



2022 ESG Performance Summary

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# Building a Healthy Tomorrow



**Armstrong**<sup>®</sup>  
World Industries

# A Message From Our President and CEO



At Armstrong World Industries (AWI), we are committed to driving positive change for a healthy world, starting with the built environment. To meet this commitment, we have developed a robust sustainability program that addresses our operations, while also seeking to help building owners and occupants achieve their own sustainability goals. Our commitment and the work we do in these areas align with our history of innovation and customer focus, as well as with our company purpose to make a positive difference in the spaces where we live, work, learn, heal and play.

The last several years have demonstrated that the need for healthy indoor environments has never been greater. At Armstrong, we understand that the ceilings and walls that surround us are essential links to our health and well-being. With people spending nearly 90% of their time indoors, we believe it is more important than ever to shape this experience positively.

Together, the three pillars of our sustainability program—Product, Planet and People—help us identify and address the challenges and opportunities ahead. In this 2023 report, we update our progress within the pillars toward our 2030 targets and highlight key initiatives and achievements.

Our commitment to sustainability means working to minimize the impacts of the built environment to our existing natural world. Given that nearly 40% of global emissions come from buildings, our goals prioritize the protection of the environment for future generations. This includes our 2030 greenhouse gas (GHG) reduction targets that the Science Based Target Initiative (SBTi) approved in 2022. We are also making investments throughout our operations to increase efficiency and reduce reliance on nonrenewable resources. As of the end of 2022, we had reduced our carbon footprint by 13% from 2019 levels and increased our use of renewable electricity to 13% of total usage.

We are also investing in sustainable and circular design practices to reduce the environmental impact of the products and solutions we provide. By reducing our reliance on finite resources, minimizing waste and pollution, and designing resilient infrastructure that can adapt to our planet's changing needs, we have the potential to meaningfully contribute

to the shift from a linear economy to a circular economy. We continue to pursue increased product transparency and to expand our SUSTAIN® portfolio of products that meet the industry's most stringent sustainability criteria. We are also proud of our long-standing Ceilings Recycling Program. Since 1999, we have diverted over 1.2 million tons of virgin raw material from landfills. We continue to drive circularity in our operations, with customers and throughout our value chain.

We are also innovating to support greater building efficiency. A key highlight is the development of an energy-saving system that combines the DynaMax® grid systems for data centers with our ULTIMA® AIRASSURE® gasketed ceiling. In 2022, we validated that these systems installed in data center environments can deliver energy savings of up to 40 cents per square foot each year. With the average data center being 100,000 square feet and reaching 1 million square feet for mega centers, the magnitude of savings is significant.

We also know that healthy spaces and healthy communities go hand in hand. Our commitment to health and safety begins within our own walls and extends to the communities we serve. By investing in local organizations and community service projects, we can give back to the communities that have helped us grow and cultivate lasting partnerships that seed a sustainable future. In 2022, we further empowered our people to give back through an expanded employee match program for both charitable giving and volunteer hours.

At Armstrong, we remain committed to driving positive change. Our sustainability efforts are a testament to our company's values, and we are proud of what we have accomplished over the last year.

I invite you to explore our Sustainability Report to learn more about our progress and plans for the future. Together with our stakeholders, we can take bold steps toward a healthier, more sustainable world for generations to come.

Sincerely,  
**Vic Grizzle**  
President and CEO

A handwritten signature in black ink, appearing to read 'Vic Grizzle'. The signature is fluid and cursive, written over a white background.

# 2022 ESG Performance Summary

## Our Sustainability Goals and Targets

We have established nine goals under our three sustainability pillars. They reflect our evolving materiality analysis and align with the UN SDGs and other reporting frameworks. Armstrong continues to work towards our 2030 targets.

GOALS			TARGETS	TARGET DATE
Healthy and Circular Products	Sustainably sourced products	We aim to create products and solutions from healthy, sustainably sourced materials, by eliminating chemicals of concern through sustainable supply chains.	100% of our products are free of chemicals of concern.	2030
			100% of our products have verified transparency.	2030
			100% of our material sourcing activities are evaluated for social, ethical and environmental performance.	2030
	Circular products	We aim to design our products to be recycled, reused or repurposed and drive circularity in our operations, with customers and throughout our value chain. We aim to make a positive contribution to spaces and the environment by decreasing our products' carbon and water footprint, and by creating solutions that actively contribute to health and wellness.	50% of our products have a viable path to be recycled, reused or repurposed at end of use.	2030
			20% reduction in the water intensity of our products, compared with a 2019 baseline.	2030
Healthy Planet	Reduced carbon footprint	We aim to reduce our greenhouse gas emissions and increase our reliance on renewable electricity using climate-science based targets.	30% reduction in absolute Scope 1 and 2 GHG emissions compared with a 2019 baseline, in accordance with the SBTi, allowing us to meet a well below 2oC scenario.	2030
			100% of our electricity needs are sourced directly or indirectly from renewable electricity.	2030
	Circular systems	We aim to eliminate waste through innovative manufacturing processes and by creating circular systems from order to delivery.	50% reduction in absolute waste from our operations, compared with a 2019 baseline.	2030
	Optimized water	We aim to optimize our use of water and contribute to water management and restoration efforts by reducing our reliance and impact on local water systems.	100% of our water management practices include measures designed to minimize usage and environmental discharge.	2030
Thriving People and Communities	Community engagement	We aim to engage in communities where we operate to make them vibrant places to live and work by strengthening and supporting local programs and fostering impactful relationships.	Locations formally engaged in local community outreach.	ongoing
			Employees offered opportunities to actively engage in their communities on an ongoing basis.	ongoing
			Increased community engagement scores year over year.	ongoing
	Diverse & inclusive workforce	We aim to develop an inclusive culture and a diverse workforce at all locations.	Employees receive training or engagement on diversity and inclusion topics on a regular basis.	ongoing
			Locations have a representative diverse workforce.	ongoing
			Employees have a meaningful and safe opportunity to share their views on topics that matter to them.	ongoing
	Safe & healthy employees	We aim to cultivate a culture that leads to safe, healthy, fulfilled employees.	Employees offered tools and resources to improve their financial, physical and mental health and well-being.	ongoing
			Employees offered learning and development opportunities annually.	ongoing
Improved workplace safety scores year over year, while we strive to have zero workplace injuries.			ongoing	
Employees offered at least a fair wage, to be defined as competitive total rewards based on position and location.			ongoing	

## 2022 ESG Performance Summary (Continued)

### Key Sustainability Data

HEALTHY AND CIRCULAR PRODUCTS		2019	2020	2021	2022
Percentage of product sales free of chemicals of concern		57%	62%	60%	59%
Percentage of product sales with verified transparency		57%	62%	60%	59%
Product carbon footprint (Mt CO <sub>2</sub> e)		1,291,000	1,116,000	1,146,000	1,129,000
HEALTHY PLANET		2019	2020	2021	2022
<b>Carbon<sup>1</sup></b> in Metric tons CO <sub>2</sub> e: market-based emissions	Scope 1 emissions	214,000	199,000	206,000	196,000
	Scope 2 emissions	108,000	93,000	91,000	88,000
	Total Scope 1 & 2 emissions	322,000	292,000	297,000	284,000
	GHG intensity for Scope 1, 2 & 3: Mineral Fiber only (Mt/Mft <sup>2</sup> )	1,190	1,180	1,130	1,100
<b>Energy<sup>1</sup></b> in MWh	Percentage of renewable electricity	0%	0%	10%	13%
	Direct energy consumption	1,179,000	1,096,000	1,137,000	1,085,000
	Indirect energy consumption	260,000	246,000	258,000	257,000
	Energy intensity for Scope 1 & 2: Mineral Fiber only (MWh/ft <sup>2</sup> )	1,530	1,590	1,600	1,570
<b>Waste<sup>2</sup></b> Metric tons	Total waste	21,180	20,960	23,110	20,970
	Nonhazardous waste landfill	20,860	20,550	22,820	20,770
	Nonhazardous waste incinerated	270	320	190	120
	Hazardous waste	50	90	100	90
<b>Water<sup>3</sup></b> Mgal	Water used	733	687	713	733
<b>Air Quality<sup>4</sup></b> Metric tons	Nitrous Oxides (NOx)		150	130	129
	Volatile Organic Compounds (VOCs)		550	530	503
	Particulate Matter (PM)		240	240	230
	Hazardous Air Pollutants (HAPs)		90	80	79
	Carbon Monoxide (CO)		2,410	2,170	2,026
	Sulfur Oxides (SOx)		40	60	62
	Ammonia (NH <sup>3</sup> )		70	60	57

2022 ESG Performance Summary (Continued)

THRIVING PEOPLE AND COMMUNITIES			2019	2020	2021	2022
<b>Health and safety<sup>5</sup></b>	OSHA recordable injuries		37	38	51	34
	OSHA total recordable incident rate		1.62	1.55	1.76	1.16
	Fatalities		0	0	0	0
<b>Charitable giving</b> U.S. dollars in thousands				\$544	\$834	\$623
<b>Employee data by gender (global)</b> Percent (%)	Total employees	Male		75%	73%	73%
		Female		25%	27%	27%
	New hires	Male		71%	69%	72%
		Female		29%	31%	28%
	Employee turnover	Male		9%	12%	16%
		Female		7%	12%	16%
	Leadership (director and above)	Female			23%	24%
Mid-level managers and staff	Female			38%	38%	
Production	Female			15%	16%	
<b>Employee data by age (global)</b> Percent (%)	Total employees	<30		15%	15%	15%
		30-50		43%	43%	43%
		50+		41%	41%	42%
	New hires	<30		33%	37%	35%
		30-50		45%	44%	45%
		50+		22%	19%	20%
	Employee turnover	<30		13%	22%	29%
		30-50		5%	10%	15%
		50+		10%	10%	11%
<b>Employee data by minority status (U.S. only)</b> Percent (%)	Total U.S. employees			23%	25%	28%
	New employee hires			20%	34%	37%
	Employee turnover			7%	13%	15%
	Leadership				12%	12%
	Mid-level managers and staff				15%	18%
	Production				15%	16%
<b>Board of Directors</b> Percent (%)	Gender	Male		78%	78%	78%
		Female		22%	22%	22%
	Minority status			22%	22%	33%
Independent status			88%	88%	88%	
<b>Senior Leadership</b> Percent (%)	Gender	Male			57%	57%
		Female			43%	43%
	Minority status				14%	29%

## 2022 ESG Performance Summary (Continued)

### Notes about data

- Certain 2019, 2020 and 2021 figures have been updated from previously reported data.
- Our operating segments are as follows: Mineral Fiber, Architectural Specialties and Unallocated Corporate. Our Mineral Fiber segment produces suspended Mineral Fiber and soft fiber ceiling systems. Our Mineral Fiber products offer various performance attributes such as acoustical control, rated fire protection, aesthetic appeal and health and sustainability features. Our Architectural Specialties segment produces, designs and sources ceilings and walls for use in commercial settings. Products are available in numerous materials, such as metal, felt and wood, in addition to various colors, shapes and designs. Products offer various performance attributes such as acoustical control, rated fire protection and aesthetic appeal. We sell standard, premium and customized products, a portion of which are derived from sourced products. Our Unallocated Corporate segment includes certain assets, liabilities, income and expenses that have not been allocated to our other business segments.
- Data covers all the entities under Armstrong World Industries, including acquisitions of Tectum, Inc. (Jan. 2017), Plasterform, Inc. (May 2018), Steel Ceilings, Inc. (Aug. 2018), Architectural Components Group, Inc. (ACGI) (Mar. 2019), MRK Industries, Inc. (Nov. 2019), TURF Design, Inc. (Jul. 2020), MOZ Designs, Inc. (Aug. 2020), and Arktura LLC (Dec. 2020).
- Data does not include discontinued operations (our international businesses in Europe, the Middle East and Africa, including Russia, and Asia-Pacific, which we sold to Knauf International GmbH in Sept. 2019) or the WAVE joint venture.
- Unless otherwise noted, data related to acquired entities is included in the figures disclosed only for the time periods after acquisition.
- We have limited external assurance of 2019 and 2022 Scope 1 and 2 GHG emissions. We have not obtained any third-party assurance for the other data presented in this document.
- Data within this report represents our best attempt at collecting accurate information about our performance on key issues. As we improve and formalize our data tracking systems, we may retroactively adjust figures in future reports.

Note: All data reflects U.S. employees only. Leadership refers to Director level and above. Mid-level managers and staff represent senior managers, early career and remaining salaried and hourly non-production staff. Production workers represent hourly production plant employees.



[See our full SCS Global Services Footprint Verification Report online.](#)

### 1

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- 2020 carbon and energy figures exclude data from TURF, MOZ and Arktura. 2021 figures exclude data from TURF for the first six months of 2021.
- CO2e refers to carbon dioxide equivalents.
- Scope 1 emissions include on-site fossil fuel consumption, primarily natural gas consumption with a small proportion from other on-site fuel usage.
- Scope 2 emissions include purchased electricity.
- Direct energy consumption refers primarily to natural gas consumed in our facilities with a small proportion from other on-site fuel usage.
- Indirect energy consumption refers to electricity used at our facilities.

### 2

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- 2019 and 2020 waste figures exclude data from our Montreal facility and our campus headquarters. 2020 figures exclude data from TURF, MOZ and Arktura.
- The increase from 2020 to 2021 in hazardous waste was due to disposal of a large amount of chemicals that became unusable due to acquisitions and consolidation of operations.

### 3

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- 2019, 2020, 2021 and 2022 water figures exclude data from our Montreal facility and our campus headquarters. 2022 figures also exclude Steel Ceilings, Inc. and TURF Design, Inc. data.

### 4

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- Air quality data for 2020 and 2021 includes all facilities except Arktura.

### 5

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- 2021 injury increase is attributed to missing the OSHA allowable re-test window of employee hearing tests (Standard Threshold Shift (STS) testing) due to staffing changes. Typically, this re-test would rectify the majority of these recordables.
- All injuries and recordable injury rates for U.S. and Canada use OSHA definitions.



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