



Talent | Technology | Trust™

2023 W. R. Grace & Co. GRI Report



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About This Report

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This report describes the W. R. Grace and Co. -Conn. (Grace) sustainability strategy and initiatives for the calendar year 2022, covering all manufacturing and administrative facilities under Grace's operational control. This report has been prepared in alignment with the GRI Core Option requirements.

In 2020, we conducted a materiality assessment based on SASB's materiality matrix for the chemical industry relevant to Grace and have used that as the basis for our report. In 2023, Grace has begun a process to revise its materiality assessment for current and future business needs, however, this has not yet been completed as of writing of this report.

Grace currently collects enterprise sustainability information on an annual basis. This data is aggregated, analyzed, and reviewed by Grace's Sustainability function and other key internal stakeholders. Our data undergoes an internal quality control process and, beginning in 2021, external limited assurance on our Scope 1 & 2 GHG emissions from a licensed assurance provider following the GHG Protocol (ISO 14064).

The topics that will be discussed in this report are listed below. The GRI standards addressed by each topic will be indicated as a marker below the topic heading.

- About Grace
- Economic Value Generated and Markets Served
- Governance
- Ethics
- Stakeholder Engagement (Community, Customers, Raters, Employees, etc.)
- Employee Retention, Diversity, and Inclusion
- Health, Safety, and Process Safety
- Mitigation and Adaptation (Risk Management, Climate, Water, Physical and Transition)
- Natural Resource Management (GHG, Energy, Water, Waste)
- Product Safety and Sustainability
- Sustainable Sourcing

Please use the [Contact Us](#) link on our website to address any questions or to request additional information.

About Grace

2-1, 2-2, 2-3, 2-4, 2-5, 2-6

W. R. Grace & Co.-Conn. is engaged in the production and sale of specialty chemicals and specialty materials on a global basis through two business segments: Grace Catalysts Technologies, which includes catalysts and related products and technologies used in refining, petrochemical and other chemical manufacturing applications; and Grace Materials Technologies, which includes specialty materials, including silica-based and silica-alumina-based materials, used in consumer/pharma, chemical process, and coatings applications.

Grace manufactures hydroprocessing catalysts in conjunction with our Advanced Refining Technologies LLC (“ART”) joint venture with Chevron Products Company (“Chevron”). We hold a 50% economic interest in ART. A portion of ART revenue is included in Grace’s total revenues to calculate intensity metrics to align with Grace’s operational control over all production.

Grace delivers value through performance. Our catalysts and specialized silicas improve the products and processes of many of the world’s best companies. Through world-class know-how, collaboration, and experience, we help customers in 70 countries achieve some of their most important goals, from high-performing products and high-productivity manufacturing to improved efficiency, sustainability, and profitability.

On September 22, 2021, Grace was acquired by Standard Industries, a privately held global industrial company.

Grace currently operates manufacturing facilities in eight countries globally: Brazil, Canada, Germany, Malaysia, the Republic of Korea, Spain, Sweden, and the United States of America. Grace also owns its Corporate Headquarters located at 7500 Grace Drive, Columbia, Maryland 21044, USA.

Economic Value Generated and Markets Served

2-6

Our Business Segments

Catalysts Technologies

Catalysts Technologies uses our significant catalyst knowledge and applications expertise to design and manufacture products to create significant value for our customers. Our customers include crude oil refiners as well as plastics and chemicals manufacturers. We believe that our technological expertise and broad technology platform provide a competitive advantage, allowing us to quickly design products that help our customers create sustainable value in their operations and end markets. A network of globally coordinated plants manufactures our Catalysts Technologies products. Our Global Operations team, in partnership with our Integrated Business Management teams, is responsible for effectively utilizing our manufacturing capabilities and minimizing their environmental footprint.

Specialty Catalysts

Grace Specialty Catalysts provides process technologies for polypropylene and provides a broad range of high-performance catalysts and supports for specialized processes in the polyolefins and chemical value chain, from basic chemicals to plastics to petrochemicals.

We have a full offering of polyolefin catalyst solutions to serve all process technologies. Our strong strategic and backend integration position is evident in our worldwide polyolefin catalysts offering as well as our polypropylene process technology licensing business. We offer customers a broad and technically advanced portfolio of polyolefin catalyst technologies that enable the production of high-performance and differentiated resins. Our catalysts are used to produce plastics, including HDPE (high-density polyethylene), LLDPE (linear low-density polyethylene), and PP (polypropylene), to the packaging, consumer products, automotive, and building and construction end markets providing the market's need for lightweighting, durability, and versatility properties.

Grace's CONSISTA® catalyst enables manufacturers to produce key polypropylene grades for automotive applications, including the exterior, interior, and under-the-hood components. The growth in these applications comes from the replacement of more costly polymers and metal. The improved strength-to-weight ratio of reinforced polypropylene grades means that weight can be reduced by up to 30% over metal parts.

FCC Catalysts and Additives

We are a global leader in developing and manufacturing fluid catalytic cracking or FCC catalysts and additives. Our FCC products also enable refiners to reduce emissions from the operation of their FCC units and the transportation fuels they produce.

Oil refining is a highly specialized discipline, and FCC catalysts must be tailored to meet local variations in crude oil feedstocks and a refinery's desired product mix. We regularly work with our customers to identify

the most appropriate catalyst and additive formulations for their changing needs. FCC units are designed to produce a broad spectrum of refined product yields, including gasoline, middle distillates, liquefied petroleum gas, or LPG. Traditionally, many FCC operators have focused on maximizing yields of transportation fuels; however, as demand for petrochemicals increases, a growing segment of refiners have transitioned their FCC operations with the primary objective of maximizing yields of petrochemical feedstocks, such as propylene.

With the Energy Transition progressing, refining companies are evaluating the scope 1, 2 and 3 greenhouse gas (GHG) emissions of their operations. Along with Grace's extensive customer application expertise, Grace FCC catalyst and additive technologies are often key contributors to the customers' plans as the catalysts' and additives' selectivities can be tuned to reduce carbon intensity of operations or enable the co-processing of renewable feed streams for carbon circularity.

Advanced Refining Technologies (ART)

Grace manufactures catalyst for ART Hydroprocessing™ (ART), a Chevron and Grace joint venture. ART Hydroprocessing™ is a leading supplier of hydroprocessing catalysts used in production of cleaner fuels. Feedstocks can be naturally high in sulfur and nitrogen, producing oxides when burned. Sulfur oxides (SO_x) and nitrogen oxides (NO_x) are air pollutants regulated by global regulatory agencies, including US EPA.

Hydroprocessing enables refiners to remove these contaminants and produce fuels that meet stringent environmental regulations. The catalysts we manufacture for ART Hydroprocessing™ enables customers to meet low sulfur fuel regulations by reducing sulfur content by 75-99% in most applications. Catalysts that Grace manufactures for ART can remove over 200 million pounds of sulfur annually in an average hydroprocessing unit.

Sustainability Product Example: Environmental additives

Sulfur oxides (SO_x), nitrogen oxides (NO_x) and carbon monoxide (CO) are all air pollutants regulated by global regulatory agencies, including US EPA. Removal of these pollutants from industrial gas streams provides significant environmental benefits.

In addition to hydrocarbons, crude oil contains heteroatoms like sulfur and nitrogen. During fluid catalytic cracking of crude oil derived feedstocks to transportation fuels and petrochemical feedstocks, these heteroatoms may be partially converted to SO_x and NO_x in the FCC plant's regenerator. To reduce the release of these pollutants several mitigation routes have been described. The use of catalytically active additives is amongst the abatement techniques described in the Best Available Technologies (BAT) Reference Document for the Refining of Mineral Oil and Gas by the European Commission (2015).

Grace has been at the forefront of researching, manufacturing, and introducing such additives into the refineries globally. Our market leading FCC Environmental Additives portfolio has, for over 25 years, enabled the cleaner operation of refineries by allowing for significantly reduced SO_x, NO_x, and CO emissions from the refinery, with zero capital investment. We continue to innovate and invest in making these materials even more efficient than today's technologies. A recent example of Grace's commitment to reducing air pollution from the operation of FCC units is the launch of the latest generation SO_x additive EMISSCIAN™ after a significant investment in manufacturing to produce this technology at commercial scale.

Materials Technologies

Materials Technologies uses our significant specialty silica, zeolite, and fine chemical knowledge and applications expertise to design and manufacture products to create significant value for our customers. Our customers include pharmaceutical companies, consumer products manufacturers, coatings manufacturers, emission control system manufacturers, adsorbents for CO₂ capture and purification, petrochemical and natural gas processors, and plastics manufacturers.

We globally manufacture functional additives and process aids, such as silica gel, colloidal silica, zeolitic adsorbents, precipitated silica, and silica-aluminas, for a wide variety of applications and end-use industries. We also custom manufacture fine chemical intermediates and regulatory starting materials used primarily in the pharmaceutical and nutritional supplements industries.

Our materials are integrated into our customers' manufacturing processes and when combined with our technical support, can increase the efficiency and performance of their operations and products. By working closely with our customers, we seek to help them respond quickly to changing consumer demands.

Sustainability Product Example: SYLOID® AQ Series

In 2021, we launched SYLOID® AQ Series matting agent silica, a product specifically developed to fulfill the increasing technical challenges of matting environmentally friendly coatings (low VOCs) where film shrinkage during drying is minimal. SYLOID® AQ Series matting agent silica is a uniquely designed amorphous silica structure that provides superior matting ability at low concentrations. It delivers an environmentally friendly (low VOC) solution in VOC-compliant coatings systems while allowing the use of fewer matting agents for the same number of units. It does not contain respirable crystalline silica. In addition, our silica is a synthetically manufactured material similar to a naturally occurring mineral. Grace manufactures this product in a controlled environment to achieve specific properties.

Sustainability Product Example: DARACLAR® Silica

Food, Beverage, and Pharma companies rely on water availability for their products and processes as part of our Materials Technologies Business. Grace has worked with our customers in water-intensive industries to develop products specifically designed to reduce water consumption and solid waste by enhancing their process productivity. Grace's DARACLAR® 9000HP Silica reduces water consumption during filtration and stabilization for beverage companies by over 50% in many cases, leading to significant water savings in these process steps. Based on a Grace case study, for an average cost of US\$ 70 per cycle for filtration Cleaning in Place (CIP) cycles which includes chemical and water treatment costs, customers are able to save over 60,000 Liters of water and a reduced filtration CIP cost by over 60%.

Filtration is typically a mechanical process to separate undesired impurities from the main liquid stream. In brewing, beer is generally mixed with a filter aid, such as Diatomaceous Earth (DE), that is retained on a filter septum. Clarified beer goes through the DE filter cake, which is then removed and usually disposed of at a landfill. DARACLAR® 9000HP silica helps our customers achieve a total DE reduction volume, reducing the amount of solid waste in landfill.

Our Management Approach

We create value for customers by profitably growing our catalysts and materials businesses and achieving high efficiency, economies of scale, and healthy financial performance. To meet these objectives, we:

- Invest in accelerating growth and extending our competitive advantages.
- Invest in great people to strengthen our high-performance culture.
- Acquire to build our technology and manufacturing capabilities for our customers.

Our businesses are well-positioned to grow through our customer-driven innovation, commercial and operating excellence and thoughtful, disciplined merger and acquisition approach. Our businesses are interconnected through shared materials science and our highly integrated global manufacturing and supply chain operations. Our organic growth drivers include global demand for cleaner fuels, rising living standards globally, stricter environmental standards in downstream value chains, and increased focus on health and wellness.

Governance

2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-19, 2-20, 2-22, 2-23

Board Leadership

W. R. Grace & Co.-Conn, the operating unit of W. R. Grace & Co., is governed by a four member board. The board, with the support of the full leadership team, has assumed responsibility for all issues for W. R. Grace & Co.-Conn, including sustainability issues. The board addresses those issues as they rise to the level of material significance to the corporation, and does not maintain subordinate committees for impacts on the economy, environment, or people.

In 2022, Grace's board maintained Corporate Governance Principles, Business Ethics, and Conflict of Interest policies to guide employees in their daily business interactions. The policies reaffirmed Grace's commitment to comply with all applicable laws and to be governed by the highest level of business ethics.

Sustainability Governance

Grace's Board of Directors, senior leadership, and its management address the Company's responsibilities as a global corporate citizen (including its duties to its various stakeholders, such as customers, employees, and the communities in which the Company operates). These responsibilities cover a wide range of areas, including equal employment opportunity and diversity initiatives; corporate contributions and community service programs; corporate training programs; sustainability; environmental, health and safety matters, and climate-related issues as they rise to the level of importance that would have a substantive impact on the operations or finances of the Company.

Additional information can be found in the [Governance](#) section of our website.

Sustainability Strategy

Our sustainability strategy is based in our ambition to make a positive impact on the world. Sustainability drivers are derived from factors including customer expectations, market trends, and broader societal needs. As our customers' appetites for more sustainable products and processes have increased, so has Grace's focus on integrating sustainability into our products' design, functionality, and value propositions. Our best customers are innovative and value-focused, and increasingly demand solutions that move them toward their sustainability goals. Our commitment to helping our customers meet their sustainability goals is one of our key sustainability priorities.

The value we deliver through customer-driven innovation is increasingly based on how we help our customers meet their sustainability goals. Grace products and technical services improve the efficiency of our customers' processes, reduce energy and water use, cut harmful emissions, conserve material inputs, and reduce waste. Our technologies enable our customers to make products that meet the toughest environmental standards or to reformulate products to address rising consumer and regulatory expectations for sustainability, human health, and safety. The products in our portfolio that address these sustainability endpoints accounted for 49-percent of sales in 2022. See Grace's [Product Innovation and Impact](#) page for more information.

In addition to supporting customers with these products, Grace has adopted international standards for ethics and responsible business practices to align with our customers' expectations for their suppliers.

On April 8, 2022, Grace became a signatory to the United Nations Global Compact, supporting the world's largest corporate sustainability initiative; this commitment was reaffirmed in 2023. "By affirming our commitment to the United Nations Global Compact, we are demonstrating Grace's commitment to responsible and sustainable business practices to our customers, employees, and communities," said Grace Chief Executive Officer Ed Sparks. Grace joins over 15,000 companies across 162 countries in our commitment to accelerate and scale the collective global impact of business toward a sustainable future. "In upholding the UN Global Compact's ten principles, Grace will contribute to the UN Sustainable Development Goals through the values-based approach our organization and products deliver in the marketplace," said Director of Sustainability Bob Riley. By submitting our letter of commitment to the UN Global Compact, Grace is taking action to support and report on the following ten principles:

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.

Principle 2: Businesses should make sure they are not complicit in human rights abuses.

Labor

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labor.

Principle 5: Businesses should uphold the effective abolition of child labor.

Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges.

Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.

Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.

Anti-corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Finally, Grace has established targets to reduce emissions, water, and waste consumption. Grace's target for emissions reduction is an absolute 22% reduction from a 2019 baseline by 2029. Grace also set a 10% reduction target for water withdrawal and a 5% reduction of generated waste sent to landfills, including hazardous wastes, from a 2019 baseline by 2029.

Risk Mitigation and Adaptation

Grace recognizes that it faces emerging transition and physical risks related to climate change which can negatively impact its operations and business. We evaluate these risks through our Enterprise Risk Management Committee comprising cross-functional Grace senior leaders.

Transition Risks

Regional, national, and international governments are increasingly regulating GHG emissions through cap-and-trade systems, such as the EU's Emission Trading System. Emission credit prices associated with these systems may increase the operating cost for Grace facilities. To mitigate this, Grace has implemented capability to consider carbon price into the capital planning process, particularly for facilities under the EU-ETS, to promote investments in projects that meet our sustainability objectives.

The growth of electric vehicles and the energy transition may lead to reduced demand for liquid transportation fuels which could negatively impact our revenues and business as this transition occurs. However, there are several transition related adaptations to markets, or market growth in new areas, which could provide offsetting opportunities for Grace.

Physical Risks

Certain Grace facilities globally are located in areas prone to increasing acute risks, including severe weather events such as hurricanes and flooding, resulting in production disruptions. These weather events can also negatively impact our suppliers and customers, which can delay our facilities' raw material and utility supply and decrease production demand.

Grace's emergency business continuity planning includes providing temporary housing and emergency supplies for affected employees, bringing in temporary power generation, meeting customer demand from inventory, and shifting production to alternate locations.

The EHS/Operational Risk Management team uses various tools (e.g. The Climate Explorer) to track various climate change physical risks. Future forecasts can be used within business continuity assessments for Grace locations. In addition, Grace has developed a Hurricane Playbook, which defines the preemptive steps that sites/locations will take in pending extreme weather. NOAA website is monitored during hurricane season from May – November. If a storm is impending within 48 hours, the Risk Management team will convene leaders from within Supply Chain, EHS, and Operations and initiate the playbook.

Additionally, Grace recognizes the impact of chronic physical risks on our operations and supply chains, including rising temperatures, sea levels, weather patterns, and water stress. Given the impact of water on our operations, in 2022 Grace performed a water body risk assessment using the WRI Aqueduct tool to identify at-risk areas. In 2022, 5% of our water withdrawals were sourced from water stressed areas.

Ethics

3-3, 2-23, 2-24, 2-25, 2-26, 205-1, 205-2, 205-3, 206-1

In 2022, Grace maintained corporate governance principles, business ethics, anti-corruption, and conflicts of interest policies to help employees in their daily business interactions and policies on any political activities. Grace also requires all of its employees to undergo annual ethics training. The policies and related training reaffirm Grace's commitment to comply with all applicable laws and be governed by the highest level of business ethics.

- Business Ethics Policy
- Conflicts of Interest Policy
- Political Contribution Policy
- Corrupt Business Practices Policy
- Corporate Governance Principles

The policies can be found in our website's [Ethics and Business Conduct](#) section.

Our Commitment

Grace is dedicated to the values of teamwork, performance, integrity, speed, and innovation. Grace expects the highest ethical behavior from its employees and representatives throughout its global operations. Our Business Ethics and Antitrust Compliance policies embody our unwavering commitment to integrity and ethics and outline the principles that each director, officer, employee, and other representative acting on behalf of Grace and its subsidiaries are expected to follow.

Our Management Approach

In 2022, Grace maintained an Ethics and Integrity Action hotline that employees, customers, vendors, or other interested persons can use to anonymously report violations or express concerns, including, but not limited to, any matters involving accounting, internal accounting controls, audit matters or fraud.

We provided annual employee training on our business ethics and antitrust compliance policies. Upon completion of these training, select employees were required to sign the Ethics Certificate to certify that they will conduct all business on behalf of Grace in compliance with all applicable laws and regulations and conformance with these policies. The Antitrust Compliance policy provided employees with guidelines covering relations with competitors, customers, mergers and acquisitions, joint ventures, and documentation.

Our anti-corruption policy was also incorporated into our Supplier Code of Conduct. Grace requires its suppliers to abide by the Code and encourages its Suppliers to require their suppliers and subcontractors to follow the principles of this Code in their operations. Failure of a Supplier to comply with the requirements in this Code may be considered a material breach by Grace in the related contract(s) or transaction(s) between Grace and Supplier, and Grace may terminate such contract(s) or transaction(s) with Supplier at its discretion as a result.

Our Performance

Grace's Board regularly reviews our Company's health, safety, and environmental performance, as well as significant compliance and ethical issues. Our Chief Compliance and Ethics Officer also reviews all calls to the Ethics and Integrity Hotline for potential business ethics breaches, such as antitrust violations or corruption incidents.

All Grace employees received ethics training on the below courses:

- The Company Code of Conduct
- Global Corruption and Bribery - What You Need to Know
- Respectful Communication
- Speak-Up Culture

A Cybersecurity course was assigned as part of the Ethics training. All employees participated in the 2022 Ethics Training and met the Ethics training requirement.

Our anti-corruption policy is also incorporated into our Supplier Code of Conduct, which applies to all Grace suppliers. Grace also confirms using a third-party assessment provider its suppliers' ethics and anti-corruption management systems. The assessments are evidence-based, and suppliers must provide documentary evidence of ethics and anti-corruption policies, practices, and performance. During 2021 and 2022, suppliers representing approximately 63% of Grace's direct material spend had completed an assessment.

Stakeholder Engagement

2-29, 2-30

Grace is an active member of the communities and markets in which we participate. We recognize that our operations, products, and services impact various internal and external stakeholders, including our customers, investors, employees, communities, regulators, and many more. We regularly engage with these stakeholders through formal and informal channels to understand their interests and maintain mutually beneficial relationships. We also communicate our sustainability performance to our stakeholders and consider their feedback as valuable input for the continuous improvement of our sustainability initiatives.

Approach to Stakeholder Engagement

We rely heavily on our understanding of this network and the voices of our customers and neighbors. Across a broad spectrum of stakeholders, we enable dialogue through various channels.

Our Stakeholders	Sharing and Listening	Typical Areas of Interest
Customers	We are proud to serve many of the world's most respected and successful companies. Large or small, our customers engage with us through our global sales network, customer service, our trusted distributors, our global technical service teams, and product development projects. We are active participants and frequent sponsors of conferences and events, from Grace user groups to the leading trade groups in countries worldwide.	Our relationship with customers is built on talent, technology, and trust. Our mutual interest in developing, manufacturing, and delivering quality products that improve our customers' products and processes lies at the core of our engagement.
Candidates and Employees	Prospective and current employees are the lifeblood of Grace. Our media channels range from regular face-to-face conversations to social media and our other digital connections, including the Careers section of our website. We additionally engage with unions and works councils that represent our employees. Employee-driven health and safety committees have been long-established at many of our sites.	Our relationships with candidates and employees are rich, deep, and highly consequential. Our commitment is to be as transparent as is legal and practical as we strive to identify countless opportunities for mutual benefit. Matters within the purview of unions, bargaining units, and works councils span working conditions and ways to improve our business and commitments to other stakeholders. Worker health and safety is a key priority for our many safety committees

		collaborating with employees, EHSS staff, and site leadership.
Suppliers	Current and prospective suppliers reach us through our website and global Strategic Supply Chain organization. Additionally, Grace hosts periodic sustainability-specific learning opportunities or requests its strategic suppliers to complete a sustainability-focused assessment. These assessments may result in corrective actions. For more information, please see the Responsible Procurement section of this report.	We strive to achieve mutually beneficial partnerships with our suppliers around the world. We share our commitment to ethical standards through our Supplier Code of Conduct.
Local Communities	We participate in many advisory groups, neighborhood and business associations, and countless ad hoc conversations with our communities worldwide. Our employees volunteer time, talent, and charitable gifts often matched by Grace.	Each of our facilities is engaged with groups in their area on matters of public safety, charitable giving, health and human services, education, and more.
Industry Groups	We are members of many industry trade groups and professional associations worldwide. Our participation spans the breadth of ways these groups engage their members.	Our participation is driven and informed by many priorities, including our need to be aware of developments affecting our business and many stakeholders. In our industry, trade groups offer a means to engage customers, comply with regulations, and much more.
Regulators and Policy Makers	We engage with regulators and policymakers at the state and local, federal, and international levels through collaboration with Grace site leaders, business leaders, government affairs and communications teams, trade associations, and legal counsel.	Grace's engagement with regulators and policy makers is focused on ensuring compliance with laws and regulations affecting our business in jurisdictions around the world. Relationships are often collaborative and subject to disclosure under various reporting standards.

Engagement with Workers

Many Grace facilities have established worker-management health & safety committees to evaluate and manage Environment, Health, Safety, and Security (EHSS) risks as part of our Responsible Care® Management System. Facilities also engage with our neighbors through community advisory panels, and

many employees participate in volunteering initiatives to support the development of their local communities.

Engagement with Suppliers

Grace engages with suppliers on sustainability issues through its Responsible Sourcing Program in our supply chain. The foundation of our responsible sourcing approach is the Grace Supplier Code of Conduct, which outlines our requirements for suppliers in environmental responsibility, labor, and human rights, and business ethics. This Code applies to 100% of Grace suppliers.

We assess the sustainability performance of our suppliers using a 3rd party supply chain ratings service. These assessments are evidence-based, requiring document verification of sustainability claims, and enable sourcing managers to assign corrective actions. We incorporate these sustainability scores into our overall supplier risk assessment and performance monitoring. Finally, we provide forums to train our suppliers on sustainability expectations.

Engagement with Communities

As a global specialty chemical company, we recognize that our reach extends well beyond the customers we serve or the investors in our business. We acknowledge our responsibility in earning the trust of millions worldwide who are touched by our presence or products.

Grace is connected and available to neighbors and leaders of our communities. We make a special effort to introduce ourselves to communities when we acquire new facilities and connect with leaders when we exit a business or a facility. We have been active in some communities for many years: over a century in Baltimore's Curtis Bay area; since the 1950s in Lake Charles, LA, and Valleyfield, Quebec; since the mid-1960s in Chattanooga, TN; since the early 1970s in Worms, Germany and Sorocaba, Brazil; since the early 1980s in Aiken, GA; since the 1990s in Kuantan, Malaysia. Since then, Grace has continued to expand our global footprint and is proud to be an active partner with the communities in which we operate.

As you would expect, our employees are members of the communities where we operate. They are active as individuals and Grace employees in improving these communities. Grace supports their efforts through the W. R. Grace Foundation (in the U.S.) and charitable support through our various facilities abroad.

Additional information can be found in the [Stakeholder Engagement](#) section of our website.

People, Inclusion, and Diversity

3-3, 401-2, 404-1, 404-2

Our Commitment

Grace's great talent and high-performance culture are the most important sources of our competitive advantage. Our high-performance culture is based on our commitment to performance and our five Grace Leadership Behaviors: Deliver Results; Think Critically; Be Authentic; Communicate; Engage and Include. We aspire to strengthen these by welcoming and valuing the unique backgrounds, cultures, ethnicities, genders, experiences, perspectives, and contributions of our employees around the globe.

Our Management Approach

Talent Acquisition and Retention

All employment decisions at Grace are based on business needs, job requirements, and individual qualifications, without regard to race, color, religion or belief, national, social or ethnic origin, sex (including pregnancy), age, physical disability, HIV status, sexual orientation, gender identity and/or expression, marital, civil union or domestic partnership status, past or present military service, family medical history or genetic information, caregiver status, or any other status protected by the laws or regulations in the locations where we operate.

Grace also cultivates its talent pipeline through the twelve week Summer Internship Program, wherein qualified students work on projects across different functional areas that contribute to Grace's business objectives and complement their academic learning. Graduates of the Summer Internship Program are often recruited into the three year Manufacturing Leadership Program (MLP) upon completion of their undergraduate degrees. MLP Participants are given rotational assignments across our Global Operations organization. The program provides participants with valuable experience in Grace's operations and processes and prepares them for future leadership roles within Grace.

In our German operations, most of our apprentices become full-time Grace employees at the end of their apprenticeship. A team of experienced professionals provides guidance, training, and individual coaching in five apprentice categories:

- Chemical Technician
- Industrial Mechanic
- Electronics Technician for Operating Technology
- Chemical Laboratory Technician
- Industrial Clerk

Professional Development

Grace uses multiple approaches to encourage and reinforce the ongoing professional development of its people's talents. Our high-performance culture is fueled by the engagement, inclusion, and diversity of our workforce's array of experiences and their innate curiosity and desire to be lifelong learners.

We encourage the creation of robust development plans and a healthy coaching relationship between employees and their managers. All are encouraged to consider ways to improve technical, business, and leadership capabilities for their current role and any potential roles for which they aspire. Employees are expected to take responsibility for their growth and development plan, seek support when needed, take advantage of tools and resources, and continually reassess their needs and plans. Managers are accountable for supporting these efforts and role-modeling leadership behaviors.

Grace endorses a 70-20-10 approach to learning—70 percent of learning from work/job experience; 20 percent learning from others (e.g., coaching, feedback, shadowing, and peer mentoring); and 10 percent formal training—when planning their development and working with their manager to identify real-world opportunities. For the 10 percent of traditional development, a wide array of business, professional, and leadership training is available in the Company's online learning center and through other facilitated courses.

Grace supports continuing education, including tuition reimbursement for eligible employees.

Diversity and Inclusion

In 2020, Grace introduced its Diversity and Inclusion (D&I) Commitment Statement, signaling our dedication to fostering an inclusive workplace culture. Our commitment to D&I mirrors our unwavering dedication to safety and is an ongoing journey requiring self-reflection, honesty, and transparency. In 2021, every Grace team member pledged to this commitment, setting the foundation for our collective efforts.

Our D&I approach revolves around five core pillars that guide our continuous improvement initiatives:

1. Transparent Communication:
2. Executive Commitment:
3. Employee Engagement:
4. Practices and Policies:
5. Meaningful Measurement:

In 2022, we deepened our commitment to involving employees in our D&I approach. This included growing our Women's ERG (WeACT) and the formation of Grace's Black employee resource group (BERG). WeACT renewed its focus on supporting and advancing women in the workplace and growing allies, while BERG's mission is to provide a platform for Black employees to connect, collaborate and contribute to Grace's D&I mission. Grace plans to continue our ERG journey by adding more ERGs in 2023 to ensure strong grassroots employee involvement.

We continue to track our representation across key locations and roles, ensuring that our workforce reflects the diversity we value.

In 2022, these actions underscore our dedication to creating a workplace where every individual is valued, included, and has equal opportunities to thrive. This update represents a snapshot of our ongoing journey, and we remain committed to the principles outlined in our D&I Commitment Statement.

Total Rewards

Grace is dedicated to achieving equal opportunity for all employees and applicants for employment. We comply with our Equal Employment Opportunity Posting (for U.S. locations) policy.

We provide the following benefits to all full-time U.S.-based employees at all of Grace's significant operating locations. We offer similar benefits to employees at our international locations.

Benefits: Grace provides a competitive compensation and benefits package, including medical, dental, life insurance, parental leave, employee assistance program, and others.

Transition Assistance Programs

Grace makes efforts to reduce the impact of layoffs during operations in a highly dynamic and competitive industry. Where changes in the workforce are unavoidable, Grace works to lessen the effects on its employees.

Our Performance

Talent Acquisition

We introduced a Talent Selection Workshop to help hiring managers within the organization implement a structured and efficient behavioral interviewing process to select the right talent consistently. Additionally, the workshop introduced tools to manage unconscious bias that may get in the way of hiring diverse talent. In 2022, 6 programs were held, each consisting of two 3-hour workshops.

Professional Development

We continue to invest in our global talent and talent management systems, including aligned goal setting, ongoing manager feedback and coaching, annual midyear and year-end performance reviews, calibration of employee performance, and a continuous professional development cycle.

Grace's Aspire web-based training platform provides access to a tremendous number and variety of online training content to enable and promote continual learning and development opportunities for all employees.

Training Hours by Gender ¹	Average number of hours
Male	24.0
Female	20.2
Total	23.2

1 – This data reports total global training completions from all compliance and other non-required trainings in Aspire; this data is not inclusive of SAM-based training for German-speaking employees.

Training Hours by Employee Category	Average Number of Hours
People Manager	21.6
Professional Contributor	20.6
US Union Employees	35.4
Total	23.2

Human Rights

3-3, 2-23, 2-25, 2-26, 2-30, 406-1, 407-1, 408-1, 409-1

Our Commitment

Grace is committed to protecting and advancing human rights wherever we operate. We do not tolerate any form of exploitative child labor as defined in the International Labor Organization Convention 182, Article 3 (Worst Forms of Child Labor). We also do not use indentured, enslaved persons, bonded, or other forced involuntary labor and reject corporal punishment. Our commitment to human rights extends to both our operations and supply chain.

Our Management Approach

Grace is a signatory to the United Nations Global Compact and adheres to the United Nations Universal Declaration on Human Rights principles and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, all of which form the basis of our human rights commitments. Our Human Rights policy outlines our commitment to the following:

- Employee, customer, and community health & safety
- Compliance with all EHS and human rights laws and Grace requirements
- Non-tolerance towards child and forced labor.
- Fair employee working hours and compensation.
- Diverse and inclusive workplace free from discrimination
- Employee right to freedom of association
- Non-tolerance toward corruption, bribery, and other business ethics violations

Facility management and human resources regularly engage with unionized employees of their facilities on health & safety, working conditions, and compensation. Collective bargaining agreements are regularly reviewed with union leadership to ensure local labor laws and regulations comply. Many facilities have established management-employee health & safety committees for employees to raise any EHSS hazards and issues.

All Grace employees are required to complete annual human rights training through our learning system. Any human rights violations can be reported confidentially by employees, customers, vendors, or other interested persons to our Ethics Hotline. Employees can also report these violations to their managers or local human resources representatives.

Grace has participated in internship programs sponsored by the German and Brazilian governments allowing interns to start at age 17. No other facilities employ labor under the age of 18.

All Grace suppliers must ensure that they do not use child or forced labor, respect their employees' right to bargain freely, and comply with all local labor and human rights laws, as stipulated in our Supplier Code of Conduct. Suppliers are required to report violations or legal proceedings related to human or labor rights to Grace. We also encourage our suppliers to require their own suppliers and subcontractors

to adopt the principles of Grace's Supplier Code of Conduct in their operations. Failure to meet these standards is grounds for us to terminate contracts and transactions with the supplier.

Incidents may be reported to a public hotline maintained by Grace which can be found on our website in the [Ethics and Business Conduct](#) section.

Our Performance

Our Chief Compliance Officer reviews all calls to the Ethics Hotline for potential business ethics breaches, such as antitrust violations or corruption incidents.

Our anti-corruption policy is also incorporated into our Supplier Code of Conduct, which applies to all Grace suppliers. Grace also assesses its suppliers' ethics and anti-corruption management systems using a third-party supply chain assessment company. The assessments are evidence-based, and suppliers must provide documentary evidence of ethics and anti-corruption policies, practices, and performance.

Health, Safety, and Process Safety

3-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10,

Our Commitment

Grace's EHSS core values are: No One Hurt, Nothing out of Place, and No Harm from our Products. Globally, we aspire to have zero health and safety incidents and zero process safety events at our facilities. To achieve this, we have implemented Goal Zero as our unwavering commitment to not get hurt and take necessary measures to keep others safe. Goal Zero focuses on four strategic pillars: Safety Leadership, Grace Tenets, Shared Learnings, and Personal Safety Commitment.

Our Management Approach

Leadership

Grace's commitment to providing a safe and healthy workplace is anchored on its EHSS policies management systems and implementing procedures through its global Responsible Care® Management System. All Grace employees, contractors, and suppliers are also empowered to Lead with Safety through the following principles:

All Grace employees, contractors, and suppliers make a personal commitment to working safely.

We take ownership of our actions to drive our safety culture, ethics, and core values.

We speak up when we observe unsafe behaviors or conditions.

We are all responsible for recognizing risks and doing something about them.

Crucial conversations lead to safe workplaces.

Safety is not an act but a mindset.

Grace facility managers are accountable for effectively implementing the EHSS Management System at their facilities, following Grace's EHSS Core Values. Each facility employs full-time EHSS leaders responsible for its day-to-day implementation and promoting the Lead with Safety culture among plant leaders and employees.

EHSS Management System

The global framework for Grace's EHSS activities is our EHSS Management System. Our US facilities adhere to the chemical industry-specific Responsible Care® Management System to evaluate and manage all environmental, health & safety, process safety, product safety, and security risks. Our international facilities adhere to various International Organization for Standardization (ISO) certifications such as 14001, 45001, and 50001 to manage their environmental, safety, and energy impacts.

Conformance to the EHSS Management System at the corporate headquarters level and Grace's North American RCMS certified sites is audited annually and certified every three years by third-party registrars to demonstrate conformance with Responsible Care®. ISO 14001 / 45001 certified sites are audited per the certification requirements. As appropriate, the company, operating segments, and facilities are required to establish a program to assure EHSS compliance. These programs:

- Verify compliance with laws, regulations, and operational controls established by applicable law and required by this management system.
- Assure and verify timely and effective containment, corrective, and preventive actions.
- Maintain systems to track corrective and preventive actions to closure.
- Include communications mechanisms that ensure audit results and follow-up are communicated to management.
- Include a formal process to establish and communicate audit frequency and scope.

Hazard and Risk Identification

Grace uses a tiered structure to identify and assess its hazards and risks based on the scope and operational context. At the Corporate level, risks are identified and managed through a hazard and risk assessment process in alignment with the Responsible Care® Management System. Each facility is required to maintain its own hazard and risk assessment (HRA) specific to its operational risks. A process hazard analysis (PHA) with Layer of Protection Analysis (LOPA) is conducted using tools and methodologies based on industry standards and best practices for new and existing processes that meet applicability thresholds. The management of change (MOC) process is in place at all Grace facilities to carefully consider the impacts of procedure, equipment, and organizational changes throughout the process and facility lifecycle. Grace has aligned all the above risk assessment processes to a unified risk matrix, ensuring that risks are consistently evaluated and prioritized across the organization.

Stop Work Authority

Employees at all levels are empowered and expected to stop work should unsafe conditions be identified. Plant leaders are expected to model these behaviors through regular safety walkarounds at the facility. Employees can also report unsafe activity anonymously through the Grace Ethics Hotline.

EHSS Engagement

All employees are required to undergo training to identify and eliminate EHSS risks associated with their job, using the local language used by employees. These requirements are supplemented by specific training requirements in corporate implementing procedures for lock-out tag-out, confined space entry, hot work, fall protection, safety observations, and other similar scenarios. Each Grace facility is responsible for maintaining a site-specific training program covering Grace employees and contractors that meets regulatory and Responsible Care® requirements.

Many Grace facilities have established worker-management health and safety committees that make decisions and investments in workplace health and safety. A tiered meeting structure from the facilities up through corporate headquarters meets weekly and monthly and includes representatives from all levels of facility leadership and workers. Committees develop and implement programs to eliminate EHSS-related risks at the facility as part of internal initiatives. Many committees also have long-standing programs to track and report leading indicators, near-misses, incidents, and other safety priorities. A robust internal and management system audit program often engages committee members in audit interviews and facility tours.

Grace's Corporate Communications and EHSS functions engage with internal and external stakeholders on key EHSS issues through various channels.

Process safety and occupational health and safety events are reported using a centralized incident management system available to any individual within the organization globally. Significant Near Miss events are investigated to identify the root cause using methods appropriate to the context of the event.

EHSS and Facility leadership identify containment, corrective, and preventive actions to ensure the root cause of each event is addressed and to prevent reoccurrence. High learning value events are reviewed by global leadership and communicated throughout the EHSS&Q organization through defined meeting cadences.

Emergency Response

Emergency preparedness is a key component of our Management System. All Grace facilities are required to maintain emergency response programs and plans. We regularly conduct emergency response drills involving cross-functional teams. Post-drill evaluation is conducted as part of the continuous improvement of the emergency procedure.

Our facilities have specialized onsite emergency response teams, contracts with local third-party response providers, or a close working relationship with local governmental authorities to prepare for emergencies. Several locations with onsite teams also participate in local mutual assistance programs. Additionally, Grace has HAZMAT specialists trained and available to advise quickly on off-site incidents involving certain high-hazard chemicals.

Grace uses CHEMTREC as its 24/7/365 emergency response call center and has several country/regionally specific arrangements in Asia. All known incidents are tracked, and investigations are conducted following the procedures employed for other incidents.

Additional information on our Emergency Response Program can be found in our [EHS Management System](#) section on our website.

Occupational Health Services

Grace provides occupational health services for our employees. Several manufacturing locations have an on-site occupational health nurse and visiting physician who provide risk-based medical surveillance clearances, care for work-related illness and injuries, and assist with non-occupational illness and injury management. Facilities without an on-site medical professional work with local clinics to follow our surveillance protocols. Grace has contracted a national third-party medical provider to support our onsite medical teams and our facilities without on-site medical staff with tele-medicine care for work-related illnesses and injuries. All facilities maintain stocked first-aid kits and AEDs and train volunteer medical responders in first aid/CPR/AED to assist in injuries and illnesses that may occur at the location.

Routine industrial hygiene sampling is conducted at the manufacturing facilities, pilot plants, and laboratories to ensure proper exposure controls are available and functional. Sampling is conducted by trained onsite personnel or industrial hygiene consultants. All samples are obtained following established sampling protocols and analyzed per established procedures at accredited laboratories. In 2021, Grace began implementing a cloud based industrial hygiene and occupational health management system as part of our continuous improvement efforts for standardization and transparency. The system tracks sampling plans and results. There are several benefits to a platform system, including tracking of periodic monitoring.

Grace provides several resources to support employee wellness. Our benefits network provides EAP, Diabetes Management, and employee health advocacy programs. Our online training software provides access to ergonomic training and access software that can be downloaded to help employees remember to take ergo break and stretches. In addition, several sites provide access to onsite gyms and fitness classes.

Our Performance

The table below details the year-over-year fatalities, incidents, and recordable rates. In 2022, Grace reported no work-related fatalities.

Safety Metric	2019	2020	2021	2022
Fatalities	0	0	1	0
Lost-Time Incident Rate	0.30	0.30	0.28	0.28
Lost-Time Injuries	10	15	14	14
Recordable Rate	0.74	0.62	0.62	0.62
Recordables	24	31	31	31

*Note: Recordable rate for all employees calculated (Number of Recordables * 200,000) / Hours Worked
Lost Time Incident Rate for all employees (Number of Lost Time Injuries * 200,000) / Hours Worked.*

The table below details the number of work-related illnesses and injuries for all employees and contractors in 2022.

Safety Metric	2022
Employees Work-Related Illness	1
Employees Work-Related Injury	30
Contractors Work-Related Illness	0
Contractors Work-Related Injury	2

The table below details the year-over-year recorded tier 1 and 2 process safety events.

Process Safety Metric	2020	2021	2022
Tier 1	4	6	8
Tier 2	5	8	8
Total	9	14	16

Cybersecurity

3-3, 418-1

Our Commitment

Information Security is critical for Grace and its subsidiaries to meet its business objectives, protect our stakeholders, and ensure the sustainability of our operations. Grace is committed to safeguarding the privacy of its stakeholders and their personal information.

Our Management Approach

Grace maintains a Global Cybersecurity Operational Model to allow for optimization of resources and to maintain oversight as we safeguard critical business information. To support our programs, Grace has dedicated resources and specialized response teams throughout our network.

Prior to the disposal of electronic waste (e-waste), Grace follows a protocol to conduct asset decommissioning, which removes all data, including files and licensed software, using U.S. Department of Defense standards for disk sanitization. A qualified third party also manages the disposal of electronic waste (e-waste) in a manner consistent with Grace's internal policies and regulations.

In 2022, Grace conducted cybersecurity awareness initiatives as well as required annual cybersecurity training. Employees have multiple avenues to report any cybersecurity violations to the global cybersecurity team.

Our Performance

100% of Grace employees completed cybersecurity training in 2022. In 2022, Grace did not have any substantiated releases of personally identifiable information.

Natural Resource Management

Energy, Greenhouse Gas, and Emissions

3-3, 302-1, 302-3, 302-4, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7

Our Commitment

Grace is committed to cutting energy consumption and associated greenhouse gas emissions. We have also refined our product innovation process and designed new products for use-phase resource efficiency. These products enable our customers to be more efficient, requiring fewer resources and energy per unit of production, thus enhancing our sustainability value proposition.

Our Management Approach

The global framework for Grace's EHSS activities is our EHSS Management System. Our US facilities adhere to the chemical industry-specific Responsible Care® Management System to evaluate and manage all environmental, health & safety, process safety, product safety, and security risks. Our international facilities adhere to the International Organization for Standardization (ISO) 14001, 45001, and 50001 to manage their environmental, energy, and occupational safety impacts. Energy and GHG emissions are managed through the Responsible Care® Management System for US-based facilities or through ISO 14001 / ISO 50001 for international facilities. Five Grace facilities have an environmental management system with ISO 14001 and/or ISO 50001 certification, and seven of Grace's facilities have been certified to the Responsible Care® Management System.

Since 2021, our scope 1 and 2 greenhouse gas emissions data have undergone external assurance (limited assurance level) from a licensed assurance provider in accordance with ISO 14064. Grace referenced the energy conversion factors to the U.S. Energy Information Administration for its calculation.

Grace's commitment to reducing greenhouse gas emissions and enhancing energy efficiency is anchored in its global EHSS policy and managed on a corporate and facility level through our global EHSS Management System. Grace has set a 22% global GHG Scope 1 and 2 emissions reduction target by 2029, from a 2019 baseline, which its Board of Directors has endorsed. Grace uses market-based emissions as the basis for our target as this better captures our emissions due to our utilization of carbon-free electricity at certain facilities.

Our Performance

Greenhouse Gas Emissions

In 2022, Grace reported a 7% decrease in its gross Scope 1 and 2 (market-based emissions) from its 2019 baseline. This continues to be primarily driven by Grace's procurement of carbon-free electricity at certain US facilities beginning 2021. Grace's utility providers source nuclear, hydroelectric, solar, and other carbon-free energy sources and assure this emissions profile through the issuance of Emissions-Free Energy Certificates. Grace's Canadian facility utilizes renewable hydroelectric energy for its operations. In 2022, carbon-free electricity accounted for 39% of Grace's electricity consumption.

Grace re-calculated its baseline 2019 Scope 1 and 2 emissions to account for the acquisition of our South Haven and Tyrone facilities in 2021.

Absolute Emissions	2019 (Baseline)	2021 (Previous Year)	2022 (Current Year)
Scope 1 (MT CO₂-e)	588,705	594,481	604,159
Scope 2, Location-Based (MT CO₂-e)	180,382	162,256	156,318
Scope 2, Market-Based (MT CO₂-e)	190,915	142,962	119,048

The completion of key energy efficiency projects at several facilities resulted in an estimated reduction of 28,492 MT CO₂e in energy consumption. Efficiency projects included debottlenecking and process optimization that reduced Scope 1, 2, and 3 emissions by reducing natural gas, electricity, or raw material inputs.

Emissions Intensity	2019	2021	2022
Combined Scope 1 and 2 Market Based Emissions (MT CO₂-e)	779,620	737,443	723,207
Total Revenue (including ART Joint Venture, USD)	2,468,500,000	2,512,600,000	2,601,805,000
Emissions Intensity (MT CO₂-e / USD Revenue)	0.0003	0.0003	0.0003

Grace operates in four different regions worldwide. The table below shows the 2022 emissions by facilities per region.

Region	2022 Scope 1 Emissions	2022 Scope 2 Emissions
	(MT CO ₂ -e)	Market-Based (MT CO ₂ -e)
Asia Pacific	10,290	16,634
Europe, Middle East, Africa	165,932	32,162
Latin America	3,279	810
North America	424,657	69,442
Total	604,158	119,048

Since 2020, Grace disclosed its Scope 3 emissions to CDP's Climate Change framework. This disclosure covers the 15 categories defined by WRI. We continue to use the WRI Scope 3 Evaluator tool to calculate our Scope 3 emissions.

The WRI/Quantis Evaluator tool uses a 'spend-based' method to calculate an initial screen of Scope 3 emissions, with industry-average emissions factors applied based on the economic value of the goods and services. Spend data is broken down according to Grace's internal accounting and allocated to the most appropriate product group category available within the Quantis Tool. The corresponding emissions factors from the Quantis tool are then applied to calculate an overall emission estimate for this category. The Evaluator tool is only intended to provide companies with the first estimate of their Scope 3 emissions and to guide future efforts for more refined estimates. The use of the tool entails a high degree of uncertainty as companies prepare for more refined estimates in the future.

Scope 3 Category (in MT CO ₂ -e)	2020	2021	2022
Purchased goods and services	1,107,133	1,041,162	1,106,391
Capital goods	65,177	51,337	171,396
Fuel-and-energy-related activities (not included in Scope 1 or 2)	152,060	181,071	182,303
Upstream transportation and distribution	0.00	0.00	0.00
Waste generated in operations	24,898	40,810	46,344

Business travel	785	1,308	1,277
Employee commuting	6,290	6,290	12,750
Upstream leased assets	Not relevant	Not relevant	Not relevant
Downstream transportation and distribution	5,949	6,430	5,529
Processing of sold products	2,468,658	2,804,263	2,903,823
Use of sold product	Not relevant	Not relevant	Not relevant
End of life treatment of sold products	226,979	229,069	271,880
Downstream leased assets	Not relevant	Not relevant	Not relevant
Franchises	Not relevant	Not relevant	Not relevant
Investments	Not relevant	Not relevant	Not relevant
Other upstream	Not relevant	Not relevant	Not relevant
Other downstream	Not relevant	Not relevant	Not relevant
Total	4,057,929	4,361,740	4,701,693

Energy Consumption

Our reported energy consumption in 2022 decreased by 7% from 2021 due to reduction in natural gas consumption for stationary combustion at several Grace facilities. Purchased electricity consumption still accounted for 9% of our total energy consumption, which was about the same from 2021. The calculated energy intensity combined scope 1 and scope 2 energy consumption in MWh.

Energy Metric		2022
Total Energy Consumption (MWh)		3,970,178
Total Revenue (Includes ART Joint Venture, USD)		2,601,805,000

Energy Intensity (MWh / USD Revenue)	0.0015
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Energy Source	2022 (in MWh)
Purchased and Consumed Nonrenewable Fuels	3,146,996
Purchased Electricity from Nonrenewable energy sources	260,211
Purchased Electricity from Renewable energy sources	113,136
Purchased and Consumed Steam	129,782
Purchased and Consumed Heat	0
Purchased and Consumed Cooling	0
Total Nonrenewable Energy Sold	0
Total Purchased or Self-Generated Renewable Energy	0
Total Energy Consumption, excluding Self-Generated Energy	3,650,125
Total Self-Generated Electricity	117,228
Total Self-Generated Heat	202,825
Total Energy Consumption	3,970,178

Emerging regulations such as the EU ETS may impact energy costs with restrictions on emission allowances within cap-and-trade systems. As Grace facilities require a significant amount of energy for its operations, these restrictions are expected to increase our operating costs in the short to medium term. We are also facing increasing pressure from our customers to report organizational emission data and the carbon footprint of our customer's products.

Grace has implemented capability to consider a carbon price into capital planning processes to meet these challenges and promote investment in projects that will reduce emissions and increase efficiency at our facilities, particularly those under carbon trading systems.

Air Emissions

Grace facilities utilize pollution control devices such as baghouses and scrubbers to ensure dust, particulate, and fugitive emissions do not exceed federal, national, state, or local emission standards. Certain of our facilities maintain Compliance Assurance Monitoring plans to identify all emission sources at the facility and install and maintain appropriate control devices such as baghouses and scrubbers. Many facilities have comprehensive workplace emissions measurement programs that monitor a variety of chemicals and particulates such as dust, ammonia, CO, and NOx emissions. Certain facilities implement leak detection and programs where required to ensure compliance with regulatory and Grace requirements. These programs help us strive towards our goal of Nothing Out of Place.

Process Emissions	2020	2021	2022
SOx (MT)	105	126	96
NOx (MT)	660	616	735
VOCs (MT)	88	80	72

We recalculated our 2020 and 2021 NOx and SOx emissions due to a data collection process improvement at certain US facilities. Additional information can be found on Grace's [Environmental Performance](#) section website.

Water Management

3-3, 303-1, 303-2, 303-3, 303-4, 303-5

Our Commitment

Grace recognizes the importance of water availability and quality for its manufacturing processes and value chain. We also acknowledge that water is a finite resource and should be protected for future generations. We withdraw most of the water we use from third-party sources, surface water bodies close to our facilities, or on-site groundwater wells.

Grace is committed to reducing water consumption throughout its operations, reusing water where feasible, and treating and discharging wastewater in accordance with all applicable regulations.

Our Management Approach

Grace's commitment to managing and conserving water resources is based on our global EHSS policy and our EHSS Management Systems and is tied to our Nothing Out of Place goal. To achieve this, we have set a global target to reduce our water withdrawal by 10% from a 2019 baseline. Under its operational control, Grace monitors its annual water withdrawal and discharge for manufacturing and administrative facilities.

Plant and process operation managers drive water reduction initiatives at the facility level by reusing process water and implementing productivity projects. Plant leaders may also establish facility-specific water reduction targets should water availability be deemed a significant risk for the facility.

Grace maintains compliance with all local, state, federal, and regional effluent quality standards through the incorporation of management systems, management of change processes within our operational facilities, and robust incident reporting procedures. As part of our commitment to Nothing Out of Place, facilities have primary and secondary containment measures to prevent unplanned or uncontrolled chemical releases from entering groundwater. Facilities are also equipped with various administrative, treatment, and operational controls to treat all wastewater parameters to permitted limits before discharge. Water discharge quality parameters are monitored at intervals specified by operating and discharge permits and are specific to each facility. The monitoring frequency set by the relevant permits may range from hourly to annually. Our environment metrics can be found in our Environmental Performance section.

Our internal 2022 WRI Aqueduct Assessment determined water risk across our facilities. Based on this assessment, 5% of Grace's total water withdrawals are from facilities located in water-stressed areas. Since 2021, we continued our process for determining our water-related risks within our direct operations to assess priority locations for water stewardship activities and set water risk reduction targets to respond to any identified issues. As part of this process, we review at-risk facilities within our direct operations through the WRI Aqueduct tool and evaluate facilities for opportunities for water usage efficiency. These results help inform our future water strategy. Grace began assessing its suppliers for water risk and targeted completing this assessment within five years for our key suppliers. We will incorporate this data into our supplier scorecard process to better understand our supply chain risks as part of our sustainable procurement program.

Our Performance

Grace's total withdrawal volume increased by 7% in 2022 from our 2019 baseline due to corrected water withdrawal volumes at certain Grace facilities. We also re-calculated our baseline 2019 water withdrawal volume to include water data from our South Haven and Tyrone facilities.

Destination	2022 Water Withdrawn from Origin (in megaliters)		
	Fresh Water	Other Water	Total Withdrawn Volume
Surface Water	889	0	889
Groundwater (Renewable)	2,867	0	2,867
Groundwater (Non-renewable)	4,846	0	4,846
Third-Party (Municipal) Water	11,201	0	11,201
Total Withdrawal Volume	19,803	0	19,803

Destination	2022 Water Discharged by Destination (in megaliters)		
	Fresh Water	Other Water	Total Discharge Volume
Brackish Surface Water	10,814	0	10,814
Fresh Surface Water	5,078	0	5,078
Groundwater	24	0	24
Third-Party (Municipal) Water	2,517	0	2,517
Total Discharge	18,433	0	18,433

All Grace facilities take steps to detect and eliminate any impacts to groundwater and surface water sources through various methods ranging from leak detection and containment systems to the regular collection of monitoring well data. Many manufacturing facilities perform primary or secondary treatment of wastewater pollutants to meet or exceed regulatory requirements before discharge.

Grace also implements productivity projects aimed at reducing wastewater sludge generation and disposal. Water reduction initiatives since 2020 include:

- Water reduction at Wastewater Treatment System (at our Sorocaba, Brazil facility)
- Water leak prevention at the process area (at our Worms, Germany facility)
- Installation of a new cooling tower at our Chattanooga facility
- Water reduction at the regenerator at our Worms, Germany facility
- Cooling water reduction at the water glass cooling system at our Worms, Germany facility

As of the end of 2022, suppliers representing approximately 63% of Grace direct spend (including 190 suppliers to Grace) have completed or provided to Grace an EcoVadis scorecard, which includes a variety of water-related topics, including water risk, wastewater management and efficiency, water consumption and impacts on groundwater. Based on reviews of these EcoVadis responses, we are planning to monitor water risks in our value chain.

Additional information can be found on Grace's [Environmental Performance](#) section website.

Waste Management

3-3, 306-1, 306-2, 306-3, 306-4, 306-5

Our Commitment

As part of its global EHSS goal of Nothing Out of Place, Grace is committed to minimizing the generation and safe disposal of all hazardous and non-hazardous waste from our operations. In addition, we design our products to be manufactured, transported, used, and disposed of safely.

Our Management Approach

Grace's commitment to waste reduction throughout its operations and value chain is anchored on its global Environment, Health, Safety, & Security (EHSS) policy and adherence to the Responsible Care® initiative. Grace has established a target of reducing its waste sent to landfills by 5 percent from a 2019 baseline by 2029. This includes reductions in hazardous waste sent to landfills.

Grace manages its waste-related impacts commensurate with the risk for waste generated within our operations and our value chains. Hazardous waste is managed at each Grace manufacturing facility according to applicable regulations, corporate policies, and relevant industry best practices. Operational compliance with these waste management requirements is verified through periodic EHSS compliance audits facilitated by third-party registrars.

All Grace facilities have dedicated waste areas allowing segregation of incompatible waste types (such as hazardous and non-hazardous) that meet or exceed regulatory requirements. Wastes are temporarily accumulated on-site in compliance with local regulations until they are hauled for off-site disposal by qualified third-party vendors or sold to recyclers. Grace currently maintains a single landfill at one facility, which receives non-hazardous waste for disposal and is operated in compliance with local and federal requirements. A network of monitoring wells and ongoing maintenance programs minimize potential impacts on surrounding areas.

Grace facilities monitor their waste disposal primarily through invoices sent by waste disposal contractors and estimates. Waste disposal measurements are reported in weights disposed of. Waste data is collected, aggregated, and reported on an annual basis.

Stewardship of our waste is a key concern for Grace. We have established a qualification process for high-risk disposal vendors involved in the reclamation, treatment, storage, and disposal of hazardous waste. This process is designed to ensure waste is disposed of correctly and in accordance with local regulations and our internal standards. High-Risk Disposal Vendors are required to undergo audits to assess the robustness of their EHSS risk management processes, their compliance with applicable regulations, and whether they are in good financial standing with appropriate insurance.

Our Performance

Grace's waste generation is primarily driven by production levels at our facilities. Additionally, it may include non-production activities (e.g., construction work, etc.) undertaken at our sites.

For many years, Grace has been successful in identifying beneficial reuse opportunities for materials that may otherwise be considered waste. In 2022, Grace's total waste to landfill increased by 33% from our

2019 baseline. This was primarily driven by the loss of a sales contract of a secondary byproduct stream at one of our facilities. In 2022, Grace initiated work to investigate beneficial reuse of its generated waste and continued this work in 2023.

Grace re-calculated its baseline (2019) total waste generated and waste to landfill to account for the acquisition of its South Haven and Tyrone facilities.

Waste Generation	2019 (MT)	2021 (MT)	2022 (MT)
Non-Hazardous	89,939	89,747	80,100
Hazardous	27,092	22,803	31,857
Total Waste Volumes	117,031	112,550	111,957
Total Recycled Waste	19,567	13,340	15,225
Total Landfill Waste	54,294	75,590	72,619

The table below shows the amounts of generated wastes broken down per type of disposal treatment method it underwent.

2022 Waste Disposed by Treatment Methods	Hazardous Waste (in MT)	Non-Hazardous Waste (in MT)
Converted to Energy	7,064	0
Chemical Destruction	0	2,606
Incinerated (energy)	0	1,673
Incinerated (non-energy)	6,100	303
Landfill	1,191	71,429
Recycled	11,325	3,811
Recycled for process inputs	0	76

Reused	0	14
Other	6,178	188

Grace is constantly improving the efficiency of its processes to reduce waste generated by its operations and products to reduce costs and maintain its competitive advantage. Examples of beneficial reuse include Grace offering take-back programs so customers can avoid landfill disposal of spent catalyst, a Grace facility significantly reducing its waste sent to landfill by recycling wastewater solids for use by local brick manufacturing companies and other Grace facilities recycling production fines with high metal content to metals reclamation facilities.

Other waste management activities include spent solvent reclamation and reuse before disposal and coordinating with R2-certified electronics recycling vendors and drum recyclers to minimize the disposal of waste drums.

Additional information can be found on Grace's [Environmental Performance](#) section website.

Environmental Compliance

3-3

Our Commitment

Grace's global EHSS policy requires us to conduct business and operate facilities in an environmentally sound manner with a focus on eliminating unplanned environmental releases, improving efficiencies and reducing waste, and meeting local, state, and national regulations in jurisdictions where we operate around the world. Our commitment to EHSS compliance is anchored on our global EHSS goal of Nothing Out of Place. Progress towards this goal is tracked through our objective of 0 Tier 1 Process Safety Events and top quartile Tier 1 and Tier 2 Process Safety Event rates.

Our Management Approach

The global framework for Grace's EHSS activities is our EHSS Management System. U.S. facilities adhere to the chemical industry-specific Responsible Care® Management System to evaluate and manage all environmental, health & safety, process safety, product safety, and security risks. Our international facilities with certified management systems adhere to the International Organization for Standardization (ISO) 14001, 45001, and 50001, as applicable, to manage their environmental, energy, and occupational safety impacts. Environmental Compliance is managed through the Responsible Care® Management System or ISO 14001. Five Grace facilities have an environmental management system with ISO 14001 and/or ISO 50001 certification, and seven of Grace's manufacturing facilities have been certified to the Responsible Care® Management System standard.

Through their plant and EHSS leadership, Grace facilities must develop and maintain a site-specific legal register listing all federal, national, state, and local requirements. This register also details all EHSS permits, monitoring, and reporting requirements with their respective cadences as required by the relevant EHSS authority. This process is managed through our integrated IT Systems, which support our timely and accurate preparation and completion of compliance requirements.

EHSS Management systems at both the facility and corporate levels are audited annually and certified every three years by third-party registrars to demonstrate conformance with Responsible Care® or ISO 14001 / 45001 requirements.

Reportable releases¹, regulatory citations², Tier 1 and Tier 2 Process Safety Events, and audit findings are investigated using industry-standard methods to identify the root causes and/or contributing factors leading to these events. Cross-functional facility teams work to identify containment, corrective, and preventive actions to address identified root causes.

¹ Grace considers reportable releases as releases to the air, water or land that exceed a government reportable quantity, or are otherwise reportable by law, regulation, or permit condition.

² Grace defines citations as government notices covering instances of non-compliance with regulatory or environmental permit requirement for the operating facility.

Our Performance

Recalls, withdrawals, or alerts, either required or issued for known or potential safety reasons, of Grace products that could reach a consumer and are directly or indirectly regulated by a governmental agency over the period 2015-2022 have been 0.

Examples of our products that address our customers' sustainability objectives are listed below. Together, products in these categories accounted for approximately 49% of 2022 revenue.

Sustainability Endpoints	Examples of Grace Products
Improving our customers' products	<ul style="list-style-type: none"> High-performing PP catalysts for lightweight auto parts to improve fuel economy. Custom single-site PE catalysts for downgauging packaging to reduce plastics requirements. Silicas for tires to reduce rolling resistance and improve fuel economy. Zeolites for multiple pane windows to reduce energy use
Improving our customers' processes	<ul style="list-style-type: none"> Advanced FCC catalysts to reduce raw material and energy requirements. Advanced silica gel for filtration to reduce water use and waste
Enabling our customers to meet stricter environmental standards	<ul style="list-style-type: none"> Hydroprocessing catalysts to meet cleaner fuels standards (e.g., IMO 2020) Additives to reduce SOx and NOx emissions from refinery operations. Colloidal silicas for vehicle emission control devices
Enabling our customers to reformulate their products to meet consumer demand	<ul style="list-style-type: none"> Non-phthalate PP catalysts for safer packaging and household items Silicas for anti-corrosive coatings that are heavy metal free. Silicas for high performance paints with low-VOCs
Circular economy / Enabling material recycling and bio-feeds	<ul style="list-style-type: none"> Refinery catalysts tailored to displacing crude with bio-based feedstocks. Silicas to purify recycled biofeedstocks. FCC catalyst sales where Grace recycles or enables recycling of spent catalysts

Grace is investing heavily in products with at least one of these sustainability drivers. Over 300 employees conducted research at a dozen research and development centers globally. Over 75% of Grace's research projects are focused on products that will deliver one of our sustainability drivers.

Responsible Sourcing

3-3, 308-1, 308-2, 414-1, 414-2

Our Commitment

At Grace, we strive to create value for our business partners and customers in a safe and healthy work environment in compliance with all regulatory requirements. We recognize the vital role vendors and suppliers play in helping us meet the needs of our customers, so we seek to foster healthy and mutually beneficial supplier and vendor relationships. Our robust supply chain spans a global supplier base built upon solid, long-term partnerships.

Worldwide, we work with thousands of direct and indirect suppliers to help us deliver quality products, maintain competitiveness, and manage costs. We collaborate with our suppliers to reduce end-to-end supply chain costs through joint initiatives, and we always keep communication lines open. We leverage technology and promote e-commerce tools to enable efficient business processes and faster results.

Our Management Approach

Grace's approach to responsible sourcing begins with our Supplier Code of Conduct, which outlines supplier requirements in environmental responsibility, labor, human rights, and business ethics. Grace's policy is that all third-party vendors that provide products or services to the Company act in compliance with this Code and adopt consistent practices. Failure of a Supplier to comply with the requirements in this Code may be considered a material breach by Grace in the related contract(s) or transactions between Grace and Supplier, and Grace may terminate a such contract(s) or transactions with Supplier at its discretion as a result.

We assess the sustainability performance of our suppliers and alignment with the Grace Supplier Code of Conduct using a 3rd party supply chain ratings service. The results of these assessments are incorporated into regular business supplier risk and criticality reviews, covering additional risks, including country of origin, quality, and operational performance, and financial viability. Based on the overall results of these supplier risk and criticality assessments, Grace sourcing managers may recommend sustainability-focused corrective actions to its suppliers. Determinants regarding corrective actions are the suppliers' sustainability risk score and overall business criticality, among other factors. The results of these assessments are reviewed with relevant internal stakeholders, including Sourcing and Sustainability leadership.

In addition, Grace uses the management of change system to control and validate all raw material changes, a critical supplier qualification procedure for high-risk raw materials, and a prequalification process for all direct and indirect suppliers. Our audit and qualification protocols evaluate specific environmental and social issues, including environmental, human rights, health, safety, and security.

Responsible Mineral Supply Chains

For minerals that can be sourced from Conflict-Affected or High-Risk Areas, Grace has aligned its approach with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflicted Affected and High-Risk Areas. This includes a requirement outlined in the Grace Supplier Code of Conduct that suppliers are expected to ensure that materials supplied to Grace are sourced from

responsible supply chains and do not contain metals derived from minerals or their derivatives originating from conflict regions that directly or indirectly finance or benefit armed groups.

Consistent with the OECD 5-Step Due Diligence Guidance, Grace:

- Provides a company-wide grievance mechanism via its ethics hotline.
- Regularly assesses its raw materials for minerals potentially sourced from conflict-affected or high-risk areas;
- Expects its strategic suppliers to either complete an EcoVadis supplier sustainability assessment, which includes document verification of conformance with OECD guidance, or complete a Responsible Minerals Initiative survey for conflict minerals or cobalt.
- May request corrective action based on any assessment findings; and
- Discloses its management approach and performance in these areas, including in this report.

Our Performance

In 2017, Grace began requiring its suppliers to agree to its Supplier Code of Conduct. In 2019, 100% of Grace suppliers with a minimum spend of 1 million USD agreed to the Grace Code or provided evidence that their codes met or exceeded Grace's. Beginning in 2020, Grace standardized the approach and now expects suppliers to conform to its Supplier Code of Conduct requirements, regardless of spend level.

To assess performance and encourage meaningful engagement against the sustainability elements of its Code, Grace established a Responsible Sourcing Program in 2021 and initiated supplier sustainability assessments. This program, which operates within the Strategic Sourcing function, is responsible for integrating sustainability considerations into the Grace procurement and supplier management process.

Grace uses a third-party supply chain sustainability service to conduct its supplier sustainability assessments. The service uses an evidence-based methodology that assesses policies, management systems, and performance in four areas aligned with the Grace Code. Between 2021-22, approximately 150 suppliers representing 63% of Grace's direct spend (2022 basis) completed a supplier sustainability assessment. The average score for all Grace suppliers was approximately 14 points higher (0-100 scale) than the average score of all companies assessed using the same platform.

The assessment results are used in several ways, including as a component of overall risk profiles for each strategic supplier, in performance monitoring tools such as balanced supplier scorecards, and to help qualify certain high EHSS-risk suppliers.

To facilitate the launch of the supplier sustainability assessments, Grace hosted two trainings on sustainable procurement for its sourcing managers and buyer teams. These trainings were attended by or made available through recording to 100% of the sourcing and procurement team.

Grace also directly engages its suppliers in dialogue and capacity building on sustainability issues. In 2021, Grace hosted two virtual supplier town halls to discuss sustainability trends and expectations. These town halls were hosted by Grace's Chief Sustainability Officer and the Vice President of Strategic Sourcing and attended by 80 supplier representatives.

GRI Content Index

Statement of Use
GRI 1 used

W.R. Grace & Co. has reported in accordance with the 2021 GRI Standards
GRI 1: Foundation 2021

The Organization and its Reporting Practices

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
2-1	Organizational details	About Grace				
2-2	Entities included in the organization’s sustainability reporting	About Grace				
2-3	Reporting period, frequency and contact point	About Grace				
2-4	Restatements of information	About Grace				
2-5	External assurance	About Grace		Environmental Performance		7

Activities and workers

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
2-6	Activities, value chain and other business relationships	About Grace Economic Value Generated and Distributed				8,9
2-7	Employees		Grace does not disclose information on employee breakdown by gender and employment type. This data is considered proprietary and not disclosed to third parties.			
2-8	Workers who are not employees		Grace does not disclose information on contractor breakdown by gender and employment type. This data is considered proprietary and not disclosed to third parties.			

Governance

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
2-9	Governance structure and composition	Governance: Board Leadership		Governance		
2-10	Nomination and selection of the highest governance body	Governance: Board Leadership				
2-11	Chair of the highest governance body	Governance: Board Leadership		Governance		
2-12	Role of the highest governance body in overseeing the management of impacts	Governance: Board Leadership		Governance		
2-13	Delegation of responsibility for managing impacts	Governance: Board Leadership		Governance		
2-14	Role of the highest governance body in sustainability reporting	Governance: Sustainability Governance			12	
2-15	Conflicts of interest	Governance: Board Leadership		Ethics and Business Conduct		
2-16	Communication of critical concerns	Governance: Board Leadership Ethics: Our Management Approach				
2-17	Collective knowledge of the highest governance body	Governance: Sustainability Governance		Governance		
2-18	Evaluation of the performance of the highest governance body	Governance: Board Leadership				
2-19	Remuneration policies	Governance: Board Leadership				
2-20	Process to determine remuneration	Governance: Board Leadership				
2-21	Annual total compensation ratio		Grace does not disclose its compensation ratio. This information is considered proprietary and not disclosed to third parties.			

Strategy, Policies, and Practices

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
2-22	Statement on sustainable development strategy	Governance: Sustainability Governance		Sustainability at Grace	12	
2-23	Policy commitments	Governance: Board Leadership Ethics Human Rights		Ethics and Business Conduct		1,2,3,4,5,6 10
2-24	Embedding policy commitments	Ethics: Our Management Approach		Ethics and Business Conduct		
2-25	Processes to remediate negative impacts	Ethics: Our Management Approach Human rights: Our Management Approach				
2-26	Mechanisms for seeking advice and raising concerns	Ethics: Our Management Approach Human rights: Our Management Approach		Ethics and Business Conduct		
2-27	Compliance with laws and regulations	Environmental Compliance: Our Performance				
2-28	Membership associations		Grace is a member of a number of trade & nonprofit associations, including the following: Verband der Chemischen Industrie (VCI) – German chemical industry association American Chemistry Council (ACC) American Fuels & Petrochemical Manufacturers (AFPM) European Chemical Industry Council (CEFIC) Chemical Industry Association of Canada (CIAC) Silica Manufacturing Association Wildlife Habitat Council National Safety Council CCPS			

Stakeholder Engagement

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
2-29	Approach to stakeholder engagement	Stakeholder Engagement		Community and Stakeholder Engagement	12	1,2
2-30	Collective bargaining agreements	Human rights: Our Management Approach			8	3

Material Topics

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
3-1	Process to determine material topics	About This Report			12	
3-2	List of material topics	About This Report				
3-3	Management of material topics	Our Management Approach				

Anti- Corruption

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
205-1	Operations assessed for risks related to corruption	Ethics: Our Performance				10
205-2	Communication and training about anti-corruption policies and procedures	Ethics: Our Performance				
205-3	Confirmed incidents of corruption and actions taken	Ethics: Our Performance				

Anti- Competitive Behavior

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Ethics: Our Performance				10

Energy

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
302-1	Energy consumption within the organization	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Management Approach Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance		7,8
302-2	Energy consumption outside of the organization		Grace does not collect energy consumption outside of the organization.			
302-3	Energy intensity	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance		7,8
302-4	Reduction of energy consumption	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance	12	8,9
302-5	Reductions in energy requirements of products and services		Grace does not disclose Reductions in energy requirements of products and services			

Water and Effluents

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
303-1	Interactions with water as a shared resource	Water: Our Commitment Water: Management Approach				7,8
303-2	Management of water discharge-related impacts	Water: Management Approach		Environmental Performance	6,12	8,9
303-3	Water withdrawal	Water: Our Performance				7,8

303-4	Water discharge	Water: Our Performance			
303-5	Water consumption	Water: Our Performance		Environmental Performance	

Emissions

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
305-1	Direct (Scope 1) GHG emissions	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance	<p>The Global Warming Potential (GWP) reference used was the IPCC Fifth Assessment Report (AR5 – 100 year). Biogenic carbon emissions are not relevant to Grace (See CDP Climate C7.1, 6.7). We include CO2, CH4, N2O, HFCs, PFCs, SF6, NF3 in greenhouse emissions calculations.</p> <p>Our reporting boundary for GHG emissions data are all manufacturing and administrative facilities (excluding warehouses and sales offices) under Grace’s operational control.</p>	Environmental Performance		7,8
305-2	Energy indirect (Scope 2) GHG emissions	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance		
305-3	Other indirect (Scope 3) GHG emissions	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance		
305-4	GHG emissions intensity	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance	<p>The Global Warming Potential (GWP) reference used was the IPCC Fifth Assessment Report (AR5 – 100 year). Biogenic carbon emissions are not relevant to Grace (See 2020 CDP Climate C7.1, 6.7). We include CO2, CH4, N2O, HFCs, PFCs, SF6, NF3 in greenhouse emissions calculations</p> <p>Grace calculates its Scope 3 emissions using the WRI Scope 3 Evaluator tool.</p>	Environmental Performance		
305-5	Reduction of GHG emissions	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance	12	8,9
305-6	Emissions of ozone-depleting substances (ODS)		This is not applicable to Grace			
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Natural Resource Management Energy, Greenhouse Gas, and Emissions: Our Performance		Environmental Performance		7,8

Waste

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
306-1	Waste generation and significant waste-related impacts	Waste: Our Management Approach		Environmental Performance		7,8
306-2	Management of significant waste-related impacts	Waste: Our Management Approach		Environmental Performance	11,12	8,9
306-3	Waste generated	Waste: Our Performance		Environmental Performance		7,8
306-4	Waste diverted from disposal	Waste: Our Performance				
306-5	Waste directed to disposal	Waste: Our Performance				

Supplier Environmental Assessment

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
308-1	New suppliers that were screened using environmental criteria	Responsible Sourcing: Our Management Approach Responsible Sourcing: Our Performance			12	8
308-2	Negative environmental impacts in the supply chain and actions taken	Responsible Sourcing: Our Management Approach Responsible Sourcing: Our Performance				

Employment

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
401-1	New employee hires and employee turnover		Grace does not disclose information on its new employee hires and employee turnover by age group, race, and region. This information is considered proprietary and not disclosed to third parties.			1,6
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	People, Inclusion, Diversity: Our Management Approach				

401-3	Parental Leave		Grace does not disclose parental leave data by gender. This information is considered proprietary and not disclosed to third parties.		
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Occupational Health and Safety

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
403-1	403-1 Occupational health and safety management system	Health, Safety and Process Safety: Our Management Approach		EHS Management System		1,6
403-2	403-2 Hazard identification, risk assessment, and incident investigation	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-3	403-3 Occupational health services	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-4	403-4 Worker participation, consultation, and communication on occupational health and safety	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-5	403-5 Worker training on occupational health and safety	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-6	403-6 Promotion of worker health	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-7	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-8	403-8 Workers covered by an occupational health and safety management system	Health, Safety and Process Safety: Our Management Approach		EHS Management System		
403-9	403-9 Work-related injuries	Health, Safety and Process Safety: Our Performance		Safety Performance		
403-10	403-10 Work-related ill health	Health, Safety and Process Safety: Our Performance		Safety Performance	3,8	

Training and Development

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
404-1	Average hours of training per year per employee	People, Inclusion and Diversity: Our Performance			4	1,6
404-2	Programs for upgrading employee skills and transition assistance programs	People, Inclusion and Diversity: Our Management Approach		Professional Development		

404-3	Percentage of employees receiving regular performance and career development reviews		Grace does not disclose its employee performance review data by gender and employee category. This information is considered proprietary and not disclosed to third parties.			
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Diversity and Equal Opportunity

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
405-1	Diversity of governance bodies and employees		Grace does not disclose its employee diversity data by gender and age group, and its salary ratio data of male and female employees by employee category. This information is considered proprietary and not disclosed to third parties.		5,8,10	1,6
405-2	Ratio of basic salary and remuneration of women to men					

Non- Discrimination

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
406-1	Incidents of discrimination and corrective actions taken	Human Rights: Our Management Approach Human Right: Our Performance	Grace does not disclose this information on employees. This information is considered proprietary and not disclosed to third parties.		5,8,10	1,6

Freedom of Association and Collective Bargaining

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Human Right: Our Performance	We do not consider our operations and value chain to be at risk of collective bargaining violations		8,16	1,3

Child Labor

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
408-1	Operations and suppliers at significant risk for incidents of child labor	<u>Human Right: Our Performance</u>			8,16	1,5

Forced or Compulsory Labor

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<u>Human Right: Our Performance</u>			8,16	1,4

Supplier Social Assessment

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
414-1	New suppliers that were screened using social criteria	<u>Responsible Sourcing: Our Management Approach</u> <u>Responsible Sourcing: Our Performance</u>			8,12	2,3,4,5,6
414-2	Negative social impacts in the supply chain and actions taken	<u>Responsible Sourcing: Our Management Approach</u> <u>Responsible Sourcing: Our Performance</u>				

Customer Health and Safety

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
416-1	Assessment of the health and safety impacts of product and service categories	<u>Product Stewardship: Our Management Approach</u>			3,6,8,9,12	8,9
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	<u>Product Stewardship: Our Performance</u>				

Customer Privacy

Disclosure Key	Disclosure Title	Section	Comment	Link	UN SDG	UN Global Impact Principle
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<u>Cybersecurity: Our performance</u>	In 2022, we did not receive any substantiated complaints regarding customer privacy breaches from external parties or regulatory agencies. We do not disclose information on data breaches.			