Exchange for Change

Deposit Return Scheme (DRS)

Material Specification

June 2026 V6



EXCHANGE FOR CHANGE

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1. Introduction

This document describes the requirements for a container which is captured by the Deposit Return Scheme (DRS) operated by Exchange for Change (EfC) in England, Scotland and Northern Ireland, to be accepted by a Reverse Vending Machine (RVM)

The material specification is a detailed set of criteria that defines which In-Scope beverage containers, included in the DRS scheme and subject to a deposit, can be accepted by an RVM. It Does not limit or redefine regulated scheme articles, it specifies the acceptable materials (PET, aluminium and steel), size and volume (150ml to 3 litres), labelling requirements, and quality standards that containers must meet to be accepted by Reverse Vending Machines. By clearly defining these parameters, the material specification helps maintain operational efficiency, supports high-quality material recovery, and ensures the economic viability of the scheme.

Please note that some processes within this material specification are still being finalised and will be shared by the end of July 2026 to ensure best practices for all stakeholders are adopted. Please contact Exchange for Change directly for any questions relating to products that allow for early clarification ahead of the scheme launch in October 2027.

All product types and containers that are included in the DRS, are as defined in regulations:

England & Northern Ireland: The Deposit Scheme for Drinks Containers (England and Northern Ireland) Regulations 2025

Scotland: The Deposit and Return Scheme for Scotland Regulations 2020

Note: *For the purposes of this document, any reference to "Producer Fee" shall be interpreted to mean (i) the fees payable by registered scheme producers in England and Northern Ireland to the Deposit Management Organisation (ii) the "registration fee" payable by producers under Scotland's Deposit and Return Scheme. All references to "Producer Fee" in this document are deemed to mean the "registration fee" as described in the Scottish regulations.*

2. Container Scope

All bottles and cans for water and beverages (soft & alcoholic drinks) for human consumption, with capacity of at least 150 millilitres but no more than 3 litres of liquid. Containers are in scope if made 'wholly or mainly' of PET, Aluminium or Steel.

In-Scope Materials:

- PET
- Aluminium
- Steel

Containers with in-scope material, as set out in the legislation, will be accepted. For any queries on mixed material products or irregular shapes, please contact Exchange for Change.

The governing regulator in England, Northern Ireland, and Scotland shall have final authority to determine whether the content of scheme articles renders a container drink In-Scope or Out-of-Scope (see Appendix C for contact details)

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3. Container Dimensions

Container dimensions must be within the following ranges to ensure RVM acceptance:

Dimension	Minimum	Maximum
Outer Width (Diameter)	50mm	125mm
Height (with cap on)	75mm	360mm

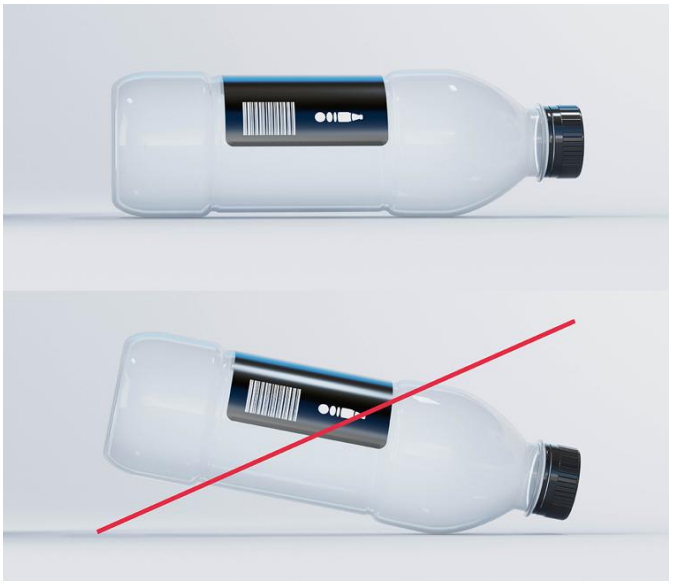
Critical Requirements:

- Width must not exceed height
- Height dimension is inclusive of caps

To support RVM take back effectiveness and reduce manual processing, cylindrical containers are the preference. Other product shapes may be subject to testing to ensure they can be processed through a RVM. Containers which cannot be accepted by RVMs due to their design or construction will be accepted through manual return and counting processes.

Stability Testing

Prior to product registration, place the empty container on a flat surface. If the upper part of the container touches the surface or balances on the shoulder, it may not be approved for acceptance by an RVM.



Non-cylindrical containers (square in shape) or top-heavy containers risk jamming RVM equipment and will require additional testing. In these circumstances, please contact enquiries@exchangeforchange.co.uk

Exchange for Change may contact producers regarding drinks containers that require testing. Please refer to the RVM Specification, available at www.exchangeforchange.co.uk to assist with container design.

4. Material Thickness and Compaction

Material thickness can cause challenges for Reverse Vending Machines and can block or cause parts of the compaction equipment to fail. Material thickness will be evaluated by compression tests and samples will be required for evaluation for products of non-standard shape and thickness.

Compaction Requirements:

To allow for RVM acceptance it must be possible to reduce the volume of a container by:

- PET bottles: Minimum of 55% during compaction
- Aluminium/Steel cans: Minimum of 75% during compaction

5. Product Identification & Barcoding

As per the regulations, there is a requirement for scheme containers to carry a scheme return code (Barcode as registered on the Scheme Article List). This is a specific obligation for producers and a breach of the regulations if not met. Individual containers within the deposit return system must display a barcode to ensure that the product can be clearly identified in both Reverse Vending Machines and at Exchange for Change's counting and sorting facilities. **All Existing product barcodes will require to be changed.**

Exchange for Change requires that a dedicated specific barcode be applied to all In-Scope products placed on the DRS market

Exemptions apply for low volume threshold products, as defined in the regulations. (see section 10 for more information) For the use of International barcodes see section 5.5

To ensure RVM acceptance, all containers should be identifiable through:

1. **Barcode Recognition** (primary method)
    - Validated against the Exchange for Change Article List
2. **Basic Shape Recognition**
    - Uses dimensional data (height, width, length)
    - Minimum 95% accuracy required
3. **Weight Detection**
    - Ensures only empty containers accepted
    - Minimum 95% accuracy required
    - Containers over 100 grams (including excess liquid) will be rejected by RVM's
4. **Metal Detection**
    - Distinguishes aluminium/steel from PET
    - Minimum 95% accuracy required

5.1 Barcode Format

The barcode used can be of the type EAN-13, EAN-8, UPC-A or UPC-E.

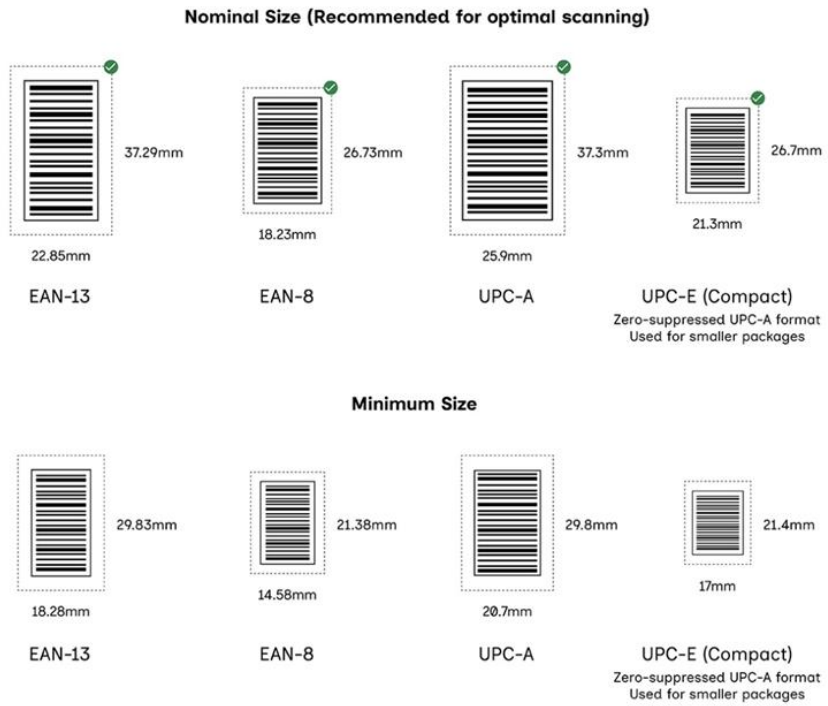
All barcodes used within the Deposit Return Scheme must be compliant with the GS1 General Specifications Standard or equivalent, and unique to the individual product.

Barcode Quality:

According to the ISO 15420 Standard, the barcode must be of sufficient quality to achieve "Grade 1.5", as defined in ISO 15416, when read throughout the life of the package and have durable, high-quality barcodes that don't easily separate

Please see Appendix B from the Hardware RVM Specification for barcode read accuracy. The full specification is available at www.exchangeforchange.co.uk

5.2 Barcode Sizing



Barcode Type	Minimum Size (W×H)	Nominal Size (W×H)
EAN-13	29.83mm × 18.28mm	37.29mm × 22.85mm
EAN-8	21.38mm × 14.58mm	26.73mm × 18.23mm
UPC-A	29.8mm × 20.7mm	37.3mm × 25.9mm
UPC-E	21.4mm × 17.0mm	26.7mm × 21.3mm

In the dimensions detailed above, the width includes the quiet zones (the space required either side of the furthest bars) and height is from the top to the bottom of the bars (excluding the numbers).

5.3 Barcode Placement

Barcodes must be placed on the container so they can be read at a maximum of 30 degrees tilt.

Placement requirements:

- Barcodes should be placed on the container in Vertical Ladder format to maximise scanning ability. Horizontal Picket-Fence format is not preferred, and if used will require testing
- Barcodes should be on the container's main label for bottles and not on a neck label. Any barcodes on the neck will be subject to testing. Please contact Exchange for Change for any further information on this.
- Barcodes must be at least 8mm from the bottom of an aluminium or steel container
- Barcodes must never be placed on the top or bottom of a container
- Must be readable on both cylindrical and non-cylindrical containers



5.4 Multipack Requirements

In the case of multipacks, as required by the regulations, each individual container within the multipack will require a barcode to ensure that it can be returned for a refund by consumers and so that all registered PET, Aluminium and Steel containers are readable by RVMs equipment and counting centres. The barcode on the outer packaging for a multi-pack should not match the barcode on individual containers.

5.5 International vs Specific Barcodes for DRS

Producers and importers are directly responsible for procuring compliant scheme logo and barcodes specific for the product they place on the market.

International Barcodes:

Producers using barcodes on their products that are also used in other markets (rather than specific barcodes created for DRS) may choose to do so, although this may be subject to an additional charge on the standard producer fee. Any such additional charge will be decided by Exchange for Change Board in 2026, in line with the overall producer fee structure. **International barcodes will require to be changed and registered with Exchange for Change**.

5.6 Future Identification Requirements

To support container design, RVM's must be capable of reading:2D data matrices and QR codes at go-live, as per RVM Hardware Specification. Details of further symbology's will be shared in due course to reflect the requirements of industry.

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6. Container Recognition Standards

Combined Recognition Accuracy

The minimum recognition combination is:

Barcode Recognition + Basic Shape Recognition + Weight Detection + Metal Detection

A combined accuracy level of at least 95% is required across this combination.

Silhouette Shape Recognition:

While not required at scheme launch (October 2027), Exchange for Change may utilise Silhouette Shape Recognition after the first year of operation. This technology uses machine vision to identify containers by their distinctive shape profile and can improve acceptance rates, particularly when barcodes are damaged or obscured.

This is guidance for future consideration. If Silhouette Shape Recognition becomes a RVM requirement, Exchange for Change will provide adequate notice, detailed technical specifications and testing protocols well in advance of implementation to allow sufficient time for any necessary packaging adjustments.

In-Scope containers not meeting the minimum recognition standards will need to be returned via the Manual Return Process.

7. Deposit Logo and Labelling

7.1 UK DRS Deposit Logo

IMPORTANT: The UK DRS deposit logo specifications will be published in Q2 2026.

The UK DRS deposit logo will be required on all in-scope products. This logo helps consumers, retailers and enforcement authorities to identify products that are part of the UK deposit return scheme and those that are not. The scheme logo cannot be used on low volume products below the minimum threshold, as outlined in section 10 and based upon the previous 12 months sales, or other out-of-scope packaging.

It is particularly important for retailers and return point operators that are accepting back containers manually (i.e. over the counter and not via a Reverse Vending Machine).

Producers must adhere to the Exchange for Change brand guidelines which can be found at: www.exchangeforchange.co.uk/resources

7.2 Labelling of Containers

Bottles - Label Coverage Guidance:

To optimise material quality for recycling, producers should target label and sleeve coverage of less than 50% of the container's surface area. While RVMs can accept containers with higher coverage, reduced coverage significantly improves the quality of recycled material and supports the circular economy goals of the scheme.

Note: This guidance applies to **bottles that require labels only**. Aluminium and steel cans are not subject to coverage guidelines.

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8. Permitted and Restricted Materials

8.1 Material Specifications

The European PET Bottle Platform (EPBP) is considered the guideline for the UK DRS scheme. Full details can be found at: www.epbp.org/design-guidelines/products

8.2 Tethered Caps: Northern Ireland Only

Under the Windsor Framework, Northern Ireland is obligated to implement the EU Single Use Plastics Directive requirement for tethered caps on PET bottles and other single-use plastic beverage containers up to 3 litres. Legislation remains pending. Industry stakeholders should prepare for implementation of these design requirements in Northern Ireland.

Tethered caps should remain attached to the bottle after opening to facilitate complete recycling of all packaging components.

9. New Product Registration

9.1 Registration Timeline

In advance of UK DRS going live on 1st October 2027, the registration of a new product will need to be submitted to Exchange for Change before the product is placed on the market.

Pre-Go-Live Registration (Before 1 October 2027)
All producers must register their existing products with Exchange for Change no later than 12 weeks prior to go-live (by 9th July 2027). This will be done by the completion of a digital form which will then be submitted via the Exchange for Change registration portal. The reason for the 12 week window is simply to allow enough time for the tens of thousands of sku's which will need to be added to the system.

Where the product is in a non-standard container (for example a bespoke PET bottle or a non-standard can) testing of the registered product will be required to ensure compatibility prior to go live. This process will minimise the risk of RVM rejection of valid scheme articles at go live. Further details will be shared later in 2026 to define what is 'non-standard' and hence requires physical testing and the timings involved.

Late Registrations (within 12 weeks of go-live):

We recognise that new product development is likely by producers in Q3 and early Q4 of 2027. These product details would ideally be submitted prior to the 9th July. Where this is not possible (for example artwork and barcode are only confirmed in August 2027 for an October launch), Exchange for Change cannot guarantee, but will use all reasonable endeavours to support products being added to the Article List prior to go-live.

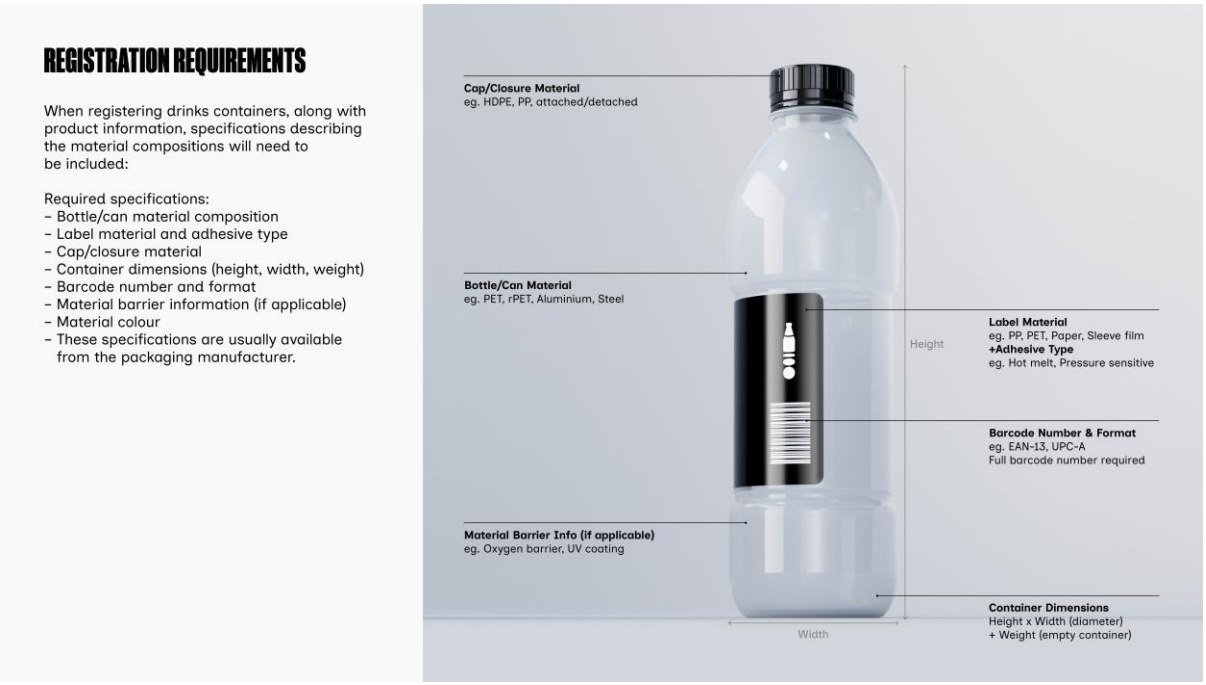
Post Go-Live Registration (After 1 October 2027):

Standard Containers: Maximum 2-week processing time from registration submission to Article List inclusion. Exchange for Change will endeavour to reduce this timeframe wherever possible with a recognition of the requirement for quick processing on new products.

Non-Standard Containers: 4-week processing time to allow for physical testing and validation of container compatibility with RVM equipment.

There will be a dedicated team available to support producers with the registration process where required.

9.2 Registration Requirements



9.3 Article List

Exchange for Change maintains an Article List which contains all in-scope products registered with the scheme. The Article List includes:

- Product name
- Container characteristics (9.2)
- Barcode information
- Associated deposit amount

The Article List is updated daily and distributed to all RVMs via API to ensure valid products are accepted. Manual Return Points will also have access to the Article List if required.

Integrity: The Article List integrity is protected. No changes are permitted outside of those provided by Exchange for Change. Any proposed changes must be communicated and confirmed by Exchange for Change through the producer product portal or required means.

9.4 Sample Submission and Testing

Once a product has been registered, samples may need to be sent to Exchange for Change or designated testing facilities for RVM acceptance testing.

In-Scope containers that fail RVM acceptance testing will need to be returned via the Manual Return Process.

Product Testing Guidelines:

Exchange For Change will publish product testing guidelines (including a list of standard Can shapes and sizes not requiring testing, see Appendix D) by September 2026 latest, to support efficient registration. The packaging will be checked against the requirements set out in this document. **Note:** *Producers with non-standard format containers should contact Exchange for Change enquiries@exchangeforchange.co.uk at the earliest opportunity from 01/03/2026 to initiate early testing and support the registration of all in scope products ahead of go-live 1st October 2027.*

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10. Low-Volume Product Exemption

Producers who manufacture or import products of 6,250 or under, individual units per SKU for year 1, ((01/10/2027 - 31/12/2028) (5,000 units or under per SKU per year thereafter)) can register them as 'Low-Volume Products'. The DRS scheme logo must not be applied to low volume products.

Exemptions for Low-Volume Products:

- Exempt from producer fees
- Exempt from labelling requirements (UK DRS logo not required)
- Still must register with Exchange for Change
- Still must report number of containers placed on market

First year (01/10/2027 - 31/12/2028) threshold: 6,250 or under (5,000 or under for subsequent years) units

This exemption is designed to reduce burden on small-scale producers while maintaining scheme transparency.

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11. Container Changes

As required in regulation, any changes to products already registered in the deposit return system must be submitted to the Exchange for Change before they can be introduced. Exchange for Change will provide a period of grace to allow further discussion if the change causes any challenges.

If the weight or dimensions of your packaging changes, you will have to register the amendment with Exchange for Change on the existing SKU.

Material specifications must be submitted to Exchange for Change if you make changes to:

- Container dimensions
- Material composition
- Label coverage or materials
- Cap/closure design

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12. Products for Export

Products that are produced in England, Scotland or Northern Ireland but only sold outside of these countries should not include a barcode used in the deposit system or the UK DRS deposit system logo.

This prevents confusion and potential fraud in the scheme.

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13. Self-Adhesive UK DRS Logo Labels

Self-adhesive UK DRS logo labels may be permitted, by exception, to fulfil labelling requirements as a contingency measure only where direct printing onto the bottle label or can is not practical for the UK market.

Use of self-adhesive labels with UK DRS logo, barcode or both will be subject to prior approval by Exchange for Change. Any labels should be securely attached. Exchange for Change will publish the approval process in Q2 2026.

Labelling must meet the criteria for UK DRS logo labelling as detailed in the brand guidelines. These can be found at www.exchangeforchange.co.uk/resources

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14. Appendix A: Glossary of Terms

Article List: Exchange for Change database containing all registered in-scope products, updated daily

Compaction: The process of reducing container volume in RVMs to prevent re-use

DRS: Deposit Return Scheme

GS1: Global standards organisation for barcodes and supply chain

In-scope: Containers that are included in the UK DRS (PET, aluminium, steel; 150ml-3L)

Low-Volume Product: Product lines with 6,250 units or under in year one (01/10/2027 - 31/12/2028) and 5,000 units or under per year thereafter, exempt from fees and labelling

PET: Polyethylene Terephthalate plastic

Producer: Any person who is first to place in-scope products on the market (manufacturers, importers, brand owners)

RPO: Return Point Operator (retailers and other organisations hosting return points)

RVM: Reverse Vending Machine (automated collection point for containers)

EFC: Exchange for Change **-** The not-for-profit industry led organisation responsible for the UK's Deposit Return Scheme.

SKU – Stock Keeping Unit

15. Appendix B : Barcode Recognition (Hardware RVM Specification)

Barcode Recognition

Barcode recognition is the primary method of container identification by the RVM and should meet the following criteria, all RVMs should be able to:

- Read the barcodes on both cylindrical and non-cylindrical containers, vertical or horizontal, not on caps or bottom of containers
- Store the product Article List to validate the barcode read.
- Read barcodes at a maximum of 30 degrees tilt. It is expected that RVMs can read and recognise at least 99.5% of undamaged barcodes at maximum tilt.
- Read EAN-8, EAN-13 and UPC barcode formats.
- Read 2D data matrices and QR codes.

16. Appendix C : DRS Regulators

Regulators	Website	Email
Environment Agency	https://www.gov.uk/government/organisations/environment-agency	drs@environment-agency.gov.uk
Scottish Environment Protection Agency	https://beta.sepa.scot/regulation/authorisations-and-compliance/scotlands-deposit-return-scheme/	depositreturn@sepa.org.uk
Department of Agriculture Environment & Rural Affairs	https://www.daera-ni.gov.uk/	packaging@daera-ni.gov.uk

17. Appendix D : Standard Can Formats

Material	Format	Volume	Diameter(mm)	Height(mm)	Nominal Finished Weight(g)
ALU	Standard	150ml	53.4	88.4	6..1
ALU	Slim	187ml	53.4	101.2	10.6
ALU	Sleek	200ml	53.4	111.2	8.0
ALU	Slim	200ml	53.4	111.2	9.2
ALU	Slim	250ml	53.4	134	8.1
ALU	Slim	250ml	53.4	134	9.4
ALU	Embossed	330ml	66.6	115.2	10.4
ALU	Round Shoulder	330ml	66.6	115.2	10.2
ALU	Round Shoulder	330ml	66.6	115.2	9.7
ALU	Sleek	330ml	58.1	145.4	12.4
ALU	Sleek	330ml	58.1	145.4	9.8
ALU	Standard	375ml	66.6	130.2	11.5
ALU	Standard	375ml	66.6	130.2	14.1
ALU	Standard	400ml	66.6	149.9	12.1
ALU	Standard	440ml	66.3	149.9	11.9
ALU	Standard	470ml	66.6	160.46	13.8
ALU	Round Shoulder	470ml	66.6	160.46	12.3
ALU	Round Shoulder	470ml	66.6	160.46	12.1
ALU	Standard	473ml	66.6	157.23	12.2
ALU	Standard	500ml	66.6	168	12.8
ALU	Standard	500ml	66.6	168	13.2
ALU	Round Shoulder	500ml	66.6	168	12.4
ALU	Standard	530ml	66.6	178.46	16.1
ALU	Round Shoulder	530ml	66.6	182.7	13.5
ALU	Round Shoulder	568ml	66.6	188.09	15.2
ALU	Standard	568ml	66.6	188.1	15.8
STEEL	Sleek	250ml	58.1	113.9	20.8
STEEL	Sleek	300ml	58.1	133.3	25.3
STEEL	Standard	330ml	66.6	115.2	21.9
STEEL	Sleek	330ml	58.1	145.4	21.7
STEEL	Standard	355ml	66.6	122.4	23.4
STEEL	Sleek	355ml	58.1	156.9	22.1
STEEL	Standard	500ml	66.6	168.0	27.2