products. Aluminium cans have a high percentage of recycled aluminium.

# Recycling Information for ROPP Closures

## ROPP Liners

Separating the liner from the ROPP cap is challenging. The lack of recycling technology available in the UK waste sector to separate the materials into appropriate recycling streams means that most of the liner material types that are retained in the caps are highly likely to be 'burned-off' in the aluminium recycling process rather than go through a separation process.

If the aluminium closure is removed from the bottle post use by the consumer, the main body of the ROPP cap can be disposed of into the aluminium waste stream. The aluminium tamper band will remain on the bottle neck unless a one piece metal closure with integral tamper band is used. Viscose offer a 28x15 one piece ROPP cap with this feature.

Liners take many forms. The tables below outline the main types applied into RO and ROPP caps. NRF and Pourers are inserted into the neck of the glass bottle during the capping process. The LDPE pieces will remain in the bottle neck unless separated through mechanical force.

Liner Type / Name	Properties	Application
NFR (Non Refillable Fitment)	LDPE	2 piece plastic. One section is retained in the cap by the form of the closure. The other section is retained in the bottle neck
Pourer	LDPE	

# Recycling Information for ROPP Closures

## Linear Low Density Polyethylene (LDPE)

Low Density Polyethylene is a plastic with a wide range of uses including; closures, plugs, netting, shrink wrap, garment bags and plastic bags. LDPE is similar to HDPE but is less dense and more flexible.

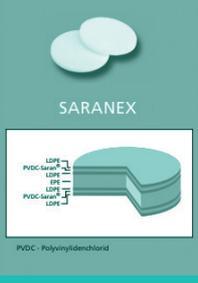
The recognised Resin Identification Code (RIC) for LLDPE is as per Figure 2.



Figure 2.

LDPE can be recycled where collection and re-processing facilities exist. Post recycling, LDPE can be recycled into many different products including: Bin liners, bins for litter, compost and recycling, plastic fencing and panels, floor tiles.

# Recycling Information for ROPP Caps

Liner Type	Properties	Application
EPE	 <p>EPE-LINER</p> <p>EPE - extruded polyethylene</p>	<p>Closed Cell unlinked Extruded Polyethylene Foam.</p> <p>EPE liners are recyclable where facilities exist.</p>
Saranex	 <p>SARANEX</p> <p>PVDC - Polyvinylidenchlorid</p>	<p>Made up of 3 materials:</p> <ul style="list-style-type: none"> <li>• LDPE</li> <li>• PVDC-Saran</li> <li>• EPE</li> </ul> <p>Separation of the 3 materials for recycling currently is not available.</p>
Saran Tin	 <p>SARAN-TIN</p> <p>PVDC-Saran</p>	<p>Made up of 4 materials:</p> <ul style="list-style-type: none"> <li>• EPE</li> <li>• PVDC-Saran</li> <li>• Paper</li> <li>• Tin</li> </ul> <p>Separation of the 4 materials for recycling is currently not available.</p>

Liner Type / Name	Properties	Application
Compound	Plastisol (Hot foamed PVC),	Liner adheres to the internal cap lacquer
PVC Free	Svelon 596	

The Compound and PVC Free liner material has a very strong adhesion to the internal closure lacquer which makes the liner difficult to remove and is likely to be 'burned off' during the aluminium recycling process.

# Recycling Information for ROPP Caps

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## Compound Liner (Plastisol - Hot foamed PVC)

PVC can be recycled where separation and recycling facilities exist.

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## PVC Free Liner (Svelon 596)

The MSDS for this product advises;

- Bioaccumulation is unlikely
  - Not inherently biodegradable
  - The product is insoluble and floats on water so may be separated mechanically in waste water plants
  - Like most thermoplastic plastics the product can be recycled if separated.
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Further information on LDPE and other plastic recycling can be obtained from WRAP, the Waste and Resources Action Programme (which operates as WRAP). A registered UK Charity. [www.wrap.org.uk](http://www.wrap.org.uk)