

SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

SYNGAS

SOLUTIONS FOR
GASIFIERS & REFORMERS



SAINT-GOBAIN 2023

Derwent
Top 100
Global Innovator
2023

Clarivate
Analytics

top
EMPLOYER GLOBAL
2024



1 IN 4

PRODUCTS
did not exist 5 years ago



160,000

EMPLOYEES



47.9 BILLION

SALES IN 2023



REPRESENTED IN 76

COUNTRIES



-34%

CARBON EMISSIONS
REDUCTION
(vs. 2017 on scope 1+2)



MAIN R&D CENTRES

OUR PURPOSE

MAKING THE WORLD A BETTER HOME.

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.

WE ARE COMMITTED TO
ACHIEVING NET ZERO
CARBON EMISSIONS BY 2050

SAINT-GOBAIN

PERFORMANCE CERAMICS & REFRACTORIES

OUR MISSION

To design, develop and supply solutions and services for extreme operating industrial conditions. Our engineered ceramics and refractory products are manufactured to the highest industrial standards and deliver enhanced performance while minimizing environmental impact.

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

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.

YOUR BENEFITS



**INCREASED
YIELD**



**REDUCED
SHUTDOWN**



**INCREASED
RELIABILITY**

SAINT-GOBAIN GASIFICATION REFRACTORIES

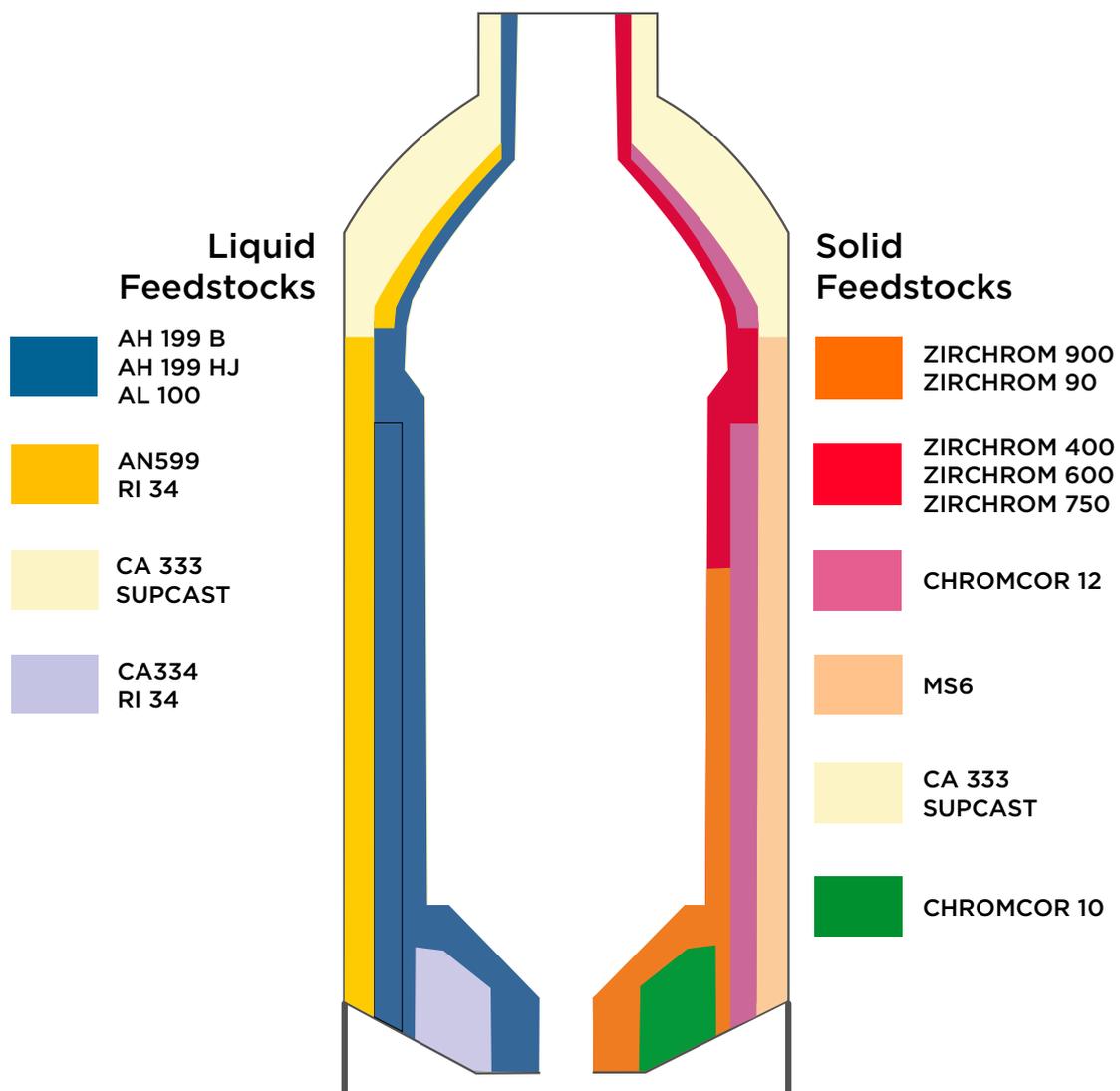
Saint-Gobain has been supplying alumina gasification refractories to liquid fed units since the 1950s and chrome alumina materials to solid fed units since the late 1970s.

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.



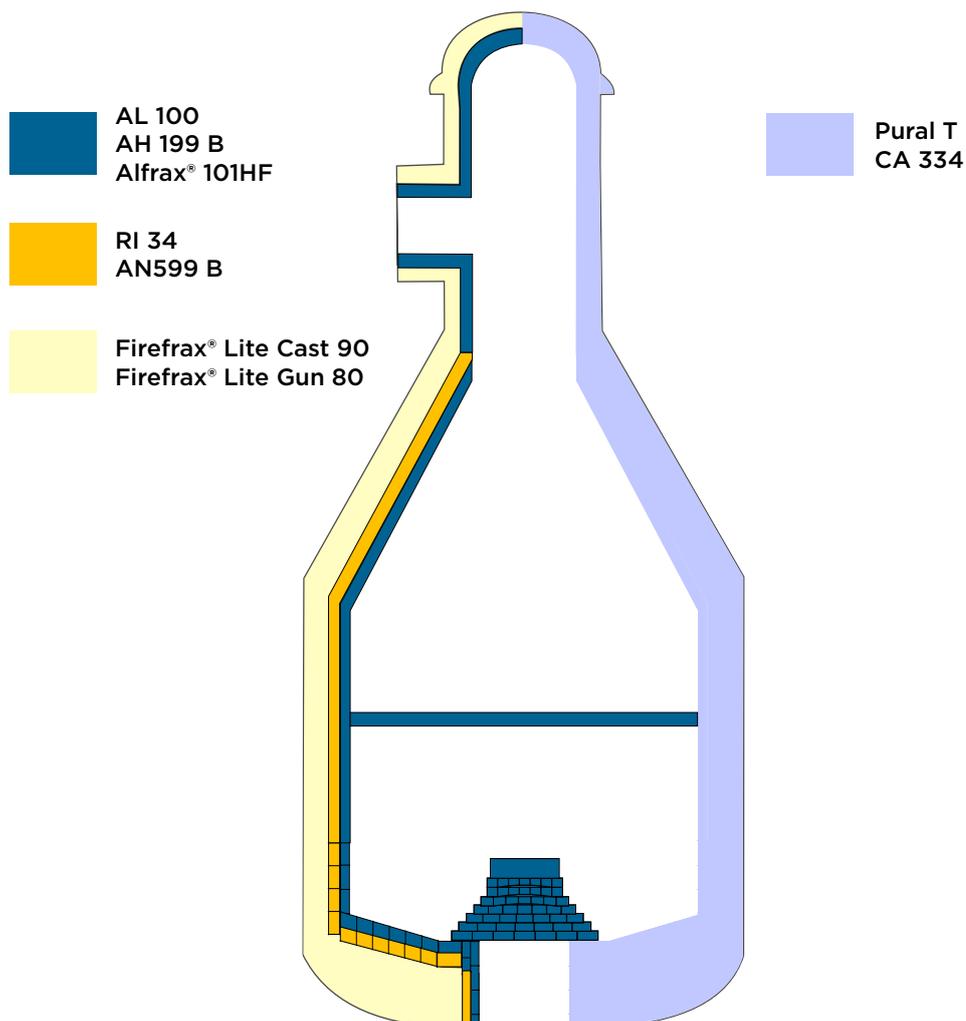
SAINT-GOBAIN REFORMER REFRACTORIES

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

		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

		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

		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 PERFORMANCE CERAMICS & REFRACTORIES

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



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