

 **RAFFMETAL**

# SILVAL

**LOW CARBON ALUMINIUM  
PRIMARY ALLOYS**



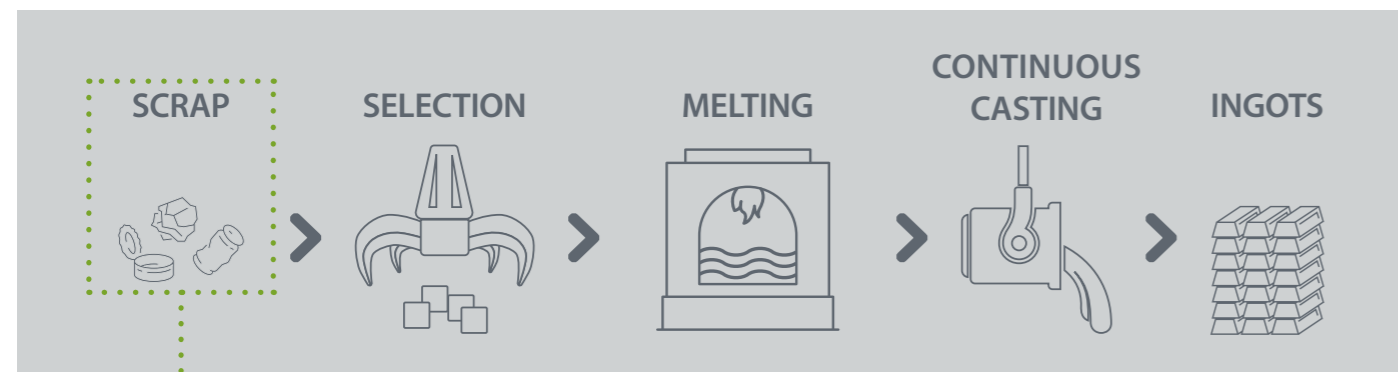
**SILVAL**

LOW CARBON  
ALUMINIUM

## SILVAL PRIMARY ALUMINIUM ALLOYS FROM RECYCLING

Alloy designation		Chemical composition (%)																	% recycling	Carbon footprint - Cradle to Gate - kg CO <sub>2</sub> eq/kg Al
Numerical designation	Chemical symbols	Si		Fe		Cu		Mn		Mg		Cr	Ni	Zn	Pb	Sn	Ti	Other		
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Max	Max	Max	Max	Max	Max	Max		
42100	AlSi7Mg0,3	6,5	7,5	-	0,15	-	0,03	-	0,10	0,30	0,45	0,03	0,03	0,07	0,03	0,03	0,18	0,03	<b>80</b>	<b>1,89</b>
42200	AlSi7Mg0,6	6,5	7,5	-	0,15	-	0,03	-	0,10	0,50	0,70	0,03	0,03	0,07	0,03	0,03	0,18	0,03	<b>80</b>	<b>1,95</b>
42300	AlSi7 (Mg)	6,5	7,5	-	0,15	-	0,03	-	0,10	0,10	0,30	0,03	0,03	0,07	0,03	0,03	0,18	0,03	<b>80</b>	<b>1,86</b>
42400	AlSi7MnMg	6,5	7,5	-	0,20	-	0,03	0,35	0,75	0,15	0,45	0,05	0,05	0,03	0,05	0,05	0,15	0,05	<b>90</b>	<b>1,32</b>
43300	AlSi9Mg	9,0	10,0	-	0,15	-	0,03	-	0,10	0,30	0,45	0,03	0,03	0,07	0,03	0,03	0,15	0,03	<b>80</b>	<b>2,15</b>
43500	AlSi10MnMg	9,0	11,5	-	0,20	-	0,03	0,40	0,80	0,15	0,60	0,05	0,05	0,07	0,05	0,05	0,15	0,05	<b>90</b>	<b>1,58</b>
44000	AlSi11	10,0	11,8	-	0,15	-	0,03	-	0,10	-	0,45	0,03	0,03	0,07	0,03	0,03	0,15	0,03	<b>80</b>	<b>2,20</b>
44600	AlSi10Mn	9,5	11,5	0,10	0,20	-	0,03	-	0,15	-	0,15	0,05	0,05	0,03	0,05	0,05	0,15	0,05	<b>80</b>	<b>2,23</b>
45500	AlSi7Cu0,5Mg	6,5	7,5	-	0,25	0,20	0,70	-	0,15	0,20	0,45	0,03	0,03	0,07	0,03	0,03	0,20	0,03	<b>100</b>	<b>0,48</b>
45600	AlSi7Cu1Mg0,6	6,5	7,5	-	0,15	0,8	1,6	-	0,10	0,50	0,70	0,03	0,03	0,07	0,03	0,03	0,18	0,03	<b>80</b>	<b>1,93</b>

## PRIMARY ALUMINIUM ALLOYS FROM RECYCLING PRODUCTION PROCESS

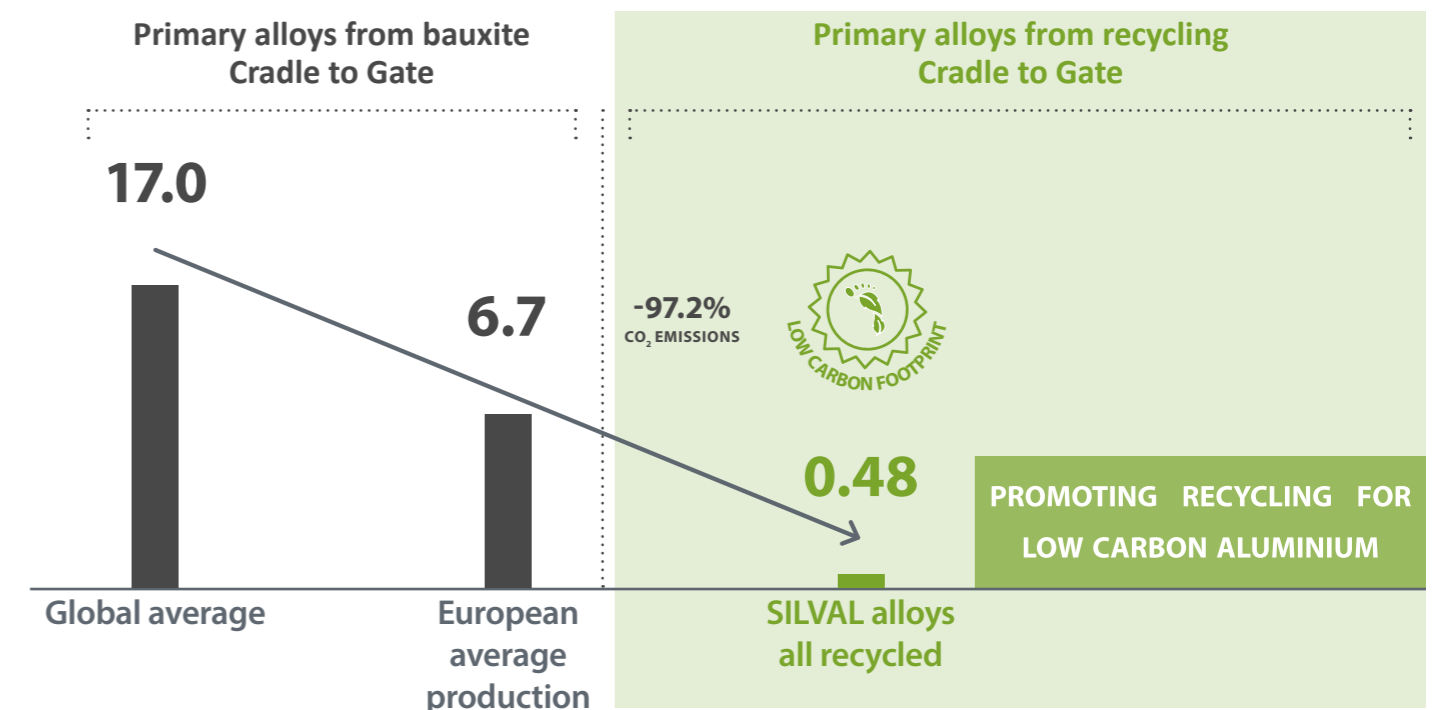


The use of recycled raw material has many advantages:

- **ZERO use of mineral resources;**
- **Use of circular raw material with ZERO impact of CARBON FOOTPRINT;**
- **Total control of the entire SUPPLY CHAIN;**
- **HIGH QUALITY products with LOW CARBON FOOTPRINT.**

## CARBON FOOTPRINT OF DIFFERENT PRIMARY ALUMINIUM ALLOYS PRODUCTIONS\*

(kg CO<sub>2</sub>eq/kg Al)



\*Data source: EA Circular Aluminium Action Plan (2020),

LCA Raffmetal and University of Siena,

Database Ecoinvent 3.6, Software SimaPro 9.1.1, Method CML-IA.

# RAFFMETAL SILVAL PRIMARY ALLOYS






## PRIMARY ALUMINIUM ALLOYS WITH HIGH RECYCLING RATE AND LOW CARBON FOOTPRINT



Raffmetal, European leader in the recycled aluminium sector for over 40 years, offers the innovative SILVAL range of primary aluminium alloys from recycling with performance **equal to primary aluminium alloys produced from bauxite**. The use of recycled aluminium, compared to production from bauxite, enables a reduction in the energy consumption and carbon footprint of our customers' castings.

Raffmetal's know-how allows the application of the most advanced technological solutions in **the treatment and selection of scrap**, in addition to the **strict control of the production process that guarantees a constant high quality**.

## SPECIAL ALLOYS PLANT FOR SILVAL ALLOYS PRODUCTION

ACTIVITIES	WHERE	WHY
 SORTING AND PROCESSING OF RECYCLED RAW MATERIALS	 RAFFMETAL - ODOLO	<ul style="list-style-type: none"> <li>• KNOW-HOW</li> <li>• SYSTEMS</li> <li>• SALES NETWORK</li> </ul>
 PRODUCTION OF ALLOYS WITH LOW CARBON FOOTPRINT	 SPECIAL ALLOYS PLANT	INNOVATION PLANT ENGINEERING
 SALE	 SALES NETWORK RAFFMETAL	CONSTANT CONTROL OF THE MARKET

## CUSTOMERS' BENEFITS

The use of SILVAL primary recycled alloys provides important advantages in terms of quality and sustainability.



**80% RECYCLING RATE AND MORE IN EACH ALLOY**



**CONTINUOUS CASTING PRODUCTION AND TRACEABILITY OF EACH INDIVIDUAL INGOT**



DECADES OF SYSTEM AND **TECHNOLOGICAL KNOW HOW** FOR THE SELECTION AND VALORISATION OF RAW MATERIALS



**HIGH-QUALITY ALLOYS CUSTOMISED** ACCORDING TO OUR PARTNERS' PRODUCTION REQUIREMENTS



**ZERO WASTE MELTING PROCESS**













**LOW CARBON EMISSION PRODUCTION**



## ESG SUSTAINABILITY CERTIFICATES

Raffmetal is the leading producer of recycled aluminium alloys in Europe. The company adopts management systems, organisational procedures and certificates of ethical responsibility and transparency in accordance with the world's leading certifications as an ESG conscious quality supplier.

AREA	AREA MANAGEMENT SYSTEM
QUALITY	  ISO 9001      IATF 16949
ENVIRONMENT AND SAFETY	   ISO 14001      ISO 45001      LCA
ENERGY	 ISO 50001
ETHICS AND RESPONSIBILITY	   231 MODEL      CODE OF ETHICS      GRI
RESPONSIBLE ALUMINIUM MANAGEMENT	 ASI

## SPECIAL ALLOYS FOR OUR CUSTOMERS

Raffmetal SILVAL high recycling and low carbon alloys are designed to help our customers to achieve sustainability goals and to meet the demands of increasingly environmentally conscious consumers.

**For more information and customised alloys please contact:** [special.alloys@raffmetal.it](mailto:special.alloys@raffmetal.it)