



SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

SYNGAS

SOLUTIONS FOR GASIFIERS & REFORMERS



SCAN ME

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SAINT-GOBAIN 2022



1 in 4 products
did not exist 5 years ago



170.000+
employees



sales of
51.2 billion



represented in
76
countries



-27%
carbon emissions
reduction (vs. 2017 on scope 1+2)



8
main R&D centres

OUR MISSION

Saint-Gobain designs, manufactures and distributes materials and solutions which are key ingredients in the well-being of each of us and the future of all.

OUR PURPOSE

MAKING THE WORLD A BETTER HOME.



WE ARE COMMITTED TO BEING CARBON FREE BY 2050.

PERFORMANCE CERAMICS & REFRACTORIES

PIONEERING CERAMIC SOLUTIONS FOR EXTREME INDUSTRIAL APPLICATIONS AND A GREENER WORLD.

Saint-Gobain Performance Ceramics & Refractories leads the industry in design, development and production of engineered ceramics and refractory products for extreme operating conditions and high temperature applications. Every product and material is designed to maximize performance and durability while minimizing environmental impact.

We strive to deliver value through our global technical expertise in material science, manufacturing technology, design engineering and the long-term partnerships we form with our customers. Our employees are committed to delivering the best solutions and services to meet the unique material and engineering needs of our customers.

Our ability to deliver custom-made solutions for every application is further enhanced by our R&D centers, manufacturing plants, sales and application engineering specialists who are positioned strategically across the globe.

TOGETHER, WE MAKE A MATERIAL DIFFERENCE.



GASIFIERS AND REFORMERS

“ Partnering with you to advance Syngas Technology”

OUR VALUE ADDED APPROACH

Saint-Gobain’s Performance Ceramics & Refractories’ team provides solutions to demanding thermochemical and thermomechanical process requirements found in syngas applications.

Saint-Gobain utilizes high purity raw materials along with specialized manufacturing processes to produce our shapes.

Materials resulting from our process are of the highest consistency and quality - they have excellent erosion and corrosion resistance along with the necessary mechanical strengths and duty level to achieve the longest service life in your application.

Saint-Gobain has been a leader in material solutions for the syngas industry since the 1950s. We supply aluminas for reformer vessels and both alumina and chromia alumina products for non-slugging and slugging reactors. We employ a team of engineers to assist with the design and material solutions for your process.

KEY BENEFITS



INCREASED YIELD



REDUCED SHUTDOWN



INCREASED RELIABILITY

SAINT-GOBAIN GASIFICATION REFRACTORIES

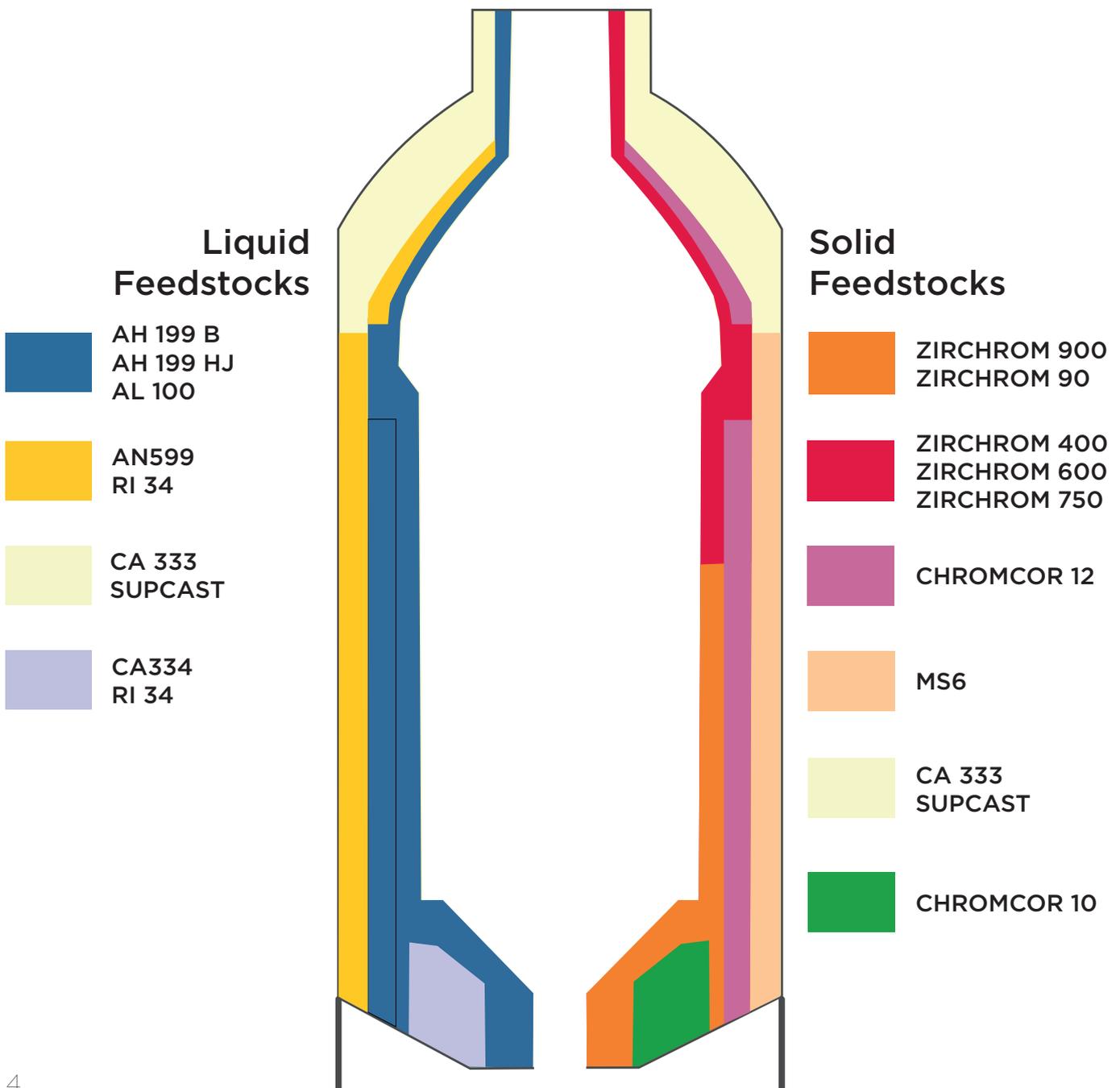
Saint-Gobain has been supplying alumina gasification refractories to liquid fed units since the 1950s and chrome alumina materials to solid fed units since the late 1970s.

Our refractory materials are proven to perform in the high temperature, reducing environment of the process. We are most capable of designing and manufacturing a wide variety of shape geometries required to construct the critical hot face lining.

Our shapes are made to high dimensional tolerances and exhibit consistent material properties.

Saint-Gobain also provides the back up safety and insulation layers needed to complete the overall lining.

The combination of these factors have led to reliable refractory linings with long lifespans for customers worldwide.



SAINT-GOBAIN REFORMER REFRACTORIES

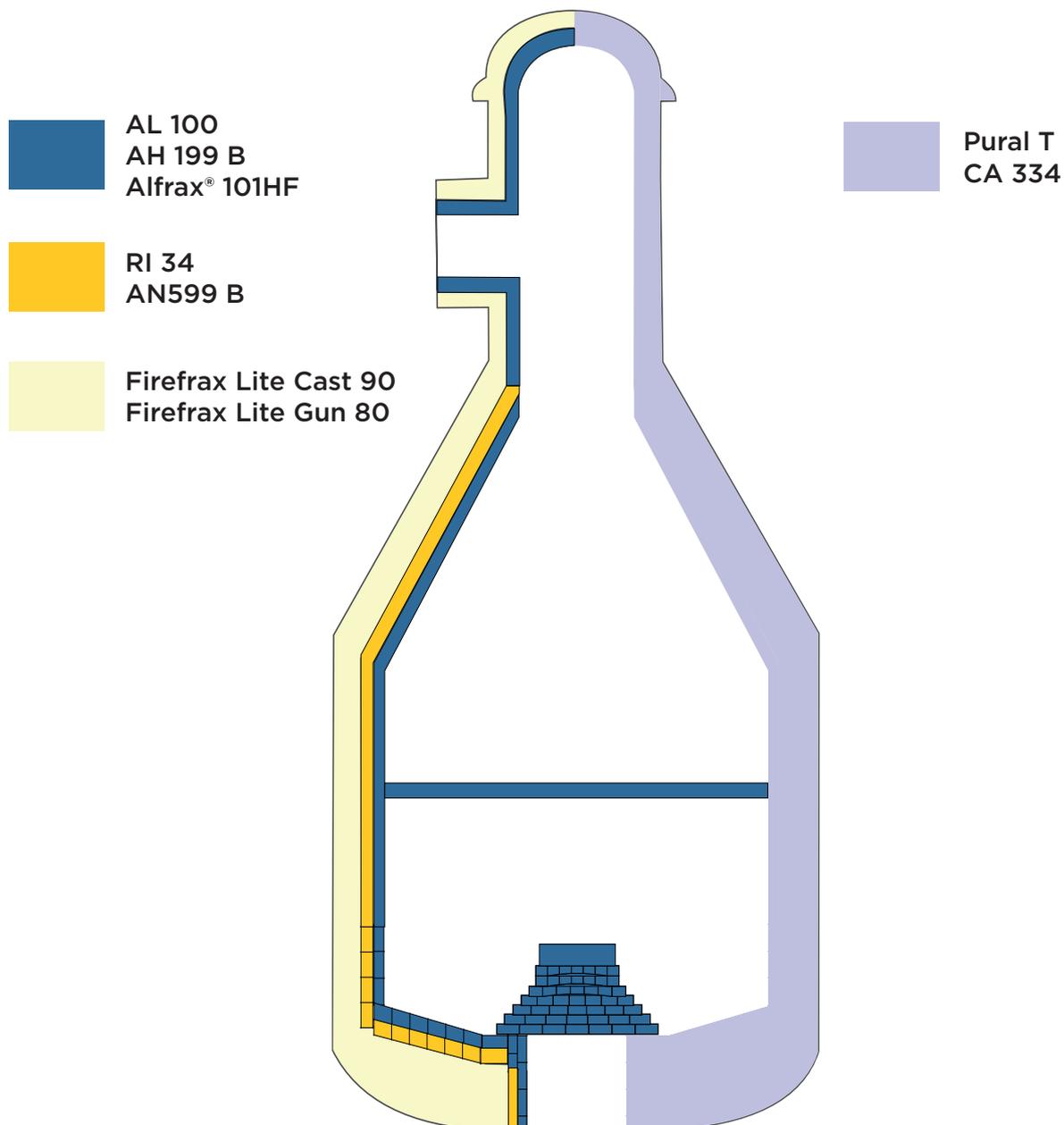
Saint-Gobain has decades of experience supplying alumina refractory products into several reforming technologies.

Our high alumina refractory materials are proven to perform in the high temperature, high hydrogen environment of the process.

We are most capable of supplying complex dome shapes, target tiles, and hot face linings shapes required in the vessel.

Our shapes are made to the highest dimensional tolerances with consistent material properties.

Saint-Gobain also provides the back up insulating layers, required behind the shapes, or alternatively can provide high purity monolithic linings for the sidewall.



BONDED SHAPES

Grade	Type	Al ₂ O ₃ (%)	Cr ₂ O ₃ (%)	ZrO ₂ (%)
AL100	Fused Corundum	99.5	-	-
ALFRAX 101 HF	Fused Corundum	98.7	-	-
AH 199 H	Fused Corundum	99.6	-	-
AH 199 B	Fused Corundum	99.6	-	-
AN599	Bubble alumina	99.8	-	-
AL 102	Fused Corundum	96.0	-	2.5
RI 34 (brick)	Bubble Alumina	98.5	-	-
Zirchrom 900	Chromium Oxide	-	87.0	6.2
Zirchrom 90	Chromium Oxide	-	86.0	7.0
Zirchrom 750	Chromium Oxide	8.0	76.0	8.0
Zirchrom 600	Chromium Oxide	25.0	63.0	6.0
Zirchrom 400	Chromium Oxide	40.0	40.5	11.5
Chromcor 12	Chrome Alumina	87.0	12.5	-
MS6	Andalusite	62.0	-	-

MONOLITHICS

Grade	Type	Al ₂ O ₃ (%)	Cr ₂ O ₃ (%)	ZrO ₂ (%)	CaO (%)	P ₂ O ₅ (%)
CA333	Bubble Alumina	95.7	-	-	3.9	-
CA334	Dense Alumina	94.7	-	-	4.5	-
Pural T	Tabular Alumina	95.0	-	-	5.0	-
Chromcor 10	Chrome Alumina	85.0	10.0	-	1.2	-
RI 34	Bubble Alumina	88.0	-	-	9.5	-
RI 34 HR	Bubble Alumina	88.0	-	-	9.5	-
Supcast	Corundum	95.0	-	-	4.0	-
Firefrax Lite Cast 90	Insulating Cast	54.0	-	-	5.1	-
Firefrax Lite Gun 80	Insulating Cast	50.0	-	-	8.1	-

MORTARS & CEMENTS

Grade	Type	Al ₂ O ₃ (%)	Cr ₂ O ₃ (%)	ZrO ₂ (%)	CaO (%)	P ₂ O ₅ (%)
AL100S	Fused Corundum	98.0	-	-	-	-
AL100 FP	Fused Corundum	94.5	-	-	-	4.5
CR 100	Chromium Oxide	1.0	93.0	-	-	-
MA 176	Fused Corundum	95.5	-	-	0.2	-

SAINT-GOBAIN'S OUTSTANDING PRODUCT QUALITY WILL HELP MEET THE DEMANDING NEEDS OF YOUR APPLICATION.



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