



## *Collapsible Aluminium Tube*

**100% RECYCLED ALUMINIUM**

**Tube dimensions 28 x 145 mm**



THE INTERNATIONAL EPD® SYSTEM

## Environmental Product Declaration

In accordance with ISO 14025:2010

**EPD REGISTRATION NUMBER:** S-P-09989

**PUBLICATION DATE:** 2023/07/27

**VALIDITY DATE:** 2028/07/26

**REVISION DATE:**

**PROGRAMME:** The International EPD® System

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This EPD provides current information and may be updated if conditions change.

The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



## The Green tube: Something we are proud of



atma  
**TUBE**  
OF THE YEAR  
**2020**

Alltub won the Tube of the Year prize in 2020 for its Green Tube\* innovation, made from >95% Post-Consumer Recycled aluminium, from the European Tubes Manufacturers Association and has subsequently announced “**WORLDSTAR WINNER 2021**” by the World Packaging Organisation (WPO) with the following motivation:

“*The use of PCR in no way detracts from the tube’s positive properties and outstanding performance: it retains all the benefits associated with product protection and meets all other consumer requirements and expectations perfectly, regardless of the product in question. This is because the closures, internal varnishes and combinations of different printing options that are used for virgin aluminium tubes can also be used for the Green tube. A water-based transparent base lacquer was used for the Green tube prototypes to emphasise the aluminium’s natural appearance. This further underlines the green orientation of the tube. A green landscape nature print complements and rounds off this design concept and, as far as the design and layout are concerned, sums up the tube’s philosophy in a visually appealing manner\**”

**The Green tube, in its various customized versions and produced in all of Alltub’s business units, was launched on the market at the end of 2020 in partnership with our customers. In 2022, Alltub supplied over 125 million green tubes with a total weight of over 1,000 tonnes.**

\*Dimensions 31,2 x 185 mm

\***Official Media Release** “Tube of the Year 2020: the dominating themes are sustainability, consumer- friendly solutions and innovative product ideas” Düsseldorf, 12 August 2020



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Additional information  
& references

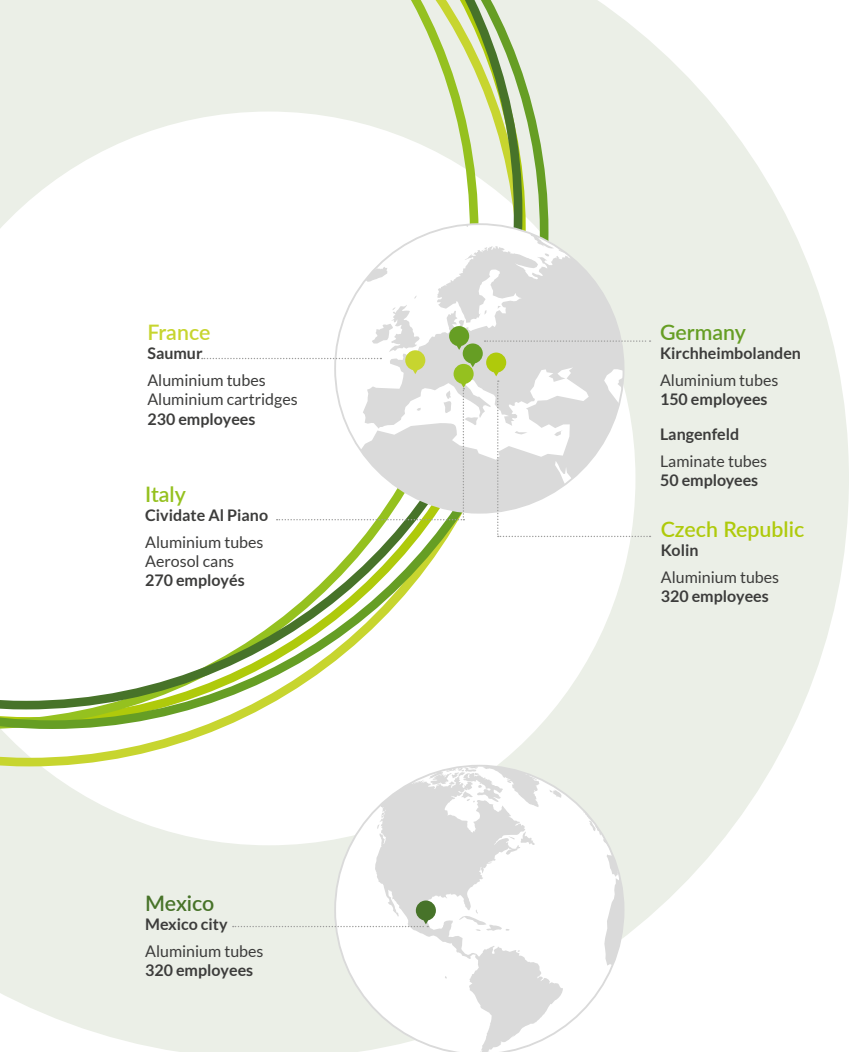


**N°1** *Worldwide leader  
in collapsible aluminium tubes*

The **ALLTUB GROUP** is an integrated global aluminium packaging specialist producing aluminium tubes, laminate tubes, aluminium cans and aluminium cartridges.

With a global market share of over 10% (over 20% in Europe and North America), the Alltub Group is the worldwide leader in the manufacture and supply of collapsible aluminum tubes.

*\*source : estimation based on the European Tube Manufacturers Association (ETMA) statistics.*



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## Company presentation

With **five production sites in Europe** and **one in Mexico** and a global sales network, ALLTUB GROUP is the perfect partner for customers requiring stylish, completely airtight and **100% recyclable packaging**.

Employing **1,300 people worldwide** and generating over 180 million Euros of annual sales, the ALLTUB GROUP has over 65 production lines manufacturing over 1.5 billion units per year.

All plants are certified ISO 9001 with additional certifications such as ISO 14001 (Alltub Central Europe s.r.o and Alltub France SAS), ISO 15378, ISO 50000 (Alltub Deutschland) and ISO 22000, BRC IoP, as well as Drug Master File registrations with the US FDA and Health Canada.

**This EPD is based on primary data from Alltub Central Europe (CZ) and Alltub Mexico.**

DIAMETER (mm)		11	13,5	16	19	22	25	28	30	31.2	32	35	40	50	
LENGTH (mm)	min.	55	55	65	85	90	100	120	120	125	130	130	130	150	
	max.	70	95	105	130	150	165	190	190	190	190	200	215	200	
FILL VOLUME (ml)	min.	2	5	8	15	20	27	50	50	67	70	85	115	200	
	max.	3	10	14	25	45	60	80	95	109	115	135	200	250	
THREAD	56	INJ	•	•	•	•									
		INJ				•	•								
	68	OP		•	•	•									
		OR		•											
		CN	•	•	•	•									
	M7	INJ	•	•	•	•									
		OP	•	•	•	•	•								
	M8	CN													
		CN		•	•	•	•	•							
	82	INJ				•	•			•				•	
		OP			•	•		•							
		CN								•					
	M9	INJ				•	•		•				•		
		OP		•	•	•	•	•	•		•				
		EM		•	•					•					
		OR				•		•	•				•		
	92	OP				•	•								
		EM						•	•						
	110	OP				•	•	•	•	•		•	•	•	•
		OR											•		
		OP				•	•	•	•	•	•	•	•	•	•
	M11	INJ						•	•						
		OR						•	•						
		CN								•					
M12	OR								•			•			
	EM				•		•	•							
M13	EM					•	•		•			•	•		
	EM					•	•	•	•			•			
135	OP							•	•			•	•		
	EM									•		•	•		
M15	OP							•	•	•	•	•	•	•	
	OR							•	•			•	•		
M18	OP											•	•		



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Additional information & references

## Company presentation: Range of products

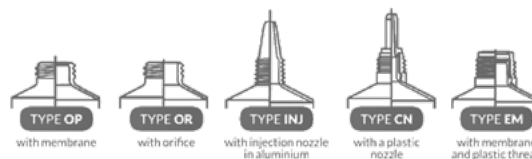
The green tube is produced at Alltub's plants in Cividate (Italy), Saumur (France), Kirchheimbolanden (Germany), Kolin (Czech Republic) and Mexico City (Mexico).

Tube sizes range from 2ml up to 250ml fill volumes with a large variety of cap styles available.

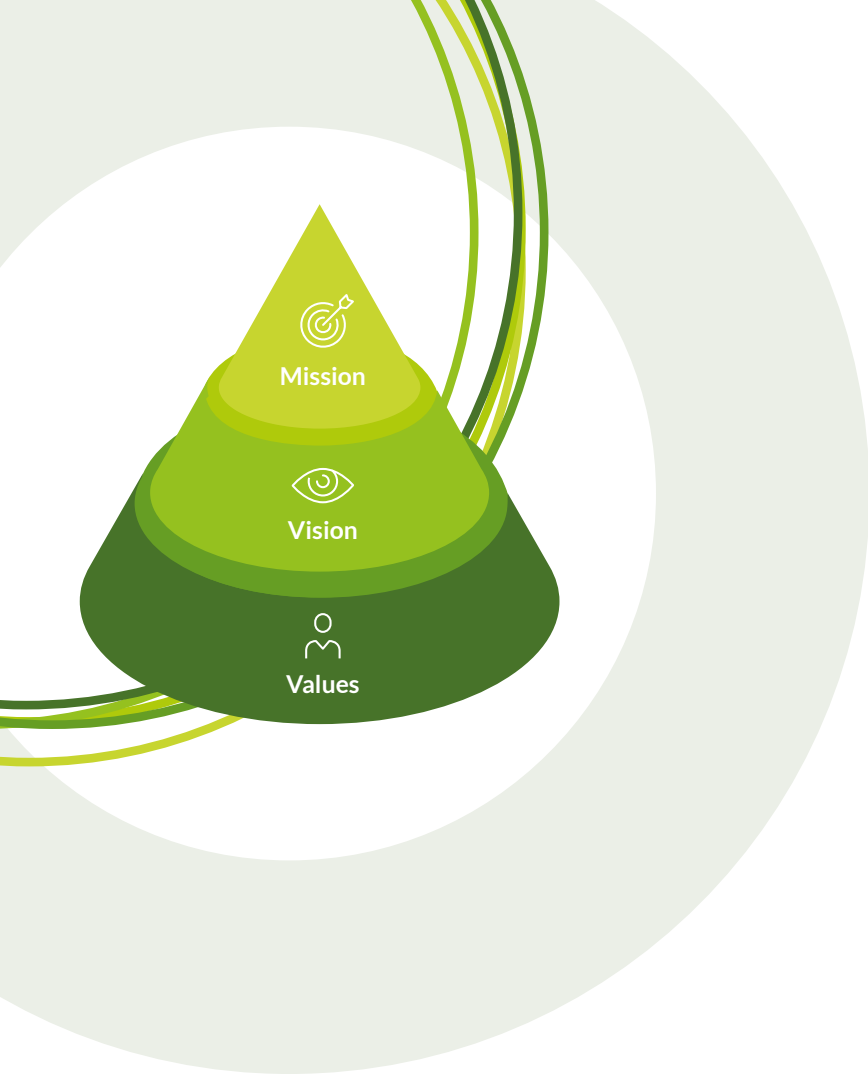
Alltub's product data sheet provides comprehensive details of the tube sizes available, complete with corresponding thread designs/dispensing mechanisms and in accordance with the cap type to be applied onto the tube.

The reference plants for this EPD, upon which data was submitted and analysed, are Alltub Central Europe (CZ) and Alltub Mexico and the concerned product is an unbranded aluminium tube with dimensions 28 x 145mm and manufactured with 100% recycled aluminium\*.

\* To define a tube as an unbranded one, it is enough to define its diameter, length and the kind of aluminium (primary or recycled). Other parameters are related to the customized customers tubes.



ALLTUB GROUP  
aluminium tube technical  
data sheet



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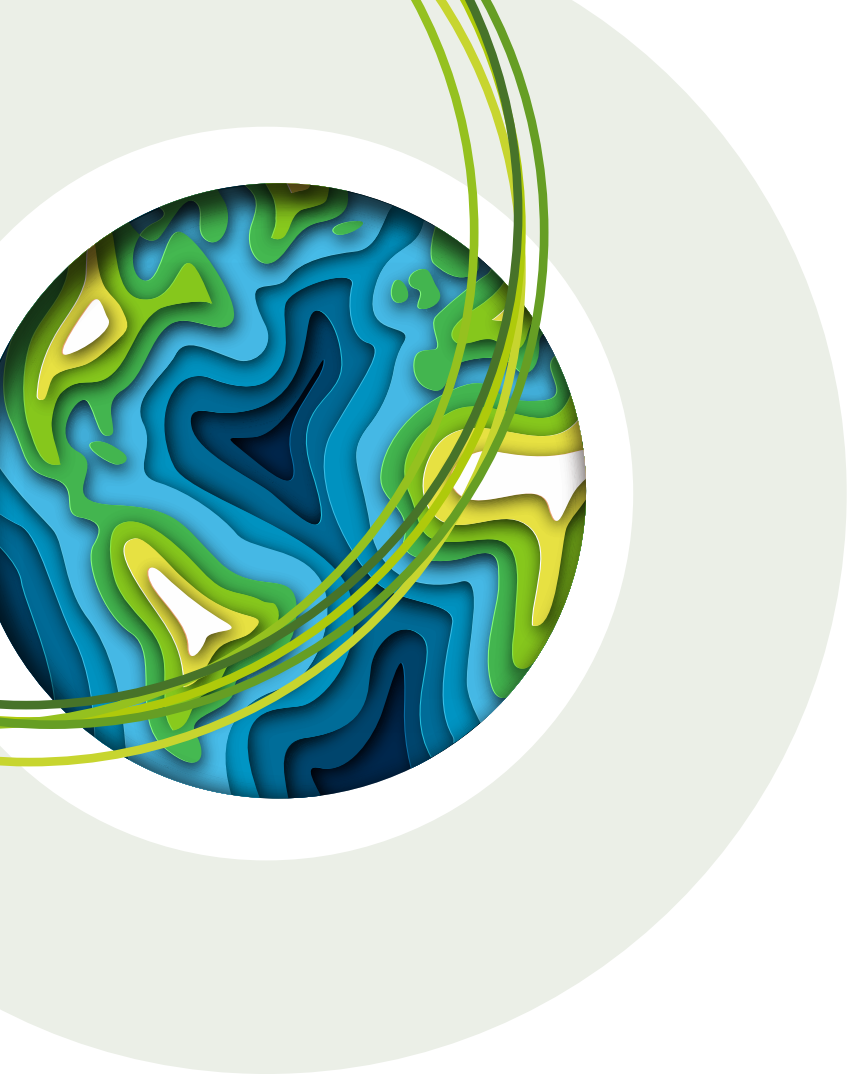
## Company vision & values

ALLTUB GROUP is an **aluminium packaging** specialist, worldwide leader in **collapsible tubes**. The group provides sustainable solutions for customers in the pharmaceutical, cosmetic, food and industrial markets.

ALLTUB GROUP thrives to be the best partner in providing added value in **sustainable aluminium packaging solutions** both globally and locally, by relying on high quality standards and passionate employees.

ALLTUB GROUP has strong values:

- Respect
- Continuous improvement
- Walk the talk and be consistent
- Discipline
- Team-work
- Trust



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## Company vision & values

Sustainability is at the core of the business of Alltub Group.

Alltub Group is inspired by the Ellen Macarthur foundation\* and its case studies which present circular economy success stories from around the world, showing how businesses, governments and cities are transforming our economy into one that works for people and the environment.

Alltub Group has developed its own in-house team of experts in sustainability.

This EPD demonstrates the first results of the **strategy** and **commitment** established by Alltub.

\*source: <https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>



## Company vision & values : support for sustainable development



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**ALLTUB Group** has set itself the rule of respecting the environment and promoting continuous improvement in environmental protection. Alltub Group is committed to sustainably upholding the goal of environmental protection for current and future generations\*.

The next decade will be critical in terms of **environmental challenges**. Decisions should be taken to limit global temperatures rise, to ensure clean air and water, stable climate and safe food for tomorrow.

As implementing sustainable solutions is a key driver, **ALLTUB GROUP** is continuously working on .. **ding better ways**... make its operations and products more efficient and environmentally friendly. **By respecting nature** and its exhaustible resources, by strongly believing that **recyclable and recycled aluminium** is key for the future in the packaging industry.

**ALLTUB Group** continuously shapes the market, challenges the industry, supports changes and trends, brings innovations to the customers.

**Alltub Group** is proud to measure the environmental impact and performance of its products and communicate in a transparent way for consumers and employees. The main goal of this EPD is **providing data for customers** who would like to publish their own EPD with **Alltub Group products**.

This EPD has been approved by the **ALLTUB Group's Management Team**.

*\*source : Alltub Group Code of Conduct support for sustainable development (6)*





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## Product: aluminium tube general information

Thanks to their **incredible properties and characteristics**, aluminium tubes can be used in many different sectors for a wide range of products and applications, and are the perfect choice for a wide range of packaging styles from vintage to trendy packaging for cosmetics.

Aluminium is a **permanent material** and can be **recycled indefinitely**.

Recycling or recycled contents is more than a trend it's a company commitment, especially today.

(Re)turning to aluminium is a **pertinent solution** for many brands and producers. Before the rise of plastics, most toothpastes, creams and ointments were packed in aluminium tubes. **Lightweight and malleable**, aluminium is popular with designers, and its natural, authentic image chimes with the current consumer climate.

\*source: <http://www.aluminium-tubes.org/history.html>



Historical picture not related to Alltub's products..



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## Product: aluminium tube general information

The collapsible aluminium tube is a tried and tested packing solution which has existed for many decades across all continents of the world.

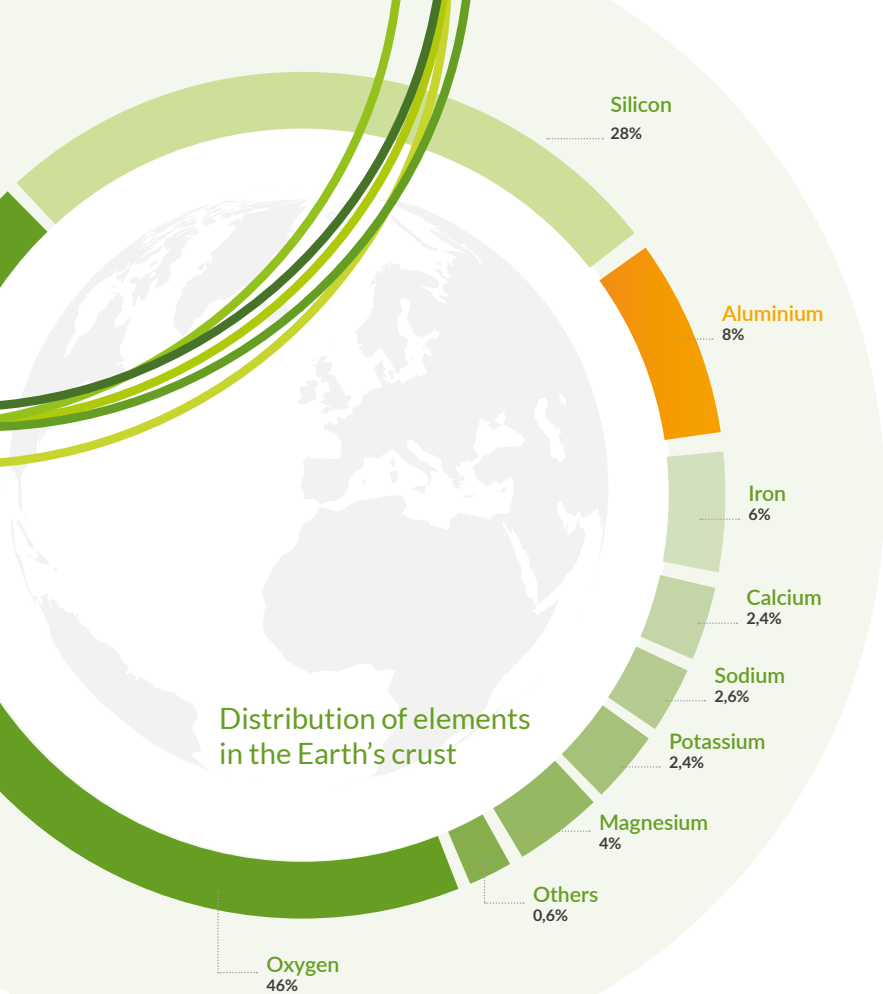
The first squeezable metal tube was born in 1841 in America for paint.

Beginning in 1886, attempts were made to fill aluminium tubes with contents other than paint such as toothpaste in 1887. The first attempts to use aluminium for the industrial production of tubes came in 1913. The first year with a high production rate was 1920, and thereafter the number rose greatly during the 1920s and 30s. In 1939, the aluminium tube celebrated its victory over the other materials used up until then. After more than 175 years ago of history as a material for high-quality packaging, the aluminium tube is still a success story.

All industries today, whether they produce pharmaceuticals, cosmetics, paint or pasty chemicals for technical use, rely on the aluminium tube as the premium packaging for their precious products, and they will continue to do so in the future\*.

\*source: <http://www.aluminium-tubes.org/history.html>

\*\*source: <https://www.kilmerhouse.com>



Source: Aluminium Everywhere, GDA, 2017



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## Product / general information: the material

### Aluminium is everywhere

Aluminium is the third most abundant element in the Earth's crust: it accounts for as much as 8%, with oxygen accounting for 46% and silicon 28%. It means aluminium is the most abundant metal.

The source of aluminium is bauxite, which through the Bayer process is converted into alumina. In turn the alumina is converted into aluminium through electrolysis.

65 million tonnes\* of primary aluminium are produced every year. In addition, more than 30 million tonnes\*\* of recycled aluminium are produced from melted down aluminium scraps. The trend is upwards because the global demand for aluminium is increasing, the green tube is a perfect example of this trend!

Almost 75 per cent of the 1.5 billion tonnes of Aluminium ever produced is still in use today\*\*\*.

\*source: <https://international-aluminium.org/statistics/primary-aluminium-production/>

\*\*[https://international-aluminium.org/work\\_areas/recycling/](https://international-aluminium.org/work_areas/recycling/)

\*\*\*[https://international-aluminium.org/work\\_areas/recycling/](https://international-aluminium.org/work_areas/recycling/)



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## Product: the green tube project

While abundant, natural resources are not infinite.

It is from this awareness, shared worldwide, that Circular Economy initiatives take their cue.

Respect - for any kind of resource, human and natural, continuous improvement - in goals and technology, walk the talk and be consistent, have always been part of Alltub's philosophy and practice.

Our approach applied to the Circular Economy gave life to the Green tube project: an aluminium tube with post-consumer recycled content but with all the technical characteristics of the virgin aluminium tube.

The challenge of the project was a tube:

- composed of the highest possible post consumer recycled aluminium content
- suitable for all applications and for all markets
- providing no reduction in functionality or performance for the consumer compared to a virgin aluminium tube
- remaining perfectly recyclable at the end-of-life



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## Product: the green tube challenge

Aluminium is known to be totally and infinitely recyclable material. Although remelted as part of the recycling process, recycled aluminium retains the same technical and mechanical performance as virgin aluminium.

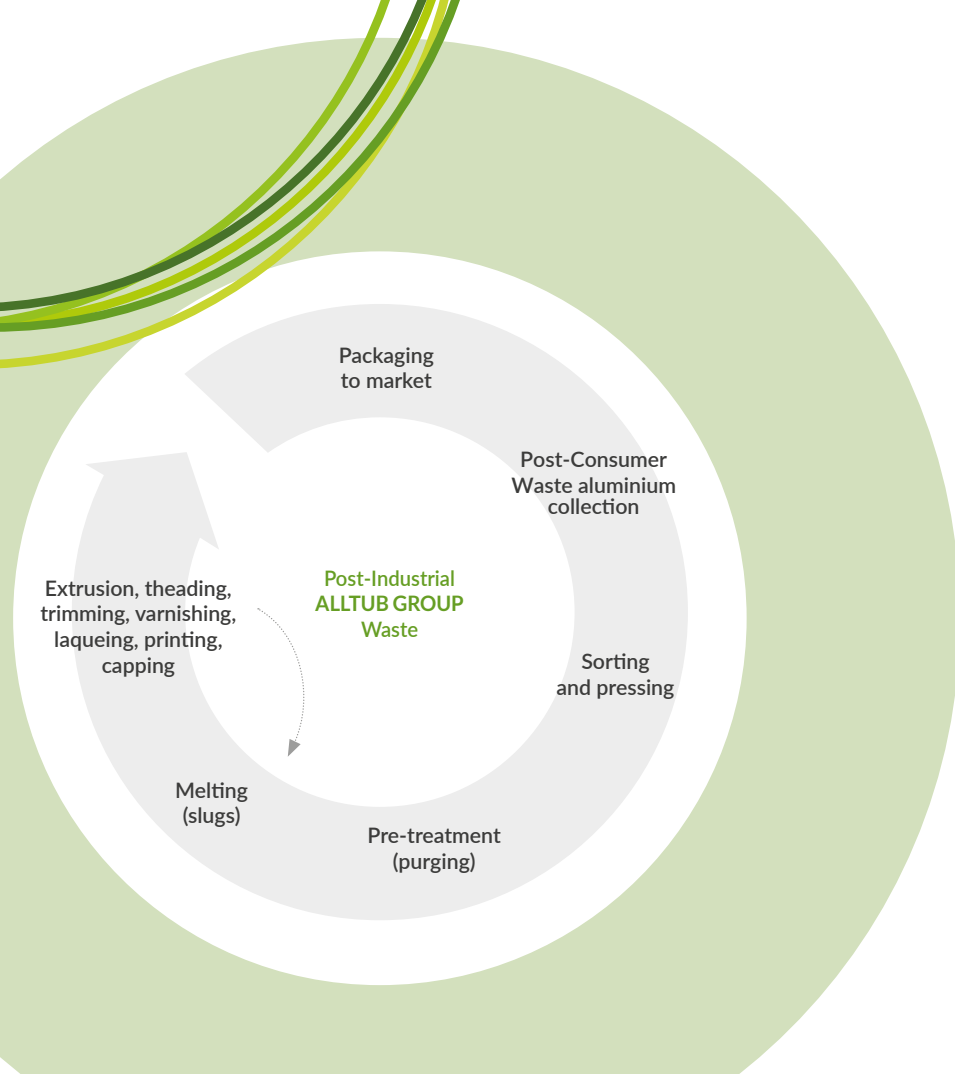
The initial primary aluminum production cycle is an energy-intensive process (electrolitical process) but being a 100% recyclable metal, the life of metals can be greatly prolonged, with a significantly reduced energy-consuming process.

In fact, recycling and subsequent remelting saves 95%\* of the energy required to produce primary aluminium thus generating a “virtuous circle” of energy saving .

The material needed to manufacture aluminium slugs must have specific characteristics that allow mechanical extrusion: the slugs must have a degree of purity of aluminum greater than 99%, while the other metals in the alloy (i.e. iron, titanium, manganese, silicon) must remain below 1%.

The challenge for the green tube is having access to a high purity level of recycled aluminium at source.

\*Sources: <https://www.cial.it/riciclo-alluminio/>  
<https://www.aluminium.org/industries/production/secondary-production>



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## Product: the green tube recycled material

### How post consumer recycled aluminium is made:

After sorting, the aluminium waste collected from the market then pressed into bales, and it's sent for recycling in the foundry. Basically here the material is pre-treated at about 500° to be purged from paints or other adhering substances and then melted around at 800° to obtain liquid aluminium from which PCR ingots and PCR slugs are obtained, destined to be processed for the production of semi-finished products and new products. Recycled aluminium has similar properties and quality as the original aluminium and is used in many sectors.

ALLTUB GROUP sends its process waste for recycling, obtaining, in return, recycled material to be used in new production.



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## **Product: the green tube**

### **How post consumer recycled aluminium is made:**

The growing social attention to sustainability also supported by the growing number of aluminum producers who are investing in equipment to clean the material themselves, has prompted European scrap processors, to produce high-quality, high-purity aluminum ready for melting.

Thanks to solid relationships with its supply chain, Alltub Group can access recycled material of adequate quality for applications in very sensitive sectors, and thanks to a deep knowledge of processes and products, it offers its customers a 100% recycled tube with the same performance of virgin metal but containing **more than 95% post-consumer** and up to 5% post-industrial recycled material.

The Green tube is the outcome of Alltub Group's technical knowledge, close collaboration with slug suppliers and its attention to customer needs, in order to **actively contribute to an effective Circular Economy.**



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## Product description / Technical information

ALUMINIUM TUBE		TUBE DIAMETER 28 mm
Diameter mm		28
Lenght mm		145
Material		Recycled Aluminium*
Nozzle orifice		Closed with membrane
Shoulder		Brush-finished
Thread ISO std		M11
Internal varnish		Epoxy-phenolic
Enamel		Polyester resins
Inks		Polyester resins
Standard open end tube not enamelled mm		2
Sealing band at the end of the tube		Acrylic resins
Weight g		5,46
PLASTIC CAP		
Material		PP plastic
Thread ISO std		M11
Colour		Several colours
Weight g		0,81

\* PCR >95%, PIR <5%

The product complies with the requirements for "materials and articles intended to come into contact with food" (EU Framework Regulation (EC) No. 1935/2004 and Regulation (EC) No. 2023/2006)





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## Content declaration: regulatory compliance

The ALLTUB Group is a downstream user and manufacturer of articles, the collapsible aluminium tubes for the food, cosmetics and pharmaceutical market, in the meaning of the European chemical legislation REACH (Regulation (No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals).

We exclusively process at our European sites raw materials, which comply with the REACH Regulation including the CLP Regulation (EC) No 1272/2008 (labelling and packaging of substances and mixtures), and we fulfil all REACH obligations as applicable to packaging manufacturers. The CLP Regulation, based on the Globally Harmonized System GHS, does not apply to articles like aluminium collapsible tubes.

The ALLTUB Group strongly avoids using raw materials containing more than 0,1% by weight of Substances of Very High Concern SVHC published to the Candidate List for Authorisation according to Article 59(10) of REACH.

However, we will fulfil the REACH obligations to submit relevant data to ECHA via the SCIP database and will inform our customers, if different.

ALLTUB's collapsible aluminium tubes comply with the following EU legislations:

- Packaging and Packaging Waste Directive 94 62 /EC PPWD and its amendments concerning the defined limits for heavy metals (Sum of Cd, Cr, Hg and Pb < 100 ppm)
- Regulation ( 2019 1021 on persistent organic pollutants and its amendments concerning the restrictions on listed substances
- Regulation ( No 1005 2009 on substances that deplete the ozone layer and its amendments concerning the restrictions on listed substances
- ALLTUB's collapsible aluminium tubes don't contain VOCs, exempt technically unavoidable and negligible residuals of organic solvents at ppm levels, nor intentionally added phthalates.

Basically, all ALLTUB tubes for food, cosmetic and pharmaceutical applications are developed with raw materials compliant to the EU Framework Regulation (EC) No. 1935/2004 on materials and articles intended to come into contact with food and Regulation (EC) No. 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food.

Furthermore, requirements applying to specific groups of materials are or can be fulfilled as following:

- Virgin + PCR Aluminium
  - EN 602
  - CoE Resolution CM/Res(2013)9 on metals and alloys used in food contact materials and articles.
- Plastic materials
  - Regulation (EU) No. 10/2011 on plastic materials and articles intended to come into contact with food
  - European Pharmacopeia monographs 3.1.3 (Polyolefins) and 3.1.5 (Polyethylene with additives for containers for parenteral preparations and for ophthalmic preparations) or 3.1.6 (Polypropylene for containers and closures for parenteral and ophthalmic preparations).
- Colorants
  - CoE Resolution AP (89) 1 on the use of colorants in plastic materials coming into contact with food.



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## Process description: general overview



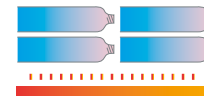
1

EXTRUSION



2

THREADING & TRIMMING



3

ANNEALING



4

INTERNAL VARNISHING



5

EXTERNAL LACQUER



6

PRINTING



7

CAPPING



8

END SEALANT



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PACKING



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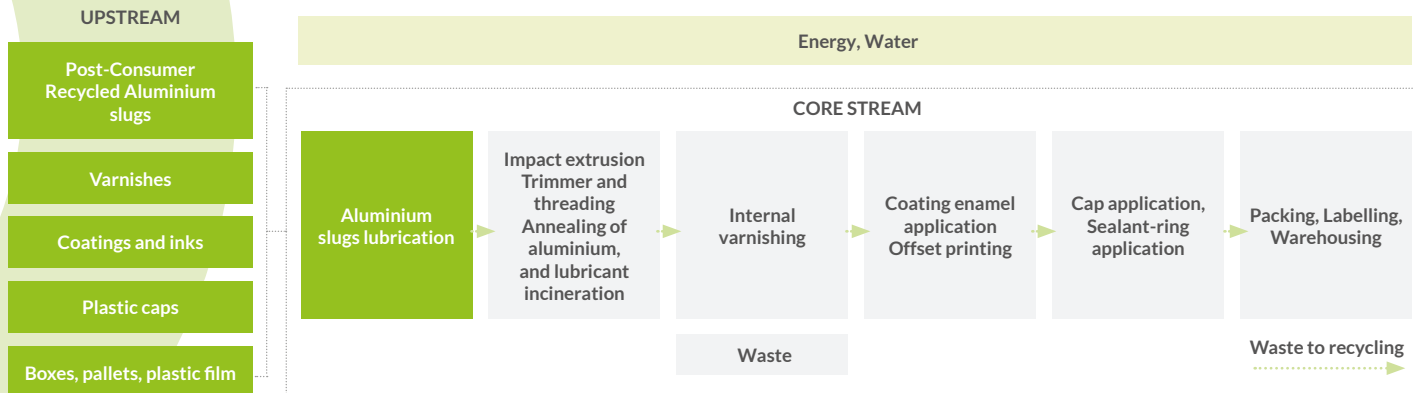


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## System diagram of the processes included in the LCA, divided into the life cycle stages



**Aluminium slugs lubrication:** During the first phase of the core process, aluminium' slugs are lubricated into tumbling machines adding solid lubricant. This process facilitate the next production phase of impact extrusion. The lubricant is subsequently completely removed by incineration in the annealing oven.



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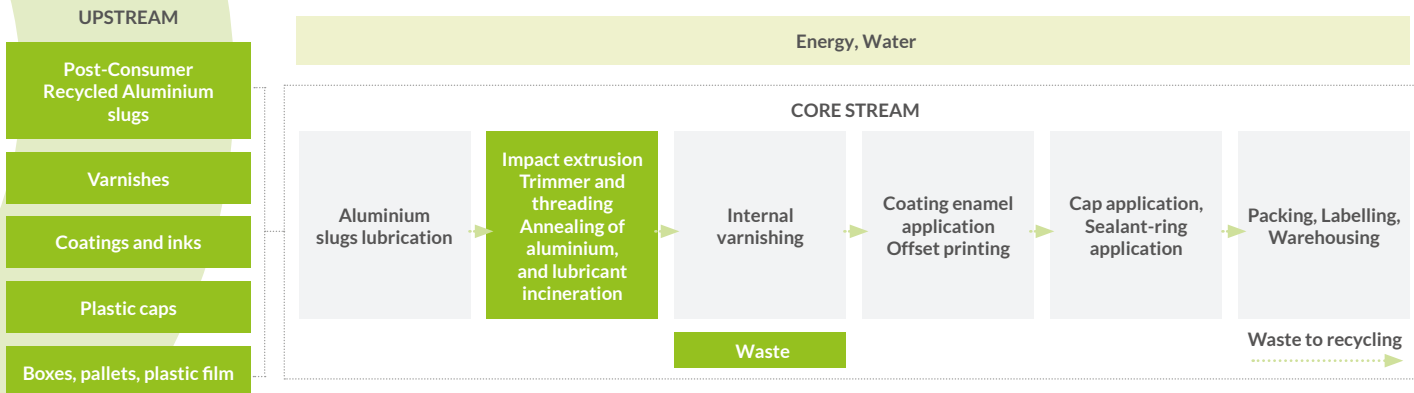


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## System diagram of the processes included in the LCA, divided into the life cycle stages



**Impact extrusion:** The slug is positioned in the die and hit by a mandrel; the aluminium, compressed between the mandrel and the matrix, forms the shoulder shape and flows back along the surface of the mandrel creating the cylindrical shape.

**Dimensional and threading operation:** The trimming machine removes the surplus to obtain the nominal length and it machines the thread on the nozzle. The aluminium scraps generated by these operations are eliminated and collected for recycling.

**Annealing of aluminium:** To give to the trimmed tube the requested mechanical properties and remove any residue of the lubricant, the tubes have to come into an annealing oven at a temperature above 300°C.



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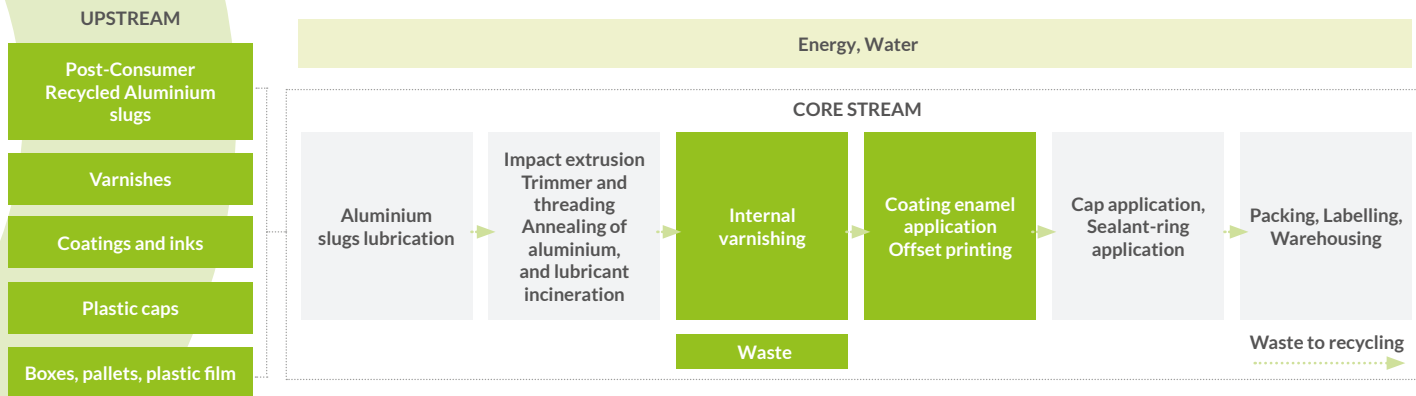


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## System diagram of the processes included in the LCA, divided into the life cycle stages



**Internal varnishing:** At the exit of the annealing oven the tube is coated internally by spraying with 2 or 3 passes. This is necessary to ensure the protection of aluminum to the chemical product contained therein. During the passage through the curing oven, generally at 280-300°C, the internal coating cures and becomes solid and homogeneous. The complete protection of the aluminum must be guaranteed by the thickness, the temperature of polymerization, flexibility and uniformity of the internal film.

**Printing:** The first phase of the printing process is the application of the enamel which consists of applying a coating on the external surface of the tube with a roller. The enamel can be transparent, white or colored, glossy or matt. The next step in the drying oven at a temperature between 120 and 140°C allows the partially cured enamel to improve the adhesion of the printing inks.

The printing technology is indirect offset wet on wet. The ink, through a series of rubber and metal rollers, is uniformly distributed and transferred to the photopolymer plate. Then the colour is transferred, one by one, without drying, onto a printing blanket. The complete image is transferred from the blanket onto the tube. The enamel and inks are completely dry after passing in the curing oven at a temperature of 170°C.



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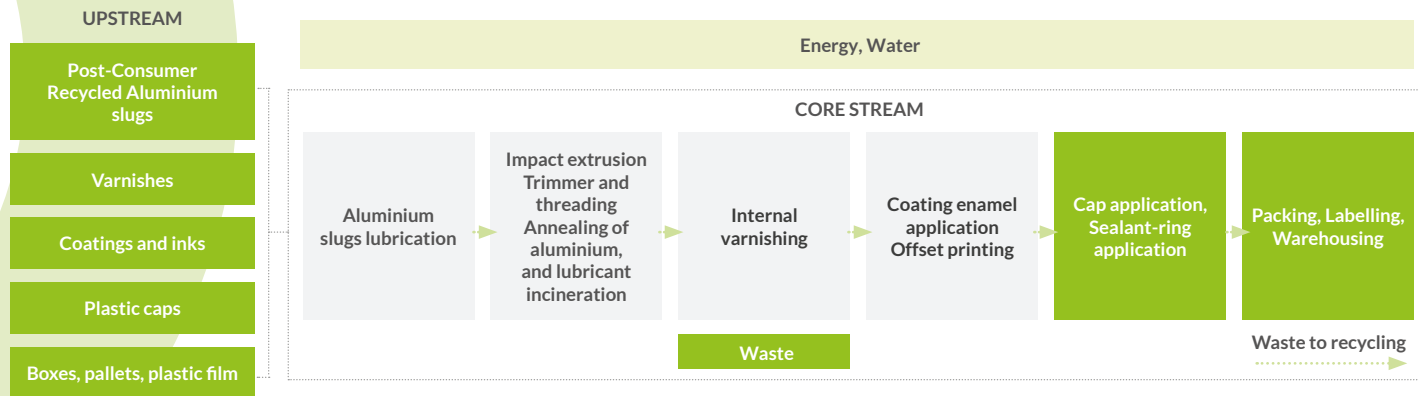


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## System diagram of the processes included in the LCA, divided into the life cycle stages



**Finishing:** This phase consists into three operations:

- Plastic Cap application;
- Sealant-ring application near the open end of the tube;
- Packing and positioning of the tubes into boxes and then onto pallets, wrapped with stretch plastic film, suitable for transport and shipping.



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## Description of the EPD approach

**Geographical scope of the EPD:** Global

**Declared unit:** One aluminium tube with a plastic cap, at gate. The indicated data relate to the product divided into the raw material supply (upstream processes) and the production phase, including cap application (core processes). The cap for the declared tube is intended as standard and used for impact assessment.

**Declaration of the year(s) covered by the data used for the LCA calculation:** year 2022

**Main database for generic data:** Ecoinvent 3.9.1

**LCA Software:** Simapro 9.5

**System boundary:** "cradle to gate"

**Cut-off rules:** Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts are included (not including processes that are explicitly outside the system boundary as described in Section 4.3 of the PCR).

**Excluded processes:** Production and transport of inks, production of rollers' rubber, transport of plastic cap, transport of aluminium ingot to slugs' production facility were excluded because under the cut-off.

**LCA modeling description:** Product environmental performance was assessed using the Life Cycle Assessment (LCA) method, from the extraction of the raw materials to the production of the finished product. The study was conducted in accordance with the ISO 14040 standard and the product category rules set forth in PCR 2019:13 Packaging (1.1), approved by the International EPD® System technical committee.

**Data Quality:** The data quality rules followed for this EPD are those defined in the relevant PCR. In accordance with such rules, both specific data gathered directly from the Aluminium Tubes production site during the year 2022 and generic data extracted from the commercial database (Ecoinvent 3.9.1) were used.



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## ***Sources and version of the characterization model used in the epd***

- **Acidification potential (mol H<sup>+</sup> eq.)** - AP, accumulated exceedance, EN 15804. Version: August 2021
- **Eutrophication potential, aquatic freshwater (kg P eq.)** - EP, aquatic freshwater, EUTREND model, EN 15804. Version: August 2021.
- **Eutrophication potential aquatic marine (kg N eq.)** - EP, aquatic marine, EUTREND model EN 15804. Version: August 2021.
- **Eutrophication potential terrestrial (mol N eq.)** - EP, terrestrial, accumulated exceedance, EN 15804. Version: August 2021.
- **Global warming potential (kg CO<sub>2</sub> eq.)** - GWP100, EN 15804. Version: August 2021.
- **Photochemical oxidant formation potential (kg NMVOC eq.)** - POCP, LOTOS-EUROS as applied in ReCiPe, EN 15804. Version: August 2021.
- **Ozone depletion potential (kg CFC 11 eq.)** - ODP, EN 15804. Version: August 2021.
- **Water deprivation potential (WSF) (m<sup>3</sup> H<sub>2</sub>O eq.)** - AWARE Method: WULCA Characterization model for WSF 2015, 2017.
- **Abiotic depletion potential for minerals and metals (kg Sb eq.)** - ADP minerals & metals, EN 15804. Version: August 2021
- **Abiotic depletion potential for fossil resources (MJ)** - ADP fossil resources, EN 15804. Version: August 2021.





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## Environmental impacts: 28x145mm tube, max fill capacity 60ml, with standard opening\*\*

IMPACT CATEGORY		UNIT	UPSTREAM PROCESSES	CORE PROCESSES	TOTAL*
Global Warming Potential	Fossil	kg CO <sub>2</sub> eq.	2.88E-02	5.44E-02	8.32E-02
	Biogenic	kg CO <sub>2</sub> eq.	-9.70E-04	6.68E-05	-9.03E-04
	Land use and land change	Kg CO <sub>2</sub> eq.	1.01E-03	8.19E-06	1.02E-03
	<b>Total</b>	<b>Kg CO<sub>2</sub> eq.</b>	<b>2.89E-02</b>	<b>5.45E-02</b>	<b>8.33E-02</b>
Eutrophication potential	Aquatic freshwater	Kg P eq.	1.08E-05	1.82E-05	2.90E-05
	Aquatic marine	Kg N eq.	3.97E-05	7.54E-05	1.15E-04
	Terrestrial	mol N eq.	3.27E-04	7.89E-04	1.12E-03
Acidification potential		mol H <sup>+</sup> eq.	1.68E-04	2.49E-04	4.18E-04
Photochemical ozone creation potential		Kg NMVOC eq.	1.13E-04	2.47E-04	3.59E-04
Ozone depletion potential		Kg CFC eq.	8.93E-10	8.11E-10	1.70E-09
Abiotic depletion potential for minerals and metals		Kg Sb eq.	7.77E-07	3.61E-08	8.13E-07
Abiotic depletion potential for fossil resources		MJ	4.63E-01	8.75E-01	1.34E+00
Water deprivation potential		m <sup>3</sup> world eq. deprived	1.40E-02	6.91E-03	2.09E-02

\*0.81g plastic cap intended as standard included

\*\*Product composition: Aluminium 71%, Polymeric Coatings 19%, PP 10%



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## Use of resources: 28x145mm tube, max fill capacity of 60ml, with standard opening\*\*

IMPACT CATEGORY		UNIT	UPSTREAM PROCESSES	CORE PROCESSES	TOTAL*
Primary energy resources - Renewable	Use as energy carrier	MJ, net calorific value	5.34E-02	3.98E-02	9.33E-02
	Use as raw materials	MJ, net calorific value	5.15E-02	0.00E+00	5.15E-02
	Total	MJ, net calorific value	1.05E-01	3.98E-02	1.45E-01
Primary energy resources - Non renewable	Used as energy material	MJ, net calorific value	4.60E-01	9.29E-01	1.39E+00
	Used as raw material	MJ, net calorific value	3.59E-02	0.00E+00	3.59E-02
	Total	MJ, net calorific value	4.96E-01	9.29E-01	1.42E+00
Secondary material		Kg	6.97E-03	0.00E+00	6.97E-03
Non - renewable secondary fuels		MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
Renewable secondary fuels		MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water		m <sup>3</sup>	4.32E-04	5.77E-04	1.01E-03

\*0,81g plastic cap intended as standard included

\*\*Product composition: Aluminium 71%, Polymeric Coatings 19%, PP 10%



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## Waste production and output flows **28x145mm** tube, max fill capacity of 60 ml, with standard opening\*\*

IMPACT CATEGORY	UNIT	UPSTREAM PROCESSES	CORE PROCESSES	TOTAL*
Hazardous waste	kg	0.00	0.00	0.00
Non-hazardous waste	kg	0	2.53E-03	2.53E-03
Radioactive waste	kg	0.00	0.00	0.00

IMPACT CATEGORY	UNIT	UPSTREAM PROCESSES	CORE PROCESSES	TOTAL*
Components for reuse	kg	0.00	0.00	0.00
Material of recycling	kg	0.00	2.53E-03	2.53E-03
Material for energy recovery	kg	0.00	0.00	0.00
Exported energy, electricity	kg	0.00	0.00	0.00
Exported energy, thermal	kg	0.00	2.53E-03	2.53E-03

\*0,81g plastic cap intended as standard included

\*\*Product composition: Aluminium 71%, Polymeric Coatings 19%, PP 10%



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## Additional information



Aluminium is a permanent material and can be recycled infinitely.



Aluminium packaging preserves more resources than it uses itself avoiding spoilage and product losses.



75% of the aluminium ever produced is still in use.



Recycling saves 95% of the energy required to produce primary aluminium.



Aluminium is the third most abundant element present on earth and Bauxite, the raw material for aluminium production, is widely available with known resources for more than 200 years.



Aluminium is multi-functional packaging material for utmost product protection, safety, convenience and resource efficiency.



Aluminium enjoys high recycling rates, for example a rate of 60% for packaging in Europe.



Aluminium is recycled in a closed material loop and is widely used in new applications.



Continuous weight reduction of aluminium packaging has been achieved without compromising functionality and performance.



Aluminium has the highest scrap value of all packaging materials.



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## Additional information: Chain of custody

The development of the green tube was based on the selection and collaboration with suppliers who offered specific guarantees on the origin and quality of their post-consumer recycled aluminium.

The green tube was developed thanks to the contribution of Alltub's global aluminium purchasing department based in Italy, which created a qualified supply chain to support prototyping and subsequent industrialization.

Once the prototyping activity was completed, the supply chain was certified by a third party as it meets the requirements of the chains of custody for recycled materials.

The audit was performed by an accredited body for this specific activity with the following results\*:

“ ... The method used for the implementation of the traceability system for recycled aluminum supplies is documented in the ALLTUB Group procedures. During the verification, the method used was found to comply with the requirements of the chains of custody as provided for in the ISO 22095:2020 standard for the «Identity Preserved Model» ( Chain Custody model without mixing ) and the other specific requirements fixed in the scope of the audit (BRC GS Packaging Materials - ASI Chain of Custody (CoC) Standard ) ... ”

\*The first three pages of the audit's report are available on request.



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IP N° 0237 E

Rapporto di Ispezione n° 1111059-001  
Inspection Report n°

### Dettagli dell'Ispezione

Ente Certificatore: Name of Certification Body: Not Applicable		
Ispettore: Inspector: R. Tosi	Data dell'Ispezione: Inspection Date: 09.11.2021	Data Ispezione precedente: Date of Previous Inspection: Not applicable
Azienda Ispezionata: Company Name: Alltub Italia S.r.l.		
Indirizzo: Viale Rimembranze, 23 Address:		
Cap: Postcode: 24050 Civate/Al Piano BG	Nazione: Country: Italia	
Tel. No. +39 0363 946011	Fax No. -	
Sito Produttivo / Production plant: come sopra / as above		

### Scopo dell'Ispezione

Surveillance on:  
PRODUCT: Aluminium slugs for production of collapsible tubes and aerosol cans.  
PROCESS: Purchase process and use of recycled aluminium in the production of tubes and cans of the ALLTUB Group. Application of the Alltub Group specifications designed to investigate the traceability in the production chain of slugs (raw materials) and the management of chains of custody starting from the management of aluminium waste.  
AUDIT CRITERIA (set of policies, procedures or requirements used as a reference): audit criteria applicable from the waste management phase, refining and / or remelting up to the use in production of the slugs delivered to the Alltub Group by the suppliers. The Alltub Group specifications contain the applicable requirements of the following standards: BRC GS Packaging Materials - ISO 22095 - ASI Chain of Custody (CoC) Standard.

Inspector Ing Tosi

Esclusioni / Note:

Exemptions/Notes:

### Persone di riferimento

Nome Name	Qualifica Job title	Presenza durante l'ispezione Company Reference During Inspection			
Pierangelo Bonati	Assicurazione Qualità	Apertura Opening Meeting	Rev doc Procedure Review	Prelievo campi Sampling	Chiusura Closing Meeting
Lewis Rigamonti	Responsabile Acquisti di Gruppo	x	x	x	x
Inspection Frequency: N.A. Preliminary Evaluation		Next Evaluation Date expected: Not Applicable			

Firma Ispettore: Inspector's Signature: Roberto Tosi		End Date: 09/11/2021
Approvazione Direttore Tecnico Checked an Approved: Alessandro Aspesi		Date: 19/11/2021



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## Additional information

Today, CSR (corporate and social responsibility) is an integral part of corporate operations and ALLTUB provides products to its customers compliant with our CSR approach.

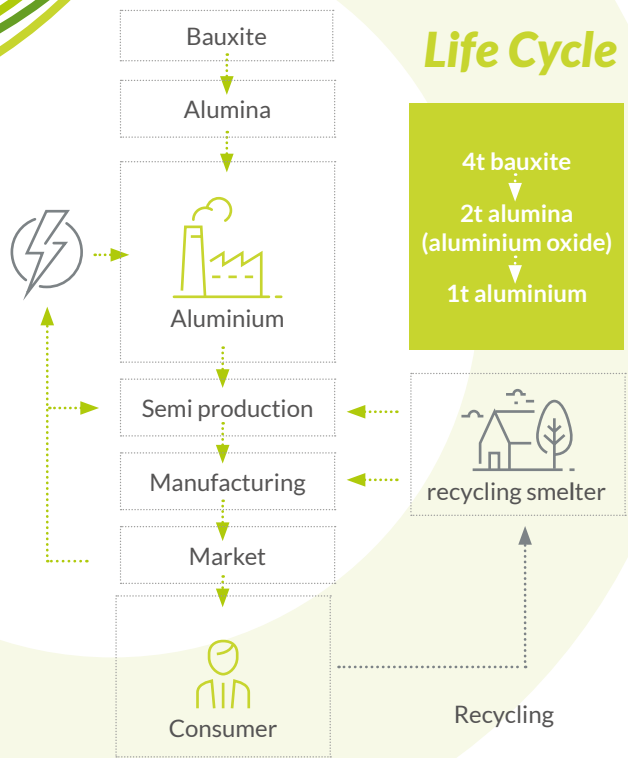
In concrete terms, ALLTUB's commitment reflects the various policies implemented across companies to participate towards environmental protection, greenhouse gas emission reduction but also the improvement of product quality, social inclusion and economic development... If CSR was historically associated with environmental protection, today it also involves other areas whether economic, social, cultural or even educational.

The ALLTUB Group participates in the **Ecovadis CSR programme** (platform to assess social and environmental performance of global supply chains). Twenty-one criteria among 4 topics as follows (social, ethics, supply chain, environment) are assessed.

In parallel of Ecovadis programme, ALLTUB GROUP also participates in the **Carbon Disclosure Project (CDP)** since 2014. The CDP organization encourages investors, businesses and cities to take action to build a truly sustainable economy, measuring and understanding their impact on the environment.

ecovadis





## Life Cycle

4t bauxite  
 ↓  
 2t alumina  
 (aluminium oxide)  
 ↓  
 1t aluminium



Recycling

Source: Aluminium life cycle, Aluminium EveryWhere, GDA, 2017



Company



Product



Content declaration



Environmental performance



Additional information & references

## Additional information

Aluminium faces an important challenge: lots of energy is required to produce it. Aluminium is therefore too valuable to throw it away after it has only been used once. The energy used to produce aluminium is not lost: it remains “stored” in the metal. Aluminium is thus approvingly referred to as an “energy bank”.

In other words, beside saving energy, recycling also conserves raw materials and makes an important contribution to environmental protection.

Today, Alltub is able to produce tubes made from >95% post-consumer recycled aluminium as well as from virgin aluminium.



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## Additional information

### ALLTUB GROUP Associative Environmental Activities

ALLTUB Group contributes actively to the promoting the increase in recycling of lightweight aluminum packaging.

In France, as a **member of the CELAA/Projet Metal Club** (Recycling and Lightweight Packaging Club), founded in 2009 by Nespresso and France Aluminium Recyclage.

In Europe, Alltub Group is an active member of the **ETMA (European Tube Manufacturers Association)** and won the Tube of the Year prize in 2020 for its Green tube innovation, made from >95% Post-Consumer Recycled aluminium.

In North America, as a member of **The Tube Council of North America**.



## Additional information & references



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### PROGRAMME INFORMATION



THE INTERNATIONAL EPD® SYSTEM

## Environmental Product Declaration

In accordance with ISO 14025:2010

Product category rules (PCR): **PCR 2019:13 Packaging (1.1), UN CPC CODE 4293**  
PCR review was conducted by: **The Technical Committee of the International EPD® System.**  
Chair: **Maurizio Fieschi.** Contact via: [info@environdec.com](mailto:info@environdec.com).

Independent third-party verification of the declaration and data, according to ISO 14025:2006:  
**✓ EPD Process Certification** EPD Verification

Third party verifier: **SGS Italia SpA**

In case of accredited certification bodies:  
Accredited by: **ACCREDIA (Certificate nr. 006H)**

Procedure for follow-up of data during EPD validity involves third party verifier:  
Yes **✓ No**

Contact person: Dr. Lewis Rigamonti - Email address: [sustainability@alltub.com](mailto:sustainability@alltub.com)

### The international EPD® System

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(QUOTA SETTE SRL)

### EPD OWNER



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*ALLTUB GROUP SAS has the sole  
ownership, liability and responsibility of  
the EPD*

*The environmental impacts of different  
EPDs can be compared only taking into  
account all the technical information  
supporting the declared/functional unit  
definition as requested by the PCR.*

*EPDs within the same product category  
but from different programmes may not  
be comparable.*