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## **SUSTAINABILITY REPORT 2022**



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This PDF is optimised for use with Adobe Acrobat.



## **ABOUT US**

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. The company's product focus is on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

### TWO STRONG BUSINESS DIVISIONS

As a multi-material and multi-product company, we operate two main businesses: Advanced Insulation (AI) and Engineered Foams (EF).

Our AI division delivers flexible foam solutions to insulate technical equipment used for transporting energy. The typical applications include HVAC, heating and plumbing, refrigeration, industrial, energy, commercial and residential infrastructure, acoustics as well as passive fire protection. The sustainable value created by our AI division lies primarily in the co-design of energy-efficient technical installations.

Our EF division develops and produces custom-made, high-performance and lightweight foams used across a broad range of end markets, including wind energy, transportation, infrastructure, industrial applications, sports and leisure. The main sustainable value created by our EF division is the customisation of the physical properties of semi-finished and finished components that are sold to converters and OEMs.

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## Our vision is to position Armacell as the global leader in providing innovative, technical insulation solutions and components to save energy and make a difference around the world.



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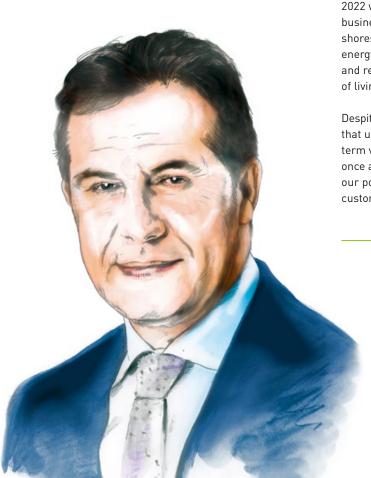
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### LETTER FROM THE CEO



DEAR READERS,

2022 was a year when we saw a new norm emerging in our business environment and private lives. The war on Europe's shores triggered an economic tsunami, leading to record-high energy and commodity prices, high inflation, interest rate hikes and recessionary trends. This in turn fed into sharply rising cost of living and significant transport and supply chain disruptions.

Despite the many unforeseen political and socio-economic events that unfolded at a galloping pace worldwide, Armacell's long-term vision remains unchanged. We have proved our resilience once again, accelerated our M&A activities and strengthened our portfolio of sustainable solutions for our global and diverse customer base.

As markets continue to be driven by growing energy efficiency awareness, our product offerings gain stronger foothold.

As markets continue to be driven by growing energy efficiency awareness and the energy generation transition, our business and product offering gain a stronger foothold, standing at the top of the list for long-lasting, sustainability-enhancing solutions for present and future needs alike.

Governments have taken wide-ranging political decisions in favour of the increased use of renewable energies and avoidance of energy waste. The European Union, for example, is committed to reducing CO<sub>2</sub> emissions by 55% by 2030 compared to 1990 levels and aims to become climate-neutral by 2050. As enhancing energy efficiency and enabling energy savings are Armacell's raison d'être, these developments bode well for the future development of the company's business and our commitment to make a difference around the world.

Armacell's sustainability efforts reflect our engagement to support ecological vitality, human well-being and economic prosperity without compromising planetary boundaries or the ability of future generations to lead healthy, safe and dignified lives.

Our corporate sustainability engagements continue to reflect and will be further developed in alignment with evolving legislative requirements, such as the European Green Deal, EU Taxonomy and the Corporate Sustainability Reporting Directive. They all demand that we deliver a material contribution to reducing greenhouse gas emissions and mitigating climate change, protecting biodiversity and the natural environment, as well as ensuring the fair treatment of our employees, suppliers and stakeholders worldwide.

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To ensure effective corporate governance and realise our principles and policies, we rely on a structure involving the highest levels of management. Furthermore, sustainability is one of the responsibilities of the highest governance body at Armacell. This structure ensures a constant and transparent flow of communication, provides strategic direction on sustainability metrics, and allows for effective management of all impacts relating to the sustainable development of our business and organisation.

In 2022, we further strengthened this strategy and internal action points for achieving our sustainability goals, and we will pursue this course in the years to come. In the R&D field, Armacell will continue to strengthen its position as the technology leader, while identifying cross-regional opportunities and adopting alternative materials and processes to propose innovative products and technologies without compromising on sustainability requirements and customers' ESG expectations.

The acquisition in 2022 of two major manufacturers of pre-insulated pipes – IZOLIR in Serbia and Austroflex in Austria – opens up the fast-growing and energy-efficient pre-insulated pipe market, which is mainly dedicated to district heating applications. Within the next decade, the deployment of district heating and cooling solutions will play a critical role in gradually phasing out fossil fuel-powered heating systems. With its technical expertise and top-notch solutions, Armacell will be playing an active role in supporting this transition.

→ »Armacell's raison d'être is to enhance energy efficiency and provide long-lasting, sustainability-enhancing solutions for present and future needs alike.

The growing energy efficiency awareness will have a positive impact on Armacell's business, as insulation materials are seen as the most efficient way to save energy. The global wind energy market is, for instance, expected to grow – with a marked expansion of offshore wind farms. This will have a beneficial effect on Armacell's business as ArmaPET® products are increasingly being used as a substitute for balsa wood in the construction of wind turbine blades.

Our clear focus on more sustainable operations has also translated into the successful launch of a number of energy-saving initiatives and business collaborations forged with leading business partners across the world to increase our use of renewable energy and install photovoltaic modules in our plants across the EMEA region in 2023 and beyond.

Our sustainability strategy is focused on four Areas of Commitment, which are all oriented to GRI Standards or Indicators: Investing in our People see page 18; Protecting our Planet see page 29; Enabling Governance see page 38; and Furthering Sustainable Growth see page 51. These Areas of Commitment govern the implementation of our sustainability activities.

The progress we have made on our sustainability journey in recent years was largely due to the efforts and commitment of the Executive Management Team and our colleagues around the world. I would like to thank all of them and further express my gratitude to our shareholders – PAI Partners and KIRKBI – for their support and commitment to Armacell's sustainable growth.

Yours sincerely.

Patrick Mathieu
President and CEO

Armacell Group

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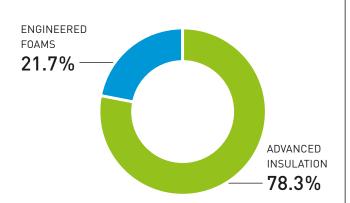
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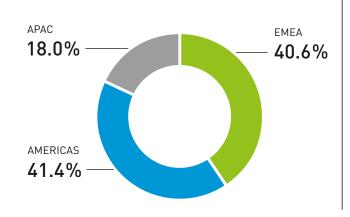
### FINANCIAL HIGHLIGHTS 2022

#### **NET SALES BY BUSINESS DIVISION**



## €806.0M TOTAL NET SALES €120.7M ADJUSTED EBITDA 15.0% EBITDA MARGIN

#### **NET SALES BY REGION**





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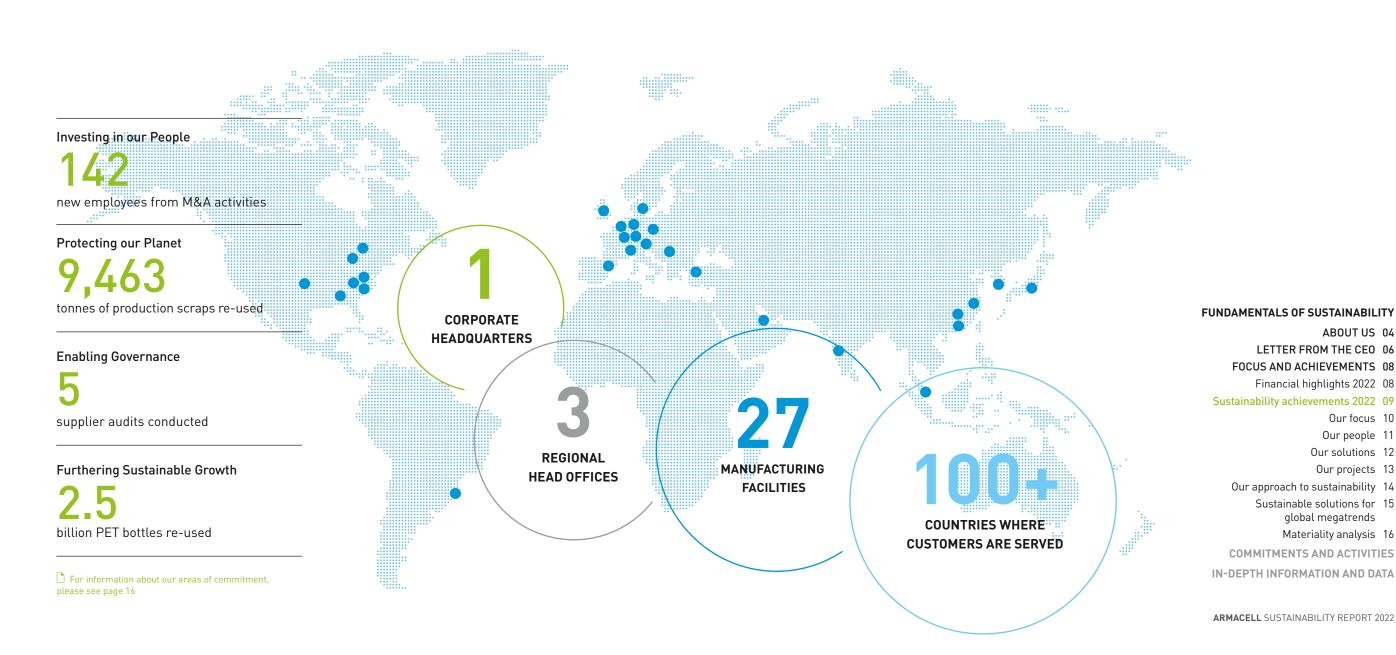
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## SUSTAINABILITY ACHIEVEMENTS 2022



## **OUR FOCUS**

## FOCUSING ON THE NEW NORM

2022 was a challenging year on many fronts. We saw a new norm emerging in our business environment and private lives. In changing times, we know how important it is to ramp up our resilience and focus on new opportunities for us and our customers.

Our commitment to enhancing energy efficiency around the world remains unchanged, and Armacell products are required more than ever – for our customers and end users. Our focus on the new norm led us to expand our portfolio, accelerate our M&A activities, boost innovation and consolidate some operations.



### Accumulated Expertise

Our technical know-how is based on decades of experience in the flexible insulation market and the multi-disciplined expertise of our highly qualified global workforce. It finds its expression in the broad portfolio of products, services and system solutions we offer in a wide range of fields. The way we work is how we apply our expertise to deliver added value to our customers and end users all over the world.



### Customer Centricity

Creating sustainable value is our overarching goal. As we continue to make progress in our sustainability journey, we strive to further expand our portfolio of sustainability-supporting products and solutions and provide an attractive offering, know-how, assistance and support to our customers around the world. Ensuring a high degree of customer satisfaction and fostering continuous exchange with our stakeholders will form the bedrock of Armacell's sustainable growth and future innovations.



### Energy Efficiency

We exist to enable energy efficiency, and our energy-saving solutions for technical equipment have become more important than ever. 2022 was the year of exciting acquisitions and innovative product launches that have broadened Armacell's portfolio. The acquisition of two major manufacturers of pre-insulated pipes, IZOLIR in Serbia, and Austroflex in Austria, opens up the fastgrowing and energy-efficient, pre-insulated pipe market, which is mainly dedicated to heating applications.







The ArmaLive centre in Singapore fosters interactive customer experience and customised training.

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## OUR PEOPLE

We hire every employee with the longterm in mind and believe that trust-based teamwork paves the way for our success



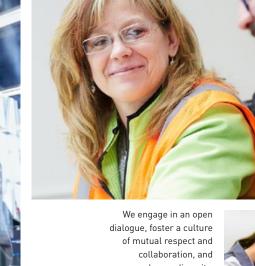
### THE GREATEST ASSET

We motivate people, develop their talents and further their skills through training opportunities. As a global company, we strive to create and maintain a positive, healthy and safe working environment. We all share a common set of core values: customer experience, commitment, empowerment, integrity and sustainability.

Building on our corporate values, our Code of Conduct describes how these values are put into practice, defines rules for everyday work and provides ethical principles to which we align our behaviour and business activities to the benefit of our stakeholders and customers.







welcome diversity



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Dedicated, highly qualified, integrity-driven employees are our most valuable asset

## **OUR SOLUTIONS**

## TRUSTED ARMACELL

Armacell's innovative and safe thermal, acoustic and mechanical insulation solutions are key to a wide range of everyday applications that bring sustainable added value to people's lives. Categorised into ten family brands, they comprise insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications, next-generation aerogel blanket technology, and passive fire protection systems. Our products and solutions help to improve the quality of life for people everywhere and make it more sustainable.



Armacell's high-performance ArmaPET® foams are made from recycled plastic bottles.



ArmaGel® HT is environmentally safe chloride-free and landfill disposable

#### **ArmaFlex®**

BRANDS

All closed-cell insulation materials based on elastomeric foam

#### **ArmaClad™**

All cladding solutions

#### **ArmaComfort**<sup>™</sup>

All insulation products for sound attenuation

### ArmaComp™

All component foams

#### **ArmaFix**<sup>™</sup>

All mounting and fixing solutions

#### **ArmaGel®**

All products based on aerogel technology

#### **ArmaLight**<sup>™</sup>

All polyethylene-based materials

#### **ArmaPET®**

All PET-based foams

#### **ArmaProtect**™

140 times more energy is saved in an ArmaFlex®

product lifetime than required to manufacture it.

All fire protection solutions

#### ArmaSound®

All industrial acoustic solutions (incl. energy)

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## **OUR PROJECTS**

## **COMMITTED TO** SUSTAINABILITY

Armacell's absolute priority is to provide sustainable solutions to our partners and customers. In the critical field of energy conservation, ArmaFlex® is enabling energy losses to be minimised in buildings such as Sathorn Square in Bangkok, Thailand.

Our ArmaPET® Eco50 insulation solution looks beyond product performance and supports energy-efficient sustainable buildings with improved comfort and safety. In the most eco-friendly means of mass transport, railways, Armacell is helping to make trains more energyefficient and cost-effective through lightweight, fire-safe ArmaFlex® Rail insulation and space-saving ArmaGel® Rail thermal and acoustic insulation.







ArmaFlex® proved a smart choice to save energy for the Nebraska State Univer-

sity stadium and is GREENGUARD® Gold Certified to low emission standards.

Netherlands), we designed single-piece façade elements as lightweight and energy-saving solutions with recycled materials.

ArmaFlex® was installed on the chilled water system of the Sathorn Square building in Thailand's capital city of Bangkok, to prevent condensation and minimise energy losses.

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## **OUR APPROACH TO SUSTAINABILITY**



We are committed to caring for the environment, pursue resource savings and work towards optimising our value chains to reduce the carbon footprint. We further uphold stringent health & safety rules and international labour standards in our operations as well as in our supply chain.

Our engagements on sustainability are aligned to legislative requirements, such as the European Green Deal, EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD). We also support COP27 climate targets and the EU's climate strategies and objectives. In our annual sustainability reporting, we follow GRI standards and further disclose information according to the Sustainability Accounting Standards Board (SASB).

#### Robust ESG governance structure

Members of Armacell's Sustainability Steering Committee (SSC) discuss progress made on our goals, targets and the overall implementation of our sustainability strategy and ambitions.

Consisting of executive management and senior employees, the committee actively promotes a culture of sustainability throughout the Group, identifies specific areas of commitment, develops sustainability focus topics, reviews and improves ESG reporting standards, while maintaining best-in-class ESG communications and positively influencing stakeholder opinions.

The SSC provides regular updates to both the Sustainability Committee of the Supervisory Board and to the Executive Team. The Supervisory Board through its Sustainability Committee is primarily responsible for providing input on the strategic direction of the SSC.

This enhanced governance structure ensures a constant and transparent flow of communication, provides strategic direction on sustainability metrics, and allows for effective management of impacts related to Armacell's sustainable development. It also fosters the exchange of ideas and opinions and enables access to expert knowledge and stakeholder consultation.

Armacell's sustainability strategy is built on four areas of commitment:

// Investing in our People
// Protecting our Planet
// Enabling Governance
// Furthering Sustainable Growth

These pillars support the implementation of our sustainability activities and guide us in directing our efforts and resources into areas where we can bring meaningful and long-lasting contributions.

In this context, we further focus on five of the United Nations Sustainable Development Goals (SDG) – SDG 8, 9, 12, 13 and 14 – that are intrinsically linked to our business  $\square$  see page 67.

In line with our strategic sustainability concept, we report each year on our environmental, social and governance performance in our Annual Report (☐ Annual Report 2022, pages 26 – 29) and Sustainability Report.

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## SUSTAINABLE SOLUTIONS FOR GLOBAL MEGATRENDS

To support Armacell's growth and continue to make a difference around the world, our energy-saving, fire-stopping, and noise- and vibration-attenuating solutions are addressing six global megatrends.



#### SUSTAINABILITY

Sustainable development requires an integrated approach that takes into consideration environmental concerns and climate mitigation, social development, along with economic prosperity. Embracing more sustainable models opens up opportunities for Armacell to look for alternative materials, green solutions or bio-based products to serve our customers globally.



#### LIGHTWEIGHTING

In many industries, lightweighting is a must to reduce  $CO_2$  emissions and use resources more efficiently. Cars, for example, were 38% heavier in 2015 than in 1970. Reducing their weight to 1970 levels will save 1,219 megatons of  $CO_2$  by 2050, lower fuel costs for consumers, and help achieve emission and environmental footprint targets.



#### URBANISATION

The UN forecasts that 68% of the world's population will be urbanites by 2050. Every year, tens of millions move from rural to urbanised areas. The demand for urban planning and housing is increasing energy distribution requirements and the need for high-performance insulation products.



## ACOUSTIC COMFORT & VIBRATION CONTROL

The more urbanised societies become, the more people suffer from excessive noise and vibration. More and more noise pollution regulations require the kind of custom solutions Armacell can provide to enhance acoustic comfort and vibration control.



#### **ENERGY EFFICIENCY**

Across the globe, ever-stricter legislative and regulatory requirements to enhance energy efficiency are driving the demand for Armacell's advanced insulation solutions. Technical equipment is the second-most important source of energy losses worldwide and effective insulation the #1 energy-saving opportunity to reduce greenhouse gas emissions.



#### RENEWABLE ENERGIES

Renewable energies are instrumental in the global transition to a low-carbon economy and resource-efficient path. The green revolution, driven by the deployment of wind, solar and biomass, is accelerating at full speed and will account for almost 95% of the increase in global power capacity through 2026, with solar photovoltaic providing more than half.

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## MATERIALITY ANALYSIS

#### Progressing on our ESG roadmap

At Armacell, we exist to enable energy efficiency for equipment. As a global leader in high-performance insulation materials, we develop innovative and safe thermal and mechanical solutions that create sustainable value for our customers and make a difference around the world. Due to the nature of our business, our focus predominantly lies on sustainability topics relating to climate, energy and emissions.

Despite a complex year of fundamental change and a new norm emerging in the business world and private lives alike, we managed to stay on the course of our sustainability journey and pursued our long-term growth strategy. We concentrated our efforts on four main areas of commitment that are embedded in our business and everyday work, we further developed our key environmental, social and governance (ESG) metrics and consolidated our internal reporting processes.

We also set specific regional targets for environmental topics, intending to further optimise our operations, minimise our carbon footprint and reduce the consumption of natural resources across the Group. To achieve our sustainability objectives, we also launched key recycling initiatives involving customers, further enhanced our circular manufacturing mindset and made progress in adopting a greater share of renewable energy in our manufacturing.

#### Our standards and commitments

At Armacell, we are committed to the highest levels of ethics and integrity in the way that we do business. Our online whistle-blowing portal, where employees and third parties can report any violations of the law, our Code of Conduct or any illegal business practices, reflects our culture of openness and accountability.

An important social topic we strive to continuously develop is the increased safety awareness of our employees to ensure trouble-free operations and protect our people from harm. Our twice-yearly Global Safety Day events allowed our manufacturing teams to identify major risks, discuss health and safety performance levels and propose new ways of promoting our zero-accident mindset.

#### Trusted partner in energy efficiency

In 2022, we continued to invest in innovative products and green technology solutions. We entered the energy-efficient and fast-growing district heating market in Europe, standing to become a leading provider of pre-insulated pipes – a technical prerequisite for district heating and cooling networks as well as for specific applications such as biogas-fuelled heat and power cogeneration or industrial process pipelines.

In our interaction with customers, we spent the last twelve months identifying and formulating key ESG questions and sustainability topics that would allow us to collect pertinent data and truly understand customers' expectations in this field, today and in the future. To this end, in our latest survey, we invited our customers to share their views and opinions on Armacell's ESG performance.

In 2022, we also conducted a comprehensive assessment of our direct and indirect emissions (Scope 1, 2, and 3). This important achievement allows us to reinforce Armacell's carbon strategy and will help us define a clear path towards reducing our carbon emissions in the years to come. Along with conducting a full Scope 3 carbon footprint assessment, our engagement with suppliers on ESG topics has strengthened significantly from one year to another. We made important progress in assessing the level of compliance of our suppliers: nearly 70% of suppliers signed our Supplier Code of Conduct or issued a statement deemed equivalent to our standards and expectations. In addition, we audited a first set of key suppliers.

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Armacell is committed to a culture that inspires employees to give their best at work and enjoy long-lasting, meaningful and successful careers. We believe in fairness, equal opportunities, and open dialogue – values that support diverse opinions, foster fruitful interactions and enable continuous improvement and innovation.

Besides promoting a motivating and engaging workplace, we uphold stringent health and safety rules to protect our employees from harm, enable them to do their work appropriately and reflect our zeroaccident mindset. With the support of our workforce, we strive to be an attractive partner for local communities by donating time, energy and resources to causes that embed our values.

**GRI** 2-7, 3-3, 401-1, 403-1, 403-2, 403-5, 403-6, 403-9, 404-1, 404-2, 404-3, 405-1, 413-1

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### OUR COMMITMENT TO OUR PEOPLE

// Providing a **safe place** to work

// Promoting employee satisfaction and engagement

// Fostering equal opportunities to grow and succeed at all levels of the organisation

// Supporting local communities

#### Making employee safety and well-being a priority

The safety of all employees is of paramount importance to Armacell. To provide a safe and healthy working environment for our workforce, we comply with the relevant national and international occupational safety and health (OSH) systems. We see such legislation and mechanisms for ensuring compliance as an important component of our overall policy and management arrangements. In 2022, managers and employees were regularly trained in applying appropriate OSH management principles and methods to improve Armacell's health and safety performance. Moreover, our OSH systems are being continuously improved through a training and information network that interlinks all managerial staff who are responsible for our manufacturing facilities.

As a reflection of our zero-accident mindset, high OSH standards help us to manage risks and have a positive impact on our employees' motivation, well-being and satisfaction, the quality of their work and our products, as well as on our company's reputation.

#### Driving motivation and people development

Embedded in our culture of dialogue and engagement, global bi-annual employee surveys have been carried out at Armacell since 2012. These voluntary and anonymous surveys allow us to better understand employee experiences, improve our work

environment and ensure we have a pleasant and motivating place to work for everyone. In recent years, we have put great emphasis on training, collaboration and enhanced working conditions. This demonstrates our commitment to fostering and sustaining a culture of openness – one that recognises people and invests in their growth and satisfaction.

Armacell carried out a new internal global survey in 2022 from 21 June to 6 July, which included a total of 48 questions. The response rate of the 2022 employee survey was 84.2%, based on 2,711 participants. This indicates a high level of interest among colleagues to share their thoughts, express their concerns, and propose new ways to continue to make a positive impact for the company and their teams alike.

#### Equal opportunities based on individual development

Regular performance and development reviews form the foundation of the Armacell Group's personnel and career development strategy. They enhance our company's performance and, at the same time, help to improve employee satisfaction.

We support our employees' individual professional development, enhance their skills and promote young talent internally. When filling management positions, we first consider internal promotions. In addition, we place a high priority on staffing management and employee positions locally.

#### Donating time and energy around the world

Worldwide, Armacell participates in local initiatives year-round and supports different causes in more than 40 countries where we have a physical presence. Our employees are working to improve the quality of life of local communities and provide them with practical support. Through their volunteering activities, our employees dedicate time, energy, expertise and resources to projects supporting a good case. Specific examples include initiatives that protect the environment and enhance biodiversity, promote energy efficiency and a responsible consumption of natural resources, support children causes, and help underserved communities to improve their everyday lives.

# »We are committed to a culture of openness and continuous engagement.

The annual Global Armacell Day is our flagship event and a major opportunity to foster meaningful links with the local community. Featuring a global theme every year, Global Armacell Day 2022 celebrated the important role of biodiversity and natural ecosystems to support our everyday lives. In 2023, we will concentrate our efforts on addressing the global megatrend of energy efficiency.

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## PROVIDING A SAFE PLACE TO WORK

#### Goal: Aim for zero accidents every year

KPI: Lost-time accidents frequency index

**7 GRI** 403-1, 403-9

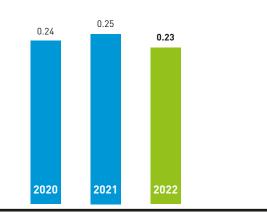
**<0.22 LTAs** Target 2023

#### Promoting a zero-accident mindset

In striving to achieve our goal of zero accidents, Armacell undertook a number of measures to identify potential hazards, perform specific risk assessments and increase its employees' awareness of potential risks. In 2022, they included:

- // Establishing and maintaining high standards to ensure the safety of our employees, assets and people living close to our sites.
- // Identifying, analysing and managing health and safety hazards and risks in order to mitigate or, if possible, eradicate them.

#### LTA FREQUENCY INDEX<sup>1</sup>



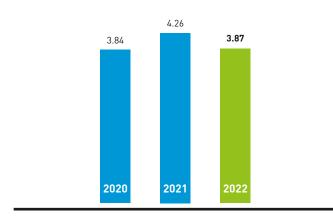
// Establishing processes and procedures to improve working

- // Educating and training employees, subcontractors and anyone entering our sites on the applicable health and safety standards.
- // Responding promptly to any employee concerns about health and safety matters.

While health and safety are a collective responsibility across the Group, at plant level, the highest occupational safety and health standards are upheld and systematically implemented by the plant manager or the local health and safety manager. In the event of an accident, they also monitor the evolution and report on the nature and incidence of such events.

The health and safety of our employees are paramount. The generally positive trends in our occupational safety statistics highlight this. The 2022 data on safety aspects cover 23 of our 27 manufacturing plants.

#### LTA GRAVITY INDEX<sup>2</sup>



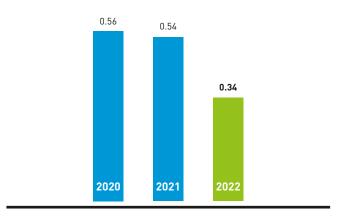
LTA Frequency Index: Between 2020 and 2022, we saw a generally stable frequency index of lost-time accidents (LTA) averaging 0.24. This reflects our continuing commitment to maintaining high standards and enforcing strict policies and regulations. In 2022, we reported an LTA frequency index of 0.23 (down from 0.25 in 2021) and had no fatal incidents or irreversible injuries. Armacell's target in 2023 is to lower the lost-time accidents frequency index to <0.22.

**LTA Gravity Index:** With an average of 3.99 over the past three years, the number of lost workdays per 100,000 working hours has seen a fairly stable evolution. In 2022, it was down to 3.87 from 4.26 in 2021.

Medical Treatment Frequency Index: The number of accidents leading to an absence from work of ≤1 day per 100,000 working hours fell to 0.34 in 2022, down from 0.54 in 2021.

In 2022, Armacell reported 12 fire near misses. The incidents remained within the site's boundaries and had no public impact.

#### MEDICAL TREATMENT FREQUENCY INDEX<sup>3</sup>



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<sup>&</sup>lt;sup>2</sup> Number of lost workdays per 100,000 working hours.

<sup>&</sup>lt;sup>3</sup> Number of accidents with absence from work of ≤1 day per 100,000 working hours.

Lost-time accidents (>1 day).

#### PROVIDING A SAFE PLACE TO WORK

#### Goal: Increase safety awareness

**KPI: Training and information sessions** 

**7 GRI** 403−2, 403−5

100% TRAINED Target 2023

#### Heightening safety awareness

"Safety First" is a practical statement that has a real echo in consolidating Armacell's strong safety and health culture and a key precondition for achieving the goal of zero accidents. Employees working in production environments are provided with workplace-specific safety training and regular opportunities to revisit internal protocols. All external personnel are given the relevant safety information in advance, and Armacell's regular contractors are supplied with specific safety guidelines.



Furthermore, all newcomers to the company are provided with specific safety information as part of their onboarding process. Of Armacell's 3,390 employees, all but the global headquarters and regional office staff (white-collar employees) have been covered by the company's safety training measures.

Constructive dialogue, mutual respect and complete transparency are key to creating a safe and healthy working environment, to which both our management staff and operators have greatly contributed.

#### Fostering occupational health

As part of Armacell's WAM programme, which promotes excellence and continuous improvement in manufacturing and operations, we follow a staged 7-step development strategy through three main stages: Reactive – Preventive – Proactive.

When it comes to the safety and well-being of employees, we have devised an internal programme which essentially addresses topics such as job risk assessment and health assessment for all employees, an active programme to reduce noise exposure, dust and chemical exposure, health and

Twice per year, local manufacturing teams revisit safety protocols and discuss current health and safety performance at plant and global levels alike.



#### // HIGHLIGHTS

The occupational health and safety management systems of six plants – four in APAC and two in EMEA – are currently certified to ISO 45001 and the remaining ones follow the Safety Pillar of the World-class Armacell Mindset (WAM) programme, which is aligned with the international standards and requirements laid down by ISO.

In 2022, a Platinum Safety Excellence award was offered to Armacell in the USA by the National Insulation Association (NIA). This is the highest recognition the NIA awards for programmes ensuring the well-being of employees and safe working environments.

well-being campaigns, as well as the assessment of ergonomic risks. As our manufacturing plants make progress on their journey to excellence and fully incorporate the WAM mindset, dedicated health and safety as well as occupational well-being initiatives will be developed at each location to benefit and respond to the needs of employees.

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## 23

### FOSTERING EQUAL OPPORTUNITIES TO GROW AND SUCCEED AT ALL LEVELS

#### Goal: Promote employee competences

KPI: Training and career development

**7 GRI** 404-1, 404-2

100% COVERAGE OF EMPLOYEES Target 2023

#### Facilitating training

We are dedicated to developing the capabilities and competencies of our people through a wide variety of training programmes. In 2022, 19.2 hours of training per employee were implemented on average (2021: 18.2 hours), covering topics such as leadership, compliance, demand generation, technology, global internal processes and safety.

Over the past few years, we have carried out global training programmes such as Leadership@Armacell for more than 500 managers, Demand Generation for more than 300 employees and Global Process for over 100 employees.

Depending on roles and responsibilities, employees take part in training linked to our company-specific World-class Armacell Mindset (WAM) programme, which is of crucial importance to all business processes worldwide and has been deployed since 2013.

#### Developing skills

In line with local employment conditions, job requirements and our employees' own career interests, personal development measures are available to our workforce around the world. Regular training is organised on topics such as product manufacturing, shop floor safety, strategic selling, demand generation and compliance aspects of our business.

Nearly 1,000 employees were trained on compliance topics in 2022. They participated in a range of e-learning modules and digital training on topics such as data protection and anti-money laundering regulations, the code of conduct, fair competition, sanctions, anti-bribery and anti-corruption rules. They also read news and updates and accessed educational materials on Armacell's rules and policies via the Group's internal communication platform. 520 of these participants attended face-to-face training sessions where they were encouraged to ask questions and engage in conversations relevant to their roles and place of business.

As part of our efforts to protect corporate data, employees complete a number of online and digital courses on how to detect phishing attempts, protect themselves from social engineering threats and manage information security inside and outside the office. They are taught how to recognise and correct inappropriate behaviour, identify suspicious situations, and know what to do if something goes wrong. In addition, employees are required to read and sign policies relating to information security, internet access security and the use of mobile and/or personal devices for work purposes.

The Armacell Group organised two cyber security training campaigns in February and October 2022 to raise awareness and educate employees worldwide on how to protect internet-connected systems such as hardware, software and data from cyber threats. These courses, which varied in length and scope, provided information on the latest and most widespread hacking techniques and enabled employees to recognise security threats and malicious attacks. Across the two campaigns, more than 2,000 employees were educated on how to keep Armacell's corporate data safe and enforce our IT security at all times.

→ We support our employees' professional development, enhance their skills and promote young talent.

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## 24

#### FOSTERING EQUAL OPPORTUNITIES TO GROW AND SUCCEED AT ALL LEVELS

#### Goal: Continued emphasis on local teams

KPI: Leadership team staffed locally

**7 GRI** 401-1, 405-1

80% OF LEADER-SHIP TEAM Target 2023

#### Valuing employees through succession planning

Through our people management system Workday, we monitor our talent management, compensation and recruitment, as well as the training and equal opportunities for development that are provided to each and every employee irrespective of their gender or category. In 2023, we intend to fill 60% of positions for plant and general managers internally.

#### Continuing the emphasis on local management and personnel

As a globally operating and locally oriented company, Armacell strives to hire local employees and management staff and, in this way, contribute to the economy and social fabric of the locality.

Moreover, by strengthening the company's presence in local markets and enabling a better understanding of local needs, this recruitment strategy is also good for business. As part of our continued emphasis on local teams, our 2023 goal is for 80% of the leadership teams to be staffed locally.

# → »70+ nationalities contribute to Armacell's success every day.

In 2022, Armacell reported a net job creation of 133 – exclusively driven by acquisitions – versus an organic net job creation of 104 in 2021. The employee turnover rate (voluntary and involuntary leavers) was 22% in 2022, up from 19.8% in 2021.

Armacell fully appreciates the advantages of a diverse workforce. They include a broader selection of qualified job applicants, a higher level of identification with the company, and differing perspectives towards customers and the markets we target.

The degree of global diversity already practised is underlined by the fact that as of 31 December 2022, 3,390 employees representing 70+ nationalities were working for the Armacell Group in 44 countries across four continents. This includes regular, full-time contracts and apprentices.

We strive to develop their talents and further their skills irrespective of gender, social or ethnic origin, sexual orientation, religion, ideology or age. Moreover, we do all we can to cultivate a work climate of mutual respect and trust to ensure diversity is lived out in practice.

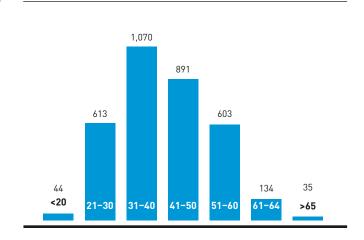
At the end of 2022, 22.4% of our global workforce and 24.6% of our managers were women. The comparative figures for 2021 were 22.5% and 22.2% respectively. At board level, 20% of the members were women, up from 10% in 2021.

We welcome and support an age-diverse workforce that drives our performance, collaboration and knowledge-sharing to foster a strong talent pipeline for our company's long-term success. 19.4% of Armacell's employees are under 30, while 22.8% of our workforce are over 50 \(\sigma\) see page 78.

#### Disabilities

Disability data are only partially available, and in most countries where Armacell operates, employees are not required to volunteer such information. We seek to reasonably accommodate employees who report any disabilities and are committed to offering a decent working environment that allows them to perform their work-related tasks.

#### AGE DIVERSITY

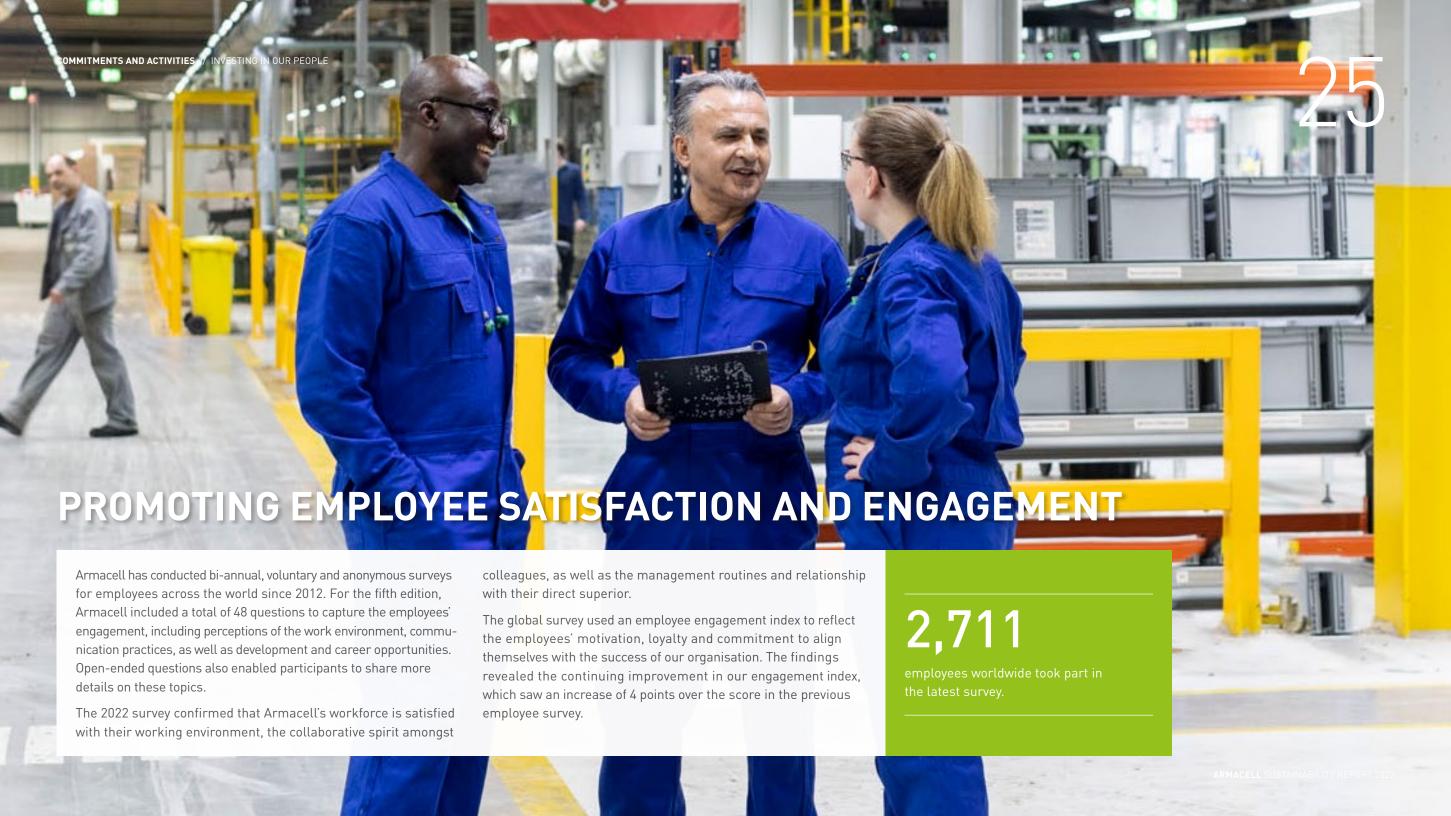


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#### FOSTERING EQUAL OPPORTUNITIES TO GROW AND SUCCEED AT ALL LEVELS

#### Goal: Employee performance feedback

KPI: Track annual performance reviews for all employees

**7 GRI** 404-3

92% COVERAGE Target 2023

#### Providing annual feedback

An annual feedback process for office staff and production workers strengthens our employees' identification with and engagement for the company and is also evidence of good and effective management practice. In 2022, the coverage rate including plant workers was above 90%, which was little changed from the 2021 figure.

Every year, Armacell's employees attend a dedicated meeting with their manager during which individual goals, achievements and overall performance are reviewed and discussed. This exchange is also a good opportunity to reflect on mobility aspects and the career development interests of each employee. In 2023, we will strive to further extend the coverage of employees receiving annual feedback across the Group.

#### Global employee survey

As the first survey to take place after the global pandemic, the 2022 edition was an opportunity to take the pulse of the organisation and collect employees' perceptions on working at Armacell today and tomorrow.

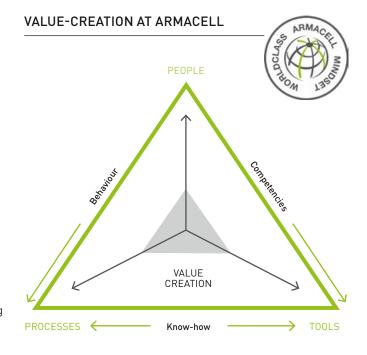
To continue the dialogue, Armacell employees were invited to debriefing sessions and encouraged to exchange in more detail about the results and action plans devised at each location. Following the completion of the 2022 global employee survey, in 2023 and beyond, we will concentrate our efforts on launching and implementing a range of action points and initiatives to respond to the improvement ideas and wishes expressed by employees.

»Regular performance and development reviews form the foundation of our personnel and career development strategies.

#### New ways of working

Over the past few years, Armacell has implemented a number of measures and invested in the necessary technology to enable white-collar employees to work remotely either on a regular or ad hoc basis. Due to the nature of their work, our manufacturing teams are mostly based at our plant locations.

Furthermore, in 2022, we formalised our internal guidelines regarding hybrid work and implemented new ways of working in most European countries where we operate. In 2023, we will further implement these rules across the EMEA region. In APAC, rules relating to remote and flexible working have been devised to reflect cultural and local realities, while in North America, hybrid work is already in place at a number of locations. In future, specific guidelines will be launched to address local policies and needs.



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### IMPROVING THE QUALITY OF LIFE IN LOCAL COMMUNITIES

#### **AMERICAS**

On Global Armacell Day 2022, colleagues in Chapel Hill (NC), USA, teamed up with the Eno River Association to plant small native seedlings in the Blue Indigo Preserve and had the chance to go on a half-mile (0.8 km) walk along a new trail. Furthermore, the team organised a joint event with colleagues based at the Mebane (NC) plant to raise funds for the Alamance County chapter of the Habitat for Humanity non-profit organisation.

The plant In Conover (NC), USA, organised a farmer's market where employees could pick fresh produce for themselves and their families, enjoy a barbecue for lunch and take part in a presentation addressing food and biodiversity.

In Florianopolis, Brazil, employees volunteered with the non-profit organisation Route to clean up the local beach and raise awareness of the need to protect the natural environment. Together with colleagues from the São Paulo office, the team carried out a second initiative to collect lids and plastic packaging, this time in collaboration with the ECOPET association.



Team USA were eager to do some planting and discover

#### APAC

Our Indian team visited a nature park near Pune, while some Armacell colleagues also participated in planting vegetable crops at the plant's premises and gave away local species samplings to support biodiversity in the region.

In China, local colleagues from our three plant locations enjoyed a variety of outdoor group activities, hosted a barbecue and explored the natural environment surrounding the Armacell premises. In South Korea, the team organised a litter-picking activity around the plant. Colleagues in Singapore organised team games to encourage greater social interaction and later went for a walk at the beach to enjoy the local landscape. In Japan, Armacell employees celebrated Global Armacell Day 2022 by visiting the Sumida Aquarium in Tokyo where they learnt more about marine biodiversity.



#### **EMEA**

Our team in Bahrain celebrated Global Armacell Day 2022 by hosting a family event, which included a quiz on the topic of biodiversity and tree-planting on the premises. Employees were given tree samplings to honour the event's theme.

Our teams in France, Germany, Italy and the United Kingdom hosted events dedicated to nature conservation, flower-planting, agricultural activities and, in some cases, built and decorated houses for insects and wild bees. In Münster, the team undertook some clean-up activities. The colleagues in Poland hosted a range of activities, also involving families and the local community, to raise awareness of the importance of biodiversity and the preservation of clean forests.

In Spain, the team in Begur marked Global Armacell Day 2022 by tasting medicinal plants and educating themselves about the benefits of such plants, while in Türkiye, employees hosted a picnic. The team in Belgium welcomed a small producer of fruits and vegetables to their premises and enjoyed the local, organic produce on offer. A few days later, a second initiative by the team in Thimister hosted a food truck offering vegetarian produce on the premises.



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Optimised packaging

25%

reduction in packaging volume for insulating tubes

Recycled plastic

92%

recycled PET used in our PET foams

**Energy recovery** 

17%

of production waste converted to energy



As a leading provider of technical insulation, we make our mark in the industry by designing solutions that help customers pursue their own sustainability ambitions, be it by saving energy, achieving acoustic comfort, enhancing fire safety or reducing  $CO_2$  emissions. As part of our vision to make a difference around the world, we strive to constantly innovate in addressing megatrends such as urbanisation, light-weighting and energy efficiency.

We are pursuing concrete opportunities to embrace more sustainable practices in our own manufacturing footprint. Over the past year, we have optimised our value chains to further enhance decarbonisation, increased the number of recycling initiatives internally, and taken steps to boost the consumption of renewable energy.

**GRI** 3-3, 301-2, 302-1, 302-4, 305-1, 305-3, 305-5, 306-1, 306-2, 306-3, 306-4, 306-5

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COMMITMENTS AND ACTIVITIES // PROTECTING OUR PLANET

## 30

## OUR COMMITMENT TO THE ENVIRONMENT

// Contributing to the **transition to a low-carbon economy** and reducing CO<sub>2</sub> emissions

// Designing solutions that preserve natural resources

// Promoting recycling and accelerating our journey towards a circular economy

#### **Environmental management systems**

In line with the Environmental Pillar of our World-class Armacell Mindset (WAM) excellence programme, we monitor and collect key performance indicators (KPIs) on energy use,  $\rm CO_2$  emissions, water, gas and electricity consumption, as well as waste management. These metrics allow Armacell to optimise manufacturing processes, decarbonise operations and further implement a circular mindset.

Since Armacell's raison d'être is to enhance energy efficiency and enable energy savings for a highly diverse customer base, as a global organisation we are continuously working to reduce our carbon footprint and proactively support initiatives that address climate change. We are committed to continuous improvement processes to reduce negative environmental impacts. At all our production sites, we are undertaking a range of measures to reduce production-related water withdrawal and energy consumption, while increasing the use of electricity generated from renewable sources. Future reporting will highlight the key partnerships we have forged and long-term initiatives devised to generate onsite solar energy and increase the mix of green energy we consume across our manufacturing sites.

#### Preserving the natural environment

Our commitment to protecting the environment and preserving planetary resources is also reflected in our internal environment, health and safety policy, which includes the following major goals:

- // Minimising our consumption of natural resources.
- // Minimising the energy and water usage in our buildings, vehicles and processes.
- // Minimising waste and re-using or recycling as much of it as possible.
- // Verifying and evaluating the environmental impact of new products along with the efficiency of existing procedures and actions taken.

Armacell's environmental and energy management systems are regularly audited by external authorities. Due to the reorganisation of our manufacturing footprint, 13 of our plants (as opposed to the total of 14 reported in 2021) have management systems certified to the international environmental management standard ISO 14001. Two plants in Germany are additionally certified to the energy management standard ISO 50001. All our manufacturing sites follow the strictest national regulations and implement continuous improvement processes as part of our WAM programme.

→ »We work continuously to reduce the use of resources in our production.

Before we provide a detailed account of our environmental metrics for 2022, it is worth adding that the Group's numbers over the past three years have been restated to avoid double counting from our mixing operations and thus provide a more refined and transparent environmental accounting.

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## 31

### CONTRIBUTING TO A LOW-CARBON ECONOMY

#### Goal: Reduce production-related CO<sub>2</sub> emissions

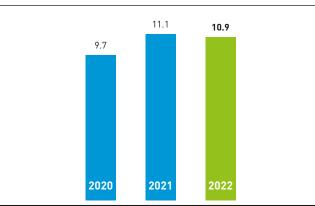
KPI: Tonnes of CO₂ emissions

**7 GRI** 305-5, 305-2

**-2.5% tC0<sub>2</sub>e**Target 2023

As part of Armacell's optimisation processes and thanks to our innovative technologies, we are continuously working towards increasing the range of low-carbon and alternative materials used in our manufacturing. Wherever possible, we favour recyclates in our PET and polyethylene (PE) processes, prioritise polyvinyl chloride (PVC)-free products and embrace the use of recycled materials in our flexible elastomeric foam (FEF) lines.

## CO<sub>2</sub> EMISSIONS<sup>1</sup> in kg (Scope 1 & 2) per tonne of finished goods



<sup>1</sup> Data covers 18 of our 27 plants. All numbers were restated

The Group's numbers over the past three years have been restated to avoid double counting from our mixing operations and thus provide a more refined and transparent environmental reporting.

For example, by using recycled PET flakes, our manufacturing process for the ArmaPET $^{\circ}$  Struct generates 37% fewer CO<sub>2</sub> emissions than similar processes using a virgin PET raw material base.

In 2022, we reported 10.9 kg of  $CO_2$  emissions per tonne of finished goods, a slight decrease from the 11.1 kg of  $CO_2$  emissions recorded in 2021.<sup>1</sup>

#### Reducing Scope 1 and 2 CO<sub>2</sub> emissions

To calculate Armacell's direct and indirect  $CO_2$  emissions, we use the Greenhouse Gas Protocol created by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). This allows us to implement a consistent approach for corporate carbon accounting and reporting. Every year, we thus report on Scope 1, Scope 2 and Scope 3 GHG emissions. Scope 1 refers to the direct emissions from our own manufacturing operations, whereas Scope 2 refers to indirect emissions from the generation of purchased energy.

In 2022, our total Scope 1 emissions stood at 34,818 tonnes of carbon dioxide equivalent ( $tCO_2e$ ), a standard unit for measuring carbon footprints. The figure was higher than the 31,470  $tCO_2e$  we reported in 2021.

Furthermore, our Scope 2 emissions in 2022 were  $56,226 \text{ tCO}_2\text{e}$ , up from  $55,155 \text{ tCO}_2\text{e}$  reported in 2021. Our total CO<sub>2</sub> emissions for Scope 1&2 were  $91,045 \text{ tCO}_2\text{e}$  in 2022, as opposed to  $86,625 \text{ tCO}_2\text{e}$  in 2021.

#### Addressing Scope 3 CO<sub>2</sub> emissions

In 2022, Armacell commissioned an external consultancy firm to quantify the levels of other indirect greenhouse gas (GHG) emissions associated with its operational activities. According to the GHG Protocol, Scope 3 emissions can be split into a maximum of 15 distinct emission categories. Based on Armacell's business, 10 categories were deemed relevant, of which category 1 – Purchased Goods and Services (421,652 tCO<sub>2</sub>e), category 10 – Processing of Sold Products (61,055 tCO<sub>2</sub>e), and category 12 – End-of-life Treatment of Sold Products (141,606 tCO<sub>2</sub>e) were identified as the most material aspects of our business in terms of carbon emissions.

# »Armacell is working towards a reinforced carbon strategy.

The total Scope 3 footprint assessment for 2022 totalled 719,682  $tCO_2e$ . As this figure captures a broader assessment of our indirect emissions, it is not comparable with the partial Scope 3 footprint of 82,491  $tCO_2e$  we reported in 2021.

This is also the reason why the figures of all three scopes totalled 907,535 tCO $_2$ e in 2022, whereas the total amount of CO $_2$  emissions we recorded in 2021 was only 169,116 tCO $_2$ e.

We will address reduction targets and continuous improvement measures for Armacell's carbon footprint in future reporting. In addition, Armacell is working towards submitting a formal commitment to the SBTi to reinforce our carbon strategy.

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COMMITMENTS AND ACTIVITIES // PROTECTING OUR PLANET

## 33

### DESIGNING SOLUTIONS THAT PRESERVE NATURAL RESOURCES

Goal: Reduce production-related water consumption

KPI: Litre per tonne of finished goods

**7 GRI** 303-5

**-1.5% L/TONNE** Target 2023

Goal: Reduce production-related energy consumption

KPI: MJ per tonne of finished goods

**7 GRI** 302-1, 302-4

-2.8% MJ/TONNE Target 2023

Resource savings and energy efficiency are among the outstanding environmental objectives Armacell pursues in the evolution of its production sites and methods. We define the water consumed as the amount of water removed for use and not returned to its source. In the majority of our locations, we rely on third-party water systems for production purposes.

In 2022, the total water consumption at 18 of our 27 plants was  $167,946 \text{ m}^3$ , down from  $175,001 \text{ m}^3$  in  $2021 \square$  see page 79.

In terms of water consumption per tonne of finished goods, in 2022, we reported the value of 19.5 litres, a light decrease on the 20 litres recorded in 2021.

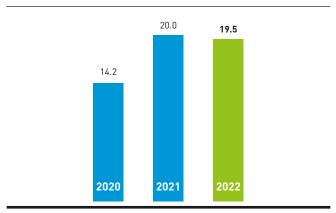
#### Managing our energy consumption

In line with our WAM excellence programme, we have implemented objectives and action plans to monitor and reduce consumption and improve primary energy efficiency (e.g. gas, coal, diesel, heating oil and electricity).

The total energy consumption in 2022 was 482,097,408 MJ, which was slightly higher than the 2021 figure of 488,200,145 MJ.

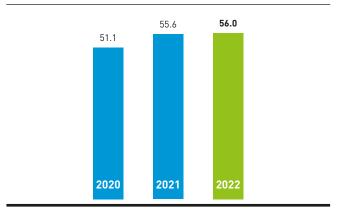
→ »We prioritise resource savings, promote the adoption of renewable energy sources and support multiple recycling initiatives.

#### WATER CONSUMPTION<sup>1</sup> in L per tonne of finished goods



 $<sup>^{\</sup>mbox{\tiny $1$}}$  Data covers 18 of our 27 plants. All numbers were restated.

## **ENERGY CONSUMPTION**<sup>1</sup> in MJ per tonne of finished goods



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#### DESIGNING SOLUTIONS THAT PRESERVE NATURAL RESOURCES

Armacell mainly consumes electricity and natural gas in its production processes. In 2022, our electricity consumption was 1,555.2 kWh per tonne of finished goods, which was slightly higher than the 1,546.1 kWh we recorded in 2021 (see graph below and page 79). In terms of gas consumption, we recorded a total of 203.8 m³ per tonne of finished goods in 2022, which was slightly higher than the 196.2 m³ reported in 2021 see graph below and page 79.

Our total electricity consumption in 2022 was 133,866 kWh, down from the 135,562 kWh we reported in 2021. Our gas consumption in 2022 was 17,538 m³, which marked a slight increase from 17,205 m³ in 2021 see page 79.

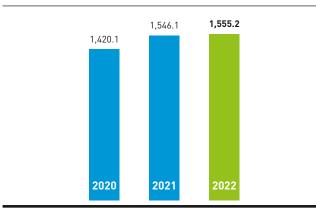
#### Minimising waste

Armacell essentially has two levers to enable and support our path to a circular economy. On the one hand, we are increasing the recycling volume of our production-related waste and, at the same time, further expanding the use of recycled PET (rPET) for our ArmaPET® products. Through initiatives such as recovering wastewater or implementing a pallet return policy for customers, we avoid generating waste at our own production sites,

reduce negative waste impacts, and support the circular economy in our upstream value chain. Another example comes from our plant in Panyu, China, where powder from the dust collectors is re-used as raw material. This saves 7.5 tonnes a year in waste and raw material terms. In India, the Pune-based team launched a sustainability-supporting service for customers through which Armacell takes back insulation scraps from onsite applications and reintegrates them into the manufacturing process for acoustics products and solutions. A total of 10 tonnes of insulation scraps were recycled in the pre-launch testing phase of this initiative in 2022.

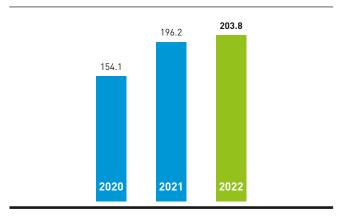
# **REFUSE RE-USE REDUCE RECOVER RECYCLE**

## **ELECTRICITY CONSUMPTION**<sup>1</sup> in kWh per tonne of finished goods



<sup>&</sup>lt;sup>1</sup> Data covers 18 of our 27 plants. All numbers were restated.

## GAS CONSUMPTION<sup>1</sup> in m<sup>3</sup> per tonne of finished goods



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## 35

### ACCELERATING OUR JOURNEY TOWARDS A CIRCULAR ECONOMY

Goal: Increase the recycling of productionrelated waste

KPI: Percentage of waste recycled

**7 GRI** 306-4

+3% RECYCLED Target 2023

Goal: Increase recycled PET consumption

KPI: Percentage of rPET in ArmaPET® foams

**对 GRI** 301-2

92% OF rPET Target 2023

#### Recycling waste

As part of the Environmental Pillar of the World-class Armacell Mindset (WAM) programme, we strive to continuously re-think, avoid generating, reduce and recycle production-related waste – whether it relates to raw materials, equipment or cleaning and maintenance services.

The progress made in waste reduction, which we track and report annually, is achieved by applying the 5R approach: Refuse/Reject (not producing waste in the first place), Reduce (waste), Re-use (before waste is even produced), Recycle (waste) and Recover (energy). The 5R approach has delivered significant advances at several plants across the Armacell Group.

To reduce our waste, we also introduced a pallet return policy by which pallets can be collected at Armacell collection points across the EMEA region. In return, customers get a payback for helping us reduce our environmental footprint. Between the launch of the project in November 2022 and the end of May 2023, 2,839 pallets were recovered.

In India, for instance, our Pune-based plant accepts customer consignments of insulation scrap from onsite applications. Once these are back on Armacell's premises, they are processed and reintegrated into the manufacturing process of acoustics products and solutions.

In 2022, the total waste Armacell generated amounted to 17,778 tonnes, which was less than the 18,276 tonnes reported in 2021. The total amount of production scraps re-used in finished goods was 10,042 tonnes (2021: 11,072 tonnes). In the elastomeric (EL) process, a small quantity of recycled scraps are currently reintegrated into the manufacturing process. In the polyethylene (PE) and polyethylene terephthalate (PET) processes, the scraps are reground and then utilised in the production process. In addition, we are continuing to expand the use of recycled PET (rPET) for our new products and, in 2022, used 92% of rPET in our Arma-PET production.

It should be noted that 56.4% of waste was recovered in the production processes (2021: 60.5%), while 17.1% of the 2022 production waste was incinerated and energy recovered. This was an improvement on the 2021 figure of 14.9% of the waste incinerated and energy recovered. In terms of waste sent to landfills, in 2022, we reported a total of 4,018 tonnes (22.6%), as opposed to 4,248 tonnes (23.2%) in 2021.

Of the 17,778 tonnes of reported waste (2021: 18,276 tonnes), 620 tonnes were hazardous waste and the remaining 17,158 tonnes non-hazardous waste. In addition, a total of 9,463 tonnes of production scraps were re-used in finished goods. Furthermore, we recovered 17,118 tonnes of non-hazardous waste,

which added up to 96.2% of the total amount; the equivalent figures for 2021 were 14,181 tonnes and 81.7%. It is important to note that the classification of hazardous vs. non-hazardous varies according to local regulations.

»9,463 tonnes of production scraps re-used in finished goods.

#### **GENERATED WASTE** in tonnes



<sup>&</sup>lt;sup>1</sup> Data covers 18 of our 27 plants. All numbers were restated.

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### ACCELERATING OUR JOURNEY TOWARDS A CIRCULAR ECONOMY

#### Recycled PET foam technology

Waste plastic bottles are repurposed using Armacell's unique recycled PET (rPET) foam technology. By the end of 2022, Armacell's rPET facilities had re-used 2.5 billion PET bottles and saved more than 113,000 tonnes of  $\rm CO_2$  emissions in the process.

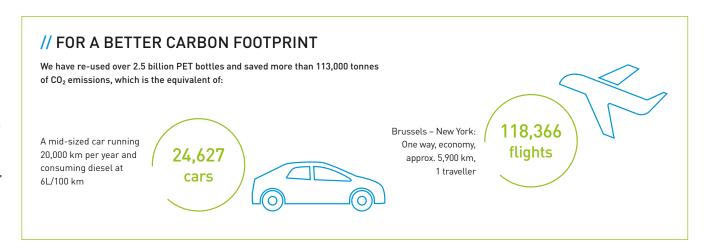
Our commitment to further investment in our rPET technology has remained steady in recent years. For example, in 2020, we began operating our fourth industrial-scale foaming line worldwide and the first in China at our Suzhou facility near Shanghai. In February 2022, the Brampton team in Canada inaugurated a new slicing line, thus doubling the plant's overall production capacity. The new line has also reduced the amount of thickness scrap generated by more than 50%.

Our comprehensive portfolio of innovative eco-friendly PET foam product solutions includes structural and insulating foam cores, thin flexible sheets for thermoformable micro-sandwich solutions and particle foams to produce 3D foam parts.

At the Armacell PET headquarters in Thimister-Clermont, Belgium, production capacity has been considerably increased in recent years through the addition of two lines, using state-of-the-art technology with ERP and Six Sigma process monitoring systems for full quality control.

One of these production lines is dedicated to ArmaPET® Eco50, our innovative solution that has gained the first-ever Environmental Product Declaration for PET-based insulating foam. ArmaPET® Eco50 is based on recycled PET and fully recyclable at the end of its life cycle. It contains no halogenated compounds or CFCs/HFCs that might negatively impact its disposal or recycling scenarios. In addition, installation waste and demolition scrap management are easier than for the main competing materials, such as polystyrene, polyurethanes or polyisocyanurates.

→ »Armacell operates six PET foaming lines in Belgium, Canada and China.



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Corporate governance at Armacell encompasses a system of rules, policies and processes to address and comply with human rights, environmental aspects, data protection and IT security, intellectual property and consumer-related considerations, working conditions and employment status, as well as stakeholder engagement and partnerships.

The existing governance principles stand for ethical behaviour, compliance with local rules and regulations, respect for the environment and responsible consumption of natural resources, fairness, inclusiveness, and equity upheld across our entire value chain. In our day-to-day business, the Armacell Code of Conduct forms the basis and bedrock of everything we do.

**GRI** 2-6, 2-9, 2-10, 2-12 to 2-16, 2-18 to 2-21, 2-23 to 2-27, 2-29, 2-30, 3-3, 205-2, 308-1, 308-2, 407-1, 408-1, 409-1, 414-1, 414-2, 418-1

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# 39

## OUR COMMITMENT TO RESPONSIBLE BUSINESS

// Driving compliance and fostering a culture of robust business ethics

// Protecting our business, our reputation and our customer data

// Ensuring compliance in our value chain

Responsible and ethical conduct is fundamental to the way we do business. Our accountability and engagement for a better, cleaner and more sustainable future date back to the early 2000s. Our first formal commitment to the United Nations Global Compact (UNGC) initiative and its Ten Principles in 2006 paved the way for our strategic endeavours with regard to human rights, the environment, labour rights and anti-corruption see page 66. Our business is also intrinsically linked to five of the United Nations Sustainable Development Goals see page 67. We contribute to decent and dignified work and economic growth, innovation and infrastructure, responsible consumption and production, and we support climate action and address the pressing environmental issue of plastic pollution.

Armacell's approach to corporate sustainability expresses our commitment to protect the natural environment and address climate change, ensures the fair treatment of employees, supports high health, safety and quality considerations, upholds integrity and transparency, and entails an unequivocally positive contribution to society at large.

Armacell's ESG strategy and sustainability management approach express how we make a difference around the world in areas ranging from protecting the environment to treating our employees fairly and ensuring the highest standards are applied across our value chain.

When it comes to Armacell's workforce, and in line with our Code of Conduct and values, we hire every employee with the long-term in mind. On average, employees stay with the company for 8.7 years.

Even though our recruitment process is organised locally, working for Armacell means being committed to the future of the Group as a whole. Our recruitment process ensures that we have the talents to grow our future. Employees are compensated in ways that are performance-driven, market-competitive and equitable. Through base and variable pay (bonus incentives, profit sharing and operational performance bonuses) we seek to reward both individual and collective contributions to our business success. Base salaries are determined by the following factors: job responsibility, benchmarking data on market competitiveness, individual competencies and job performance.

## → »The Armacell Code of Conduct forms the basis and bedrock of everything we do.

As part of Armacell's anti-bribery policy, we record, prevent and mitigate any potential risks and conflicts of interest at all levels, including those that may arise from cross-board membership, as well as controlling shareholders and related parties.

At a global level, the ratio between the executive team and all other employees' base salaries was 1:8 in 2022, which was similar to previous years. The company does not disclose overall compensation ratios due to the different nature of the variable incentives across its global footprint.

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## **OUR COMMITMENT TO RESPONSIBLE BUSINESS**

Armacell's executive team comprises ten highly experienced international managers representing eight nationalities and a diverse set of skills. Their common purpose is to drive the company's future growth by fostering innovation, encouraging commitment and promoting entrepreneurship.



Chief Executive Officer

Sets and executes Armacell's strategy in making the company a truly global leader in advanced material technologies and energy efficiency around the world.



Roberto Mengoli Chief Technology Officer

Safeguards and monitors the highest possible quality and safety standards by systematically optimising structures, processes and tools throughout Armacell.

<sup>1</sup> Member of the Management Board

<sup>2</sup> Chairman of the Management Board



Chief Human Resources Officer

Fosters the talents of 3,000+ employees to enable Armacell's global growth and leads all training, talent acquisition and career development activities.



Vice President AMERICAS

Energises the synergies from multiple acquisitions in North and South America to deliver profitable, high-quality product solutions.



Develops Armacell's strategic choices

through capital structure optimisation, management of financial resources, taxation and risk, and efficient capital utilisation.



Vice President APAC

Strives to strengthen Armacell's position and set up the Asia Pacific region for additional growth through a wide range of tailored solutions.



Chief Strategic Development Officer

Leverages his deep understanding of our industry, implements Armacell's external growth strategy, and heads corporate communications, innovation and global



**Bart Janssen** 

Vice President Engineered Foams &

Drives the development of the PET, Component Foams and Energy businesses, with a strong focus on nurturing the sustainability of product lifecycles.



Chief Legal & Compliance Officer

Manages the legal and compliance affairs within the Armacell Group, ensuring that our operations comply with applicable laws and internal regulations.



Malte Witt

Vice President EMEA & Chief Marketing Officer

Grows Armacell's position and market shares in EMEA, enables a customercentric culture and adds value through sales & marketing excellence programmes.

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## OUR COMMITMENT TO RESPONSIBLE BUSINESS

#### **Decision making**

The decision-making bodies of Armacell International S.A. consist of the individuals listed below. Responsible for the long-term success of the Group, they set the strategic goals, establish standards, and ensure compliance.

#### **Supervisory Board**

- // Mathieu Paillat (Chairman)
- // Laurent Rivoire
- // Marlène Bazouin (as of 31 October 2022)
- // Jacob Chris Lassen
- // Peter Bason
- // Jørgen Jensen (independent)

#### **Audit Committee**

- // Peter Bason (Chairman)
- // Mathieu Paillat

#### **Remuneration and Nomination Committee**

- // Mathieu Paillat (Chairman)
- // Jacob Chris Lassen

#### **Sustainability Committee**

- // Jacob Chris Lassen (Chairman)
- // Marlène Bazouin

#### Management Board

// Please refer to page 40

#### **Executive Management Team**

// Please refer to page 40

#### **Ownership Structure**

Since 28 February 2020, private equity funds managed by PAI Partners have been Armacell's majority shareholder. The remaining shares are held by the holding and investment company KIRKBI and Armacell's senior management team.

#### About PAI Partners

PAI Partners is a pre-eminent private equity firm investing in market-leading companies across the globe, with offices in Paris, London, Luxembourg, Madrid, Milan, Munich, New York and Stockholm. It manages over €26 billion of dedicated buyout funds and, since 1994, has completed 92 investments in 11 countries, representing over €72 billion in transaction value.



PAI has built an outstanding track record through partnering with ambitious management teams where its unique perspective, unrivalled sector experience and long-term vision enable companies to pursue their full potential – and push beyond. www.paipartners.com

#### About KIRKBI

KIRKBI is the Kirk Kristiansen family's holding and investment company founded to promote a sustainable future for the family ownership of the LEGO® brand through generations. Its strategic activities include 75% ownership of the LEGO Group, 47.5% ownership of Merlin Entertainments and investments in EPIC Games and renewable energy. The company's investment activities also include significant long-term investments in



companies such as ISS, Nilfisk, Falck, Armacell, Välinge and Landis+Gyr, as well as real estate investments in Denmark, Switzerland, Germany and the UK. www.kirkbi.com

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# 42

### **OUR COMMITMENT TO RESPONSIBLE BUSINESS**

To ensure effective governance and realise our principles and policies, we rely on a structure incorporating the highest levels of management and which has been implemented across all the Group's activities since 2021.

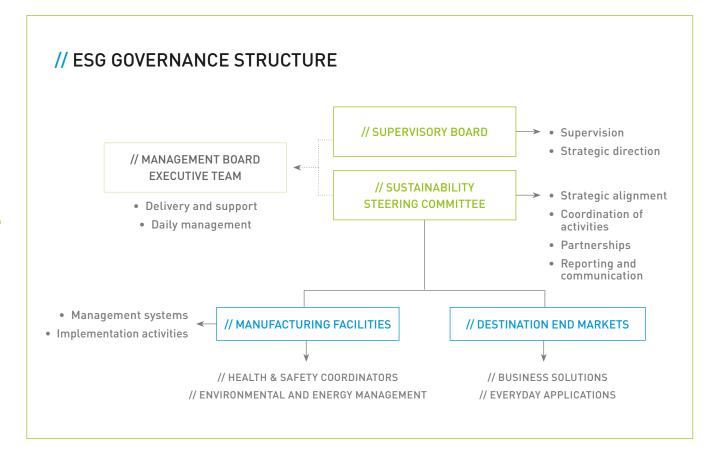
The Sustainability Steering Committee (SSC) has a key role to play in this governance structure by continuously monitoring and guarding Armacell's value system and its principles-based approach to doing business. The SSC is specifically tasked with driving compliance and promoting a culture of robust business ethics at Armacell. It identifies new areas of commitment and action, develops sustainability focus areas and measures, reviews and improves the scope and standards of annual ESG reporting practices, maintains effective ESG communications, and positively influences stakeholder opinions.

The Sustainability
Steering Committee
guards Armacell's value
system and principlebased approach to
doing business.

Furthermore, sustainability is one of the responsibilities of the highest governance body at Armacell. The Supervisory Board is primarily responsible for providing input on the strategic direction of the SSC, supporting major sustainability projects and the process of setting effective sustainability metrics, as well as overseeing the management of impacts associated with Armacell's sustainable development.

Selected members of the Supervisory Board are also members of the Sustainability Committee, the Audit Committee and the Remuneration & Nomination Committee. This structure ensures a constant and transparent flow of communication, provides strategic direction on sustainability metrics and allows for effective management of impacts relating to Armacell's sustainable development.

For example, the Remuneration & Nomination Committee is responsible for overseeing the process of nominating and selecting candidates for key positions of the Armacell Group. This committee is also dedicated to overseeing Armacell's remuneration policy and targets for performance-related pay.



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## DRIVING COMPLIANCE AND FOSTERING A CULTURE OF ROBUST BUSINESS ETHICS

#### Goal: Foster a culture of robust business ethics

KPI: Employees trained on our Code of Conduct

**7 GRI** 205-2

100% OF NEW JOINERS Target 2023

#### Engaging stakeholders in our sustainability journey

At Armacell, we are accountable for our results and for the way in which the results are achieved. As a global leader in high-performance insulation materials, we have long-standing commercial relationships along our value chains with suppliers, service providers, customers, distributors, contractors, installers and communities in more than 100 countries. We further recognise our social responsibility in all our locations and aim to contribute to the quality of life of our employees, our business partners and the surrounding communities.

Based on our values – Customer, Commitment, Empowerment, Integrity and Sustainability – the Armacell — Code of Conduct defines the rules for our daily work, both internally and externally, and shows how they are to be implemented. As a premier supplier, Armacell's value proposition is centred around quality, reliability and trust.

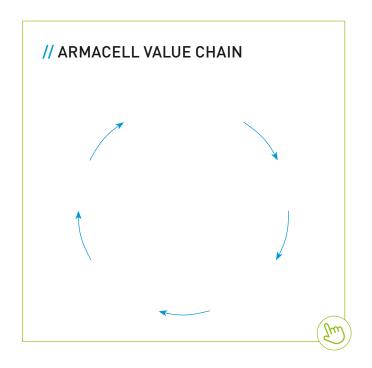
- // We contribute to sustainable growth by innovating in thermal and acoustic efficiency with energy- and resource-conscious product development. As an innovation-oriented company, we protect our intellectual property and that of other people.
- // We treat our customers and suppliers in the same manner as we expect to be treated. We provide our customers the quality standard we promise and respect ethical standards in all our dealings.

- // We are committed to developing and motivating our employees, nurturing their talents and developing new skills.
- // We respect other cultures and people of all origins, irrespective of their country of origin, nationality, age, gender, sexual orientation or personal belief.
- // Our business activities worldwide comply with the applicable environmental laws and regulations, as well as with the requirements of our environmental permits. We expect each of us to take special care of the environment.

#### Highest ethical standards

Our employees have a key role to play in ensuring safe and ethical business practices to protect the welfare of those with whom we conduct business, wherever we operate in the world. We build our relationships with customers, business partners and external stakeholders based on trust and honesty and have taken all the necessary steps and measures to uphold these principles.

For example, the Armacell Code of Conduct addresses the responsibilities of all our employees to the company, to each other, and to all our stakeholders. This includes the principles, standards and moral and ethical expectations Armacell adheres to when doing business with others. First and foremost, we comply with applicable laws and regulations in every country where we do business.



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### DRIVING COMPLIANCE AND FOSTERING A CULTURE OF ROBUST BUSINESS ETHICS

In addition, our Code of Conduct governs the framework by which our employees can establish a positive, customer-centric culture that is also compliant and respectful of the laws and regulations applicable in every country we operate in.

In assuming responsibility for complying with the applicable laws and regulations and operating a zero-tolerance policy, we implemented several corporate policies, including our anti-corruption policy, anti-money laundering policy, sanctions policy, whistleblowing and data protection policies.

#### **Armacell's Code of Conduct**

To ensure our employees have access to the latest information on these topics and act in accordance with our high standards and expectations, we implement our culture of compliance and robust business ethics at all levels of the organisation. For example, we instruct new recruits in the Armacell Code of Conduct and our data protection rules. As part of the onboarding process, all employees are required to acknowledge our policies on anti-bribery and anti-corruption, sanctions, data protection, fair competition and anti-money laundering. We also carry out risk-based training sessions across the entire Group. In 2022, there were no instances of non-compliance with laws and regulations and no fines or non-monetary sanctions.

## // REPORTING WRONGDOING AND ILLEGAL PRACTICES

Armacell has an online whistleblowing portal that is available to employees and third parties (via our internet pages). Any violations of the law or our Code of Conduct or any illegal business practices at Armacell, our business partners or within our value chain can be reported via this portal.

Reports submitted through this secure communication platform are anonymous and handled exclusively and strictly confidentially by the Armacell Group's Integrity Committee. The overriding principle of the BKMS® Incident Reporting system we use is to protect the whistleblower. The system's anonymous privacy function has been certified by an independent body. In 2022, Armacell recorded a total of six reported cases in the following categories: three cases of discrimination, harassment or bullying, two breaches of trust and one violation of internal guidelines. All the cases were investigated, some with the help of an external consultant, and all were closed within a reasonable timeline.

Following its launch in October 2021, which saw one case reported during the fourth quarter of the year, as expected, 2022 brought an increase in the total number of reported cases over 12 months. This shows increased awareness among Armacell's employees and comes as a result of the regular training opportunities being carried out over the last 12 months to encourage the identification and reporting of violations or inappropriate behaviour.

»More than 1,000 employees were trained on compliance topics in 2022.

By attending a range of e-learning modules and digital training sessions, as well as reading educational materials and online guidelines that are shared regularly on Armacell's internal communication platform, more than 1,000 employees were trained on compliance topics in 2022. A total of 520 of these participants attended face-to-face training sessions where they were encouraged to ask questions and engage in conversations relevant to their roles and place of business. Furthermore, Armacell employees were invited to take part in two cyber security campaigns where they learnt how to protect and enforce our organisation's IT security.

#### Maintaining good industrial relations

As a member of the United Nations Global Compact, we actively respect and promote labour rights. Around the world, industrial relations are determined by country-specific regulations and traditions. In Germany, where employer-employee co-determination and works councils have a decade-long tradition, four collective agreements are in place, and employees can be affiliated with the chemical industry union.

Collective agreements are also in place in Spain and France, while employees can be trade-union affiliated in the UK, Poland, Brazil and India. Following Armacell's acquisition of Austroflex in October 2022, we also have collective agreement coverage for our employees in Austria.

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# 45

## PROTECTING OUR BUSINESS, REPUTATION AND CUSTOMER DATA

### Goal: Mitigate IT risks

KPI: Reinforced security policies and mandatory training sessions

**7 GRI** 418-1



#### **Ensuring cyber security**

Thorough protection of the entire IT infrastructure is fundamental for Armacell and its customers. The Armacell Group Cyber Security Policy implemented is operating across the entire business to provide guidance to all our employees and business partners on how to safeguard data, secure the IT infrastructure and mitigate security risks. The main purpose of this policy is to prevent cyber and malware attacks on the company, prevent data theft, and protect our ordering, production, delivery and billing processes.

At Armacell, mitigating IT security risks means preventing unauthorised data access and data breaches across our value chain, including our customers. In addition to heightening our employees' sensitivity to privacy and data security, mitigating IT security risks relies on the use of powerful software for threat detection and machine protection across all servers and devices. In 2022, as in the previous year, there were no substantiated complaints regarding breaches of customer privacy, leaks, thefts or data losses

#### Mitigating security risks

In line with its manufacturing peers, Armacell is exposed to risks arising from the digital disruption of its IT infrastructure. The security and continuity of Armacell's IT systems and data are safeguarded by a set of infrastructure and security measures defined and carried out by a global governance body comprised of corporate and local IT teams and conducted in accordance with Group policies and best risk management practices.

In response to a cyber attack in 2020, various new cyber security measures were implemented and a Group Cyber Security Policy was published with guidance for all Armacell employees on how to ensure data security, safeguard the IT infrastructure and mitigate security risks. Following the appointment of a Global Information Security Officer in 2021, the cyber security team was further strengthened in 2022. As part of our security management system, we set up a process to identify, review, protect and address external and internal threats and vulnerabilities in order to properly mitigate risks. This internal policy allows us to keep our organisation secure, while ensuring the continuity of operations.

In 2022, Armacell recorded more than 46,000 threats on its computers, with 99% relating to malicious applications. Over 345,000 threats were further reported with regard to user internet communications, with 94% linked to phishing, spyware or malware.

## // ARMACELL GROUP CYBER SECURITY POLICY



**Provide guidance** to employees and business partners



Secure IT infrastructure by **powerful software** and **machine protection** across all devices and servers



Prevent cyber and malware attacks through data protection and training

#### **FUNDAMENTALS OF SUSTAINABILITY**

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## PROTECTING OUR BUSINESS, REPUTATION AND CUSTOMER DATA

#### Keeping corporate data safe

Security-conscious employees are key to safeguarding Armacell's records. As part of our efforts to protect corporate data, our employees complete a number of compliance courses on how to detect phishing attempts, protect themselves from social engineering attempts and manage information security inside and outside the office. They are taught how to recognise and correct inappropriate behaviour, identify suspicious situations, and know what to do if something goes wrong. In addition, employees are required to read and sign policies relating to information security, internet access security and the use of mobile and/or personal devices for work purposes.

The Armacell Group organised two training campaigns in February and October 2022 to raise awareness and educate employees worldwide on topics related to cyber security. Such courses, which vary in length and scope, provide specific information on hacking and social engineering techniques such as phishing in order to equip employees with the necessary knowledge and skills to enforce our IT security at all times. Participants further learnt how to exchange data securely with external partners, how to safely handle mobile devices, and what to do to ensure proper information security in the office, among other topics. Across the two campaigns, more than 2,000 employees were educated on how to keep Armacell's corporate data safe.

We work tirelessly to ensure good IT cyber security hygiene is implemented across the Group and take all the necessary steps and precautions to create an internal environment that safeguards data and protects our networks from intruders. As part of this effort, the cyber security team is continuously updating the contents and expanding the range of courses and online training opportunities available to our workforce.

→ »Two cyber security training campaigns were organised for Armacell's employees in 2022.

We also comply with all the applicable data privacy laws and regulations, the EU's General Data Protection Regulation (GDPR) and California's Consumer Privacy Act (CCPA) relating to the personal information of our employees, customers, suppliers, partners and other stakeholders.



Armacell's employees have access to the global data protection policy, training materials and key information for processing personal data via the internal communication platform.

In years to come, we will further digitalise our business processes and monitor our information technology strategy to ensure compliance with the applicable privacy and security requirements, while pursuing the Group's sustainability journey.

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# MANAGING PROCUREMENT RISK

Armacell is exposed to various risks that are part and parcel of the entrepreneurial nature of the business. To identify and mitigate possible risks at the earliest possible stage, Armacell continuously monitors potential sources of risk. We are very strict about maintaining our high standards and will only select new suppliers that share our commitment to sustainability in all its forms.

Risk management in the procurement stage is a process that allows us to recognise any specific risk and minimise the probability of its occurrence and impact. Effective risk management recognises that for every risk there is an 'upside' (i.e. new opportunities) and a 'downside' (i.e. threats and vulnerabilities). Our risk management strategy aims to take advantage of the 'upside', while mitigating the 'downside'.

400+

raw material suppliers have received Armacell's Supplier Code of Conduct.

COMMITMENTS AND ACTIVITIES // ENABLING GOVERNANCE

## ENSURING COMPLIANCE IN OUR VALUE CHAIN

#### Goal: Assess suppliers' level of compliance

KPI: Supplier assessments

**7 GRI** 308-1, 308-2, 407-1, 408-1, 409-1, 414-1, 414-2

40% OF SUPPLIERS Target 2023

#### Goal: Perform supplier audits

KPI: Number of audits across regions every year

**7 GRI** 308-1, 308-2, 407-1, 408-1, 409-1, 414-1, 414-2

8 AUDITS Target 2023

#### **Enforcing supplier standards**

Armacell prohibits all unlawful payments and practices. We reject corruption in our business transactions and are fully committed to complying with the applicable anti-corruption laws and regulations in the countries we operate in. Bribes, kickbacks and money laundering are strictly prohibited. We expect our suppliers to adhere to these same prohibitions when conducting business. Armacell's Code of Conduct was sent to all our suppliers, regardless of their services, to inform them of our company's standards and expectations.

While continuing to engage with our raw material suppliers, we further evaluated our value chain and collected valuable information on specific environmental, social and governance considerations and risk exposures. Our goal is to mitigate these risks, wherever possible, through proactive measures and consistent monitoring.

Based on our commitment to the United Nations Global Compact, the Armacell Supplier Code of Conduct defines the standards that all suppliers and subcontractors must meet with respect to good environmental practices, human rights and labour practices. This Code also includes the commitment that suppliers' operations comply with all applicable laws and regulations

#### Selecting suppliers

In our supplier self-assessment questionnaire, we ask our raw material suppliers whether they have implemented policies that address, among other things, the issues of human trafficking, forced labour and child labour and ensure anti-discrimination. Suppliers must indicate the extent to which they have put in place an environmental and sustainability policy or programme. Furthermore, we have included a specific due diligence section focusing on the integrity of our suppliers. We request specific information about internal controls and full compliance with anti-bribery and anti-corruption laws. A satisfactory result on this assessment is a prerequisite to qualifying as an Armacell supplier.

Up to now, our Supplier Code of Conduct has been sent to more than 400 raw material suppliers. Nearly 70% (compared to 60% in 2021) confirmed compliance either by signing our Code or issuing a statement that was deemed to be equivalent to our standards and expectations by the end of 2022. As part of our ongoing process to check our suppliers' level of compliance, 22% of our raw material suppliers were assessed in 2022, up from the 10% we reported the year before. We intend to assess a total of 40% of raw material suppliers in 2023 and reach 80% by 2024.

We performed five supplier audits in 2022, two in France, one in Germany, one in India and one in the United Kingdom. These onsite audits were implemented against a set of comprehensive criteria, including health, safety, environmental, social, diversity, compliance, quality management, company values and culture, as outlined in our supplier audit protocol.

»Nearly 70% of raw material suppliers confirmed compliance with our procurement standards and expectations at the end of 2022.

The selection criteria of these locations were determined by the supplier's size and the volume and nature of the existing business relationship with Armacell. Location and geographical distribution were also considered.

In 2023, we intend to carry out eight supplier audits across the three main regions in which we operate and will continue to gain insight into the operations practices and standards that are applied across our supply chain.

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## ENSURING COMPLIANCE IN OUR VALUE CHAIN

#### **Supplier Code of Conduct**

The requirements of our Supplier Code of Conduct and all future developments in how we manage and assess our value chain already apply to existing and new suppliers. These will be implemented throughout the entire value chain in future.

Based on the information provided by suppliers and following onsite audit reports, Armacell has outlined what major compliance steps will be taken:

- // Critical: The supplier does not meet Armacell's requirements.
- // Under development: The supplier does not fulfil all of Armacell's requirements but shows both the potential and willingness to improve quality, costs and delivery performance within a year.
- // Qualified: If a supplier meets all Armacell's requirements and its internal processes are found to be satisfactory, Armacell will place a trial order. The supplier will be asked to implement continuous improvement plans regarding quality, costs and delivery.

On request, we require our suppliers to:

- // Provide Armacell with copies of the signed Supplier Code of Conduct and all relevant information.
- // Complete a self-assessment questionnaire.
- // Demonstrate what efforts they are making to meet the requirements of this policy and provide their own commitments towards responsible purchasing and related procedures.
- // Co-operate and use reasonable endeavours to ensure that their subcontractors do the same.

#### Armacell's responsible procurement policy

The following concepts form the basis for the Armacell Responsible Procurement Policy:

- // Integrity and transparency.
- // Professionalism and excellence.
- // Partnership, mutuality and creation of shared value.
- // Nurturing long-term relationships with suppliers.
- // Prevention of corruption and bribery.
- // Fair employment protection of workers' rights and human rights.
- # Equal opportunities and prevention of discrimination and harassment.
- // Promotion of small businesses, social businesses and businesses located in peripheral regions.
- // Minimisation and prevention of environmental risks and promotion of positive environmental values.

Suppliers are also strongly encouraged to collaborate at their own industry level and with Armacell to identify additional opportunities throughout the supply chain and to improve and develop sustainable business practices in the areas of health and safety, human rights, ethics and environmental protection.

»We expect our suppliers to uphold high standards in their economic, social, ethical and environmental practices. As part of our ongoing efforts to progress our sustainability journey and further develop our internal processes in line with industry standards, we have also identified a number of possible corrective actions that will be taken if any of our suppliers reports negative social impacts. To implement such actions, representatives of various internal departments and stakeholders will be involved and consulted. This process involves the following steps:

- // Devising a short-term action and containment plan.
- // Conducting a root cause analysis.
- // Identifying and agreeing on long-term corrective actions based on the nature of the incident.
- // Proceeding with the implementation of long-term corrective actions.
- # Ensuring final verification of the plan and receiving a sign-off from the stakeholders.
- // Communicating the Armacell position to the supplier in question.

Building on our current efforts to gather explicit information from our suppliers on their business vision and mission, corporate culture, people management, safety, and social and human rights policies, we will continue to address all these topics in future reporting.

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Ever since Armacell invented flexible elastomeric foams for equipment insulation, we have been developing innovative and safe thermal and mechanical solutions that create sustainable value for our customers and make a difference around the world.

We focus on creating sustainable value and longlasting solutions for our highly diversified global customer base through low-impact, durable, highperformance products. We take pride in being able to help our customers make progress on their own sustainability journey. Increasing energy efficiency awareness will have a positive impact on Armacell's business as insulation materials are seen as the most efficient way to save energy.

**7 GRI** 3-3, 201-2, 302-5, 416-1, 416-2

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## **OUR COMMITMENT TO A SUSTAINABLE BUSINESS**

// Investing in low-impact, durable, high-performance products

// Maintaining the highest product quality standards

// Extending our portfolio of sustainable solutions

#### Creating sustainable value for our customers

Energy efficiency, urbanisation, acoustic comfort, vibration control, lightweighting, renewable energies and sustainability: Armacell's portfolio of products and solutions is strategically oriented to respond to these global megatrends.

We place top priority on high-quality, reliable, resource-conserving and compliant products and solutions. In addition, we measure our success by looking at the multiple benefits – of societal and ecological significance alike – that our solutions deliver to a diverse range of industries. The resulting high degree of customer satisfaction is the basis for long-lasting business relationships and key to Armacell's sustainable growth.

In recent years, we have proactively developed and commercialised sustainable products and continued to support innovative research and development (R&D).

Our successful partnerships with academia and research centres are a testimony to our long-term commitment. Our partners include the leading European plastics technology research institute RWTH at Aachen University (Germany) for the development of more sustainable manufacturing approaches and materials, and CellMat Technologies in Spain for prototyping and product testing,

Wherever possible, we integrate elements of sustainability at every level of our production by encouraging the recycling of waste, adopting a responsible consumption of resources, increasing the share of renewable energy and reducing  $\text{CO}_2$  emissions. At our Środa Śląska plant in Poland, for example, 99.8% of the polyethylene process scrap is recycled and returned to the production process. In selected plants across the EMEA region, we have installed photovoltaic modules to cover our energy consumption needs and are proactively working on business partnerships with leading European energy providers for the installation of solar panels at additional sites.

We also invest in understanding and managing the life cycle of our products and solutions. In fact, Armacell was the first manufacturer of flexible technical insulation materials to carry out comprehensive life cycle assessments (LCAs). Based on these, we publish various environmental product declarations (EPDs) certified by Institut Bauen und Umwelt (IBU), which allow us to support the green building sector and provide customers with the highest level of assurance and transparency in our industry.

### // PROCESS OF EPD CREATION



Selection of specific Product Category Rule (PCR) for the studied product



Conducting a Life Cycle Assessment (LCA) study according to the PCR, ISO14025 and EN 15804



Creation of the Environmental Product Declaration (EPD) document



Verification by programme operator



Submission and publication of EPD

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## SUSTAINABLE INSULATION PRODUCTS



#### // SUSTAINABILITY

When it comes to mitigating climate change, we take our role seriously. For instance, our rPET products made from recycled plastic bottles are used in sandwich constructions for the rotor blades of wind turbines. Over the years, they have helped to generate wind power equivalent to the output of more than a hundred standard 500 MW coal power plants.

### // DISTRICT HEATING

District energy systems include highly insulated underground thermal piping networks that transmit steam or hot water to heat and cool multiple buildings and improve their energy efficiency. Pre-insulated pipes are one of the technical prerequisites for energy-efficient local district heating systems, in which renewable energy sources such as solar power, geothermal and waste heat are increasingly replacing gas-powered heating systems.

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**ARMACELL** SUSTAINABILITY REPORT 2022

## SUSTAINABLE INSULATION PRODUCTS

#### // HYGIENE

At Armacell, we offer products and solutions in full compliance with strict hygiene and safety requirements. By partnering with us, hospitals and healthcare facilities benefit from top-class indoor air quality, high energy efficiency, acoustic comfort, fire safety and reliable equipment.



# // ACOUSTIC COMFORT

Armacell's best-in-class equipment insulation and acoustic solutions save energy, help to reduce operating costs and contribute towards a safer and more comfortable hospitality sector.



By saving weight in making trains, planes and cars, we help to reduce fuel consumption. Thanks to our acoustic insulation products, travel is less noisy. And equally important, by using our low-smoke passive fire protection, transportation is a lot safer for all of us.

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## INVESTING IN LOW-IMPACT, DURABLE, HIGH-PERFORMANCE PRODUCTS

#### Goal: Increase customer satisfaction

KPI: Interact with customers on ESG topics

**7 GRI** 201-2

10% RESPONSE RATE Target 2023

Our technical know-how is based on decades of experience in the flexible insulation market and the multi-disciplined expertise of our global workforce. Creating long-lasting value for our stake-holders is our primary objective. It keeps us motivated to constantly innovate, improve and rethink what we are doing and how our products and solutions make a difference around the world.

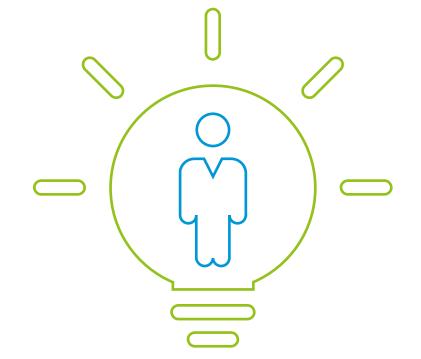
#### Customer feedback on ESG

To further increase customer satisfaction, we always strive to go Beyond Better in providing an attractive offering – know-how, assistance and support – for end users of our products and systems, as well as in responding to their needs, requirements and expectations. In future, increasing energy efficiency awareness will certainly have a positive impact on Armacell's business as insulation materials are regarded as the most efficient way to save energy.

We recognise that our customers play an active role in our sustainability journey and strongly contribute to our ambitions for the future. That is why, in 2022, we identified key environmental,

social and governance elements to include in our annual customer survey. Based on the latest global Customer Satisfaction Survey we carried out in early 2023, our customers welcomed the inclusion of ESG aspects in our conversations and highly rated the contribution of our products and solutions in enabling the transition to a circular economy model. The majority of survey respondents confirmed that our products and solutions enable them to advance their own sustainability practices.

We are determined to further drive the sustainability agenda and make progress in all areas of our value chain. To this end, we will continue to interact with our customers on ESG topics to understand, address and exceed their evolving expectations. Our future reporting will provide insights into our customers' attitudes, perceptions and expectations in years to come.



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## INVESTING IN LOW-IMPACT, DURABLE, HIGH-PERFORMANCE PRODUCTS

#### Supporting green building standards

At Armacell, we offer high-quality products and system solutions and provide our customers with the knowledge, assistance and support they need for their installation and application. The support and services we offer are making a real difference in applications around the world through time-saving help in obtaining green or wellness building certification, practical calculation tools, various training measures or a Building Information Modelling (BIM) plug-in. In combination with low-impact and durable performance products that are eligible for international green building certifications, this portfolio of work-supporting services heightens customer satisfaction with Armacell products.

Armacell products and solutions are aligned with the world's

Through our compliance cards, we offer valuable assistance to designers, architects, engineers, consultants and developers by providing clear information about which features of our insulation products and solutions are of relevance to each certification scheme's specific categories. The respective requirements are listed in detail, along with how our product achieves compliance. This saves construction companies, installation firms, building owners and operators a great deal of hassle in applying for LEED®1, BREEAM®2 or WELL Building Standard3 certification (for more information see page 71).

Throughout the world, construction is one of the most raw material- and energy-intensive industries. The building sector is the single largest consumer of raw materials worldwide and the leading producer of greenhouse gas emissions. Some 50% of all raw materials are used to build or maintain buildings, while 35-40% of global greenhouse gases result from the construction, use or disposal of buildings. In the industrialised nations, a huge amount of energy is consumed in transport and in the manufacturing industry but the building sector alone accounts for approximately 40% of Europe's energy consumption, with 80% of it coming from fossil fuels. That is why providing the right tools for the selection of the ideal insulation material in durability and energy efficiency terms is at the heart of our production and value proposition.



ArmaLight Tubolit S

Underfloor pipes

→ »The building sector is the single largest consumer of raw materials worldwide and the leading producer of greenhouse gas emissions.

- 2 BREEAM® stands for Building Research Establishment Environmental Assessment Method and is the world's leading science-based suite of validation and certification systems for a sustainable built environment. BREEAM is a registered trademark of BRE, the Building Research Establishment Ltd.
- 3 The WELL Building Standard® is a performance-based system for measuring, certifying and monitoring features of the built environment that impact human health and well-being. The WELL Building Standard is a trademark of International WELL Building Institute pbc in the United States and other countries.

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## MAINTAINING THE HIGHEST PRODUCT QUALITY STANDARDS

Goal: Enhance safety, quality and material efficiency in our solutions

KPI: Number of quality tests performed

**7 GRI** 201-2, 416-1, 416-2

30,000 QUALITY TESTS Target 2023

#### Continuous Research & Development

Armacell's market leadership in insulation materials and high-performance foams reflects our long-term commitment to consistently high-quality standards, which also enhance the safety and sustainability of our products. Furthermore, certified quality management systems ensure compliance with strict national and international requirements.

»More than 300 active patents are proof of Armacell's innovative strength.

To enhance safety, quality and material efficiency, we conduct around 30,000 mechanical, physical, chemical and fire-relevant tests every year at our main testing centre in Münster, Germany. Our researchers and technicians at sites in Belgium, Canada, China, Germany, and the USA are driving innovation in quality-oriented production, product performance, new materials, and pioneering technologies.

Other Armacell facilities around the world also have state-of-the-art product testing centres. Building on the sound foundations of long-lasting quality, Armacell develops innovative products and processes that lead to a regular expansion of our sustainable solutions' portfolio.

As clear proof of Armacell's inventiveness, our 300+ active patents in 50 patent families are securing the future of our business. In the R&D field, we will continue to strengthen our market position as the technology leader. We will further invest in new technologies to expand the temperature range, energy efficiency benefits and versatility of our solutions across a wide range of industrial applications. All our innovative achievements in reducing energy losses, conserving key resources, improving acoustic comfort and vibration control, as well as reducing the risk from fire and smoke, will be directed towards global megatrends, the UN Sustainable Development Goals (SDGs) and other global initiatives to address the most significant challenges of today's and tomorrow's world.

#### Forging research partnerships

Armacell works closely with universities and research institutes around the world:

- // CellMat Technologies (Spain) foaming processes optimisation
- // Luxembourg Institute of Science and Technology (LIST) high-performing composite materials
- // PTG Eindhoven (The Netherlands) polymer synthesis, process technology and modification
- // Wroclaw University of Science and Technology (Poland) product testing and optimisation
- // Aachen University, Institute for Plastic Processing (Germany)
   sustainable manufacturing and next-generation materials
- // Sirris (Belgium) extended developmental capabilities for semi-structural and structural materials
- // London South Bank University (UK) latest scientific approaches for acoustic performance

We are also founding members of CEFEP, the European FEF and PEF interest group; and EiiF, the European Industrial Insulation Foundation. Since 2009, Armacell has been a member of the U.S. Green Building Council (USGBC), an initiative committed to transforming the way buildings are designed, constructed and operated through LEED (Leadership in Energy and Environmental Design).

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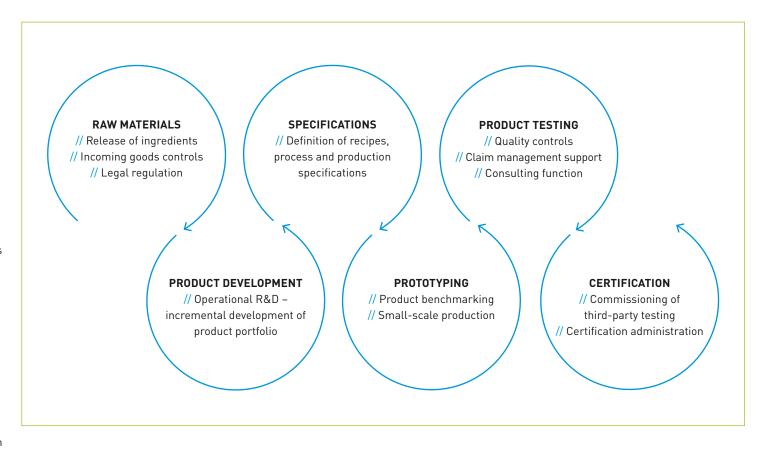
### MAINTAINING THE HIGHEST PRODUCT QUALITY STANDARDS

#### Testing for quality

By building on the sound foundations of long-lasting quality and innovation, Armacell's growth strategy has proved to be both successful and sustainable. Our Global Product Conformity (GPC) department accompanies the entire development process from the selection and specification of the raw materials, determination of the recipes and creation of product specifications with the underlying test requirements, to the necessary certifications and approvals.

Armacell's state-of-the-art technical competence centres located In Münster (Germany), Panyu (China), Mebane (USA) and Thimister (Belgium) play a key role in the final assessment of product quality. To ensure the same high testing standards are maintained and improved worldwide, the GPC team standardises and benchmarks the test methods used and supports their colleagues with training courses on statistical control and different testing methods. Different product properties are tested:

- // Mechanical: Determining the haptic appearance and performance of materials to external mechanical influences during installation and subsequent operation.
- // Physical: Defining physical properties, e.g. water vapour transmission, thermal conductivity, sound absorption and the cell structure and density of the foam.
- // Chemical: Measuring and calibrating the content and mix of chemical components and substances paramount to application performance, e.g. mitigation of corrosion under insulation.
- // Fire-relevant: Calibrating the fire performance in accordance with multiple standards representing diverse fire events, e.g. room corner test, car interior and rail applications.



#### **CE** marking

The first technical insulation materials with the CE (European Conformity) mark, e.g. Armacell's ArmaFlex® range, have been available since early 2012. Through CE marking, Armacell indicates that the construction product conforms with the applicable

requirements set out in a harmonised European standard or European technical assessment. Armacell has made significant progress in the CE-marking procedure for its elastomeric and polyethylene insulation products in all European plants.

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### MAINTAINING THE HIGHEST PRODUCT QUALITY STANDARDS

#### Meeting quality and regulatory requirements

The regulatory trends of relevance to Armacell are mainly those aimed at saving energy, reducing CO<sub>2</sub> emissions, mitigating noise pollution, and improving fire safety. Increasingly strict regulatory requirements have been laid down by international treaties, government and industry regulations, and third-party certifications. The European Union, for example, is committed to reducing CO<sub>2</sub> emissions by 55% by 2030 compared to 1990 levels and aims to become climate-neutral by 2050. At the 2022 United Nations Climate Change Conference (COP27) in Egypt, countries reaffirmed their commitment to limit the global temperature rise to 1.5°C above pre-industrial levels. The 2030 Agenda for Sustainable Development, adopted by all UN Member States, serves as a shared blueprint for peace and prosperity for people and the planet, now and into the future. The world is in a critical decade for climate action and sustainable development. Armacell's energy-saving solutions are actively

// COMPLYING WITH THE EU REACH REGULATION

contributing to these sustainability goals and are themselves manufactured in an energy- and resource-efficient manner.

The ISO 9001 standard is based on a number of quality management principles, including a strong customer focus, the motivation and implication of top management, a process-based approach and continual improvement. Operating to ISO 9001 helps to ensure that customers get consistent, good-quality products and services. 20 of our plants are certified to ISO 9001.

Most of Armacell's insulation products in the USA, e.g. ArmaFlex® or ArmaLight™ Tubolit, are GREENGUARD Gold Certified. This standard is designed to define low-emitting materials that are suitable for environments where people, and in particular children and sensitive adults, spend extended periods of time, e.g. in schools or healthcare facilities. GREENGUARD certified products are screened for more than 10,000 volatile organic compounds.

All our products are assessed for health, safety, environmental and social impact considerations. Where applicable, both the raw materials used and the products themselves are regularly analysed and evaluated to ensure that there are no declarable components above the respective threshold values. In addition, material safety data sheets are created for products that are available on the market. At Armacell, we exclusively use verifiably registered and approved substances and mixtures and we comply with the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

As for the environmental or social impact of our products, Armacell products create added value by saving energy, and we regard them as making an intrinsically positive impact. Furthermore, presenting EPDs for our core products allows us to stand by our vision and mission and, at the same time, provides third-party verification, documents the environmental characteristics of our products and makes our production process more transparent.

Furthermore, besides environmental and social considerations, safety is one of our top priorities. In 2022, we recorded no incidents, fines, penalties or warnings of non-compliance with industry regulations, standards or applicable laws regarding the health and safety impacts of our products and solutions.

#### Sourcing of materials

As part of our global sourcing strategy, we have a strong preference for procuring materials locally or at a regional level. That is why, besides the reliability of a supplier and the quality, availability and pricing of raw materials, short transportation distances play an equally important role in our procurement process. Where feasible, local suppliers are preferred in order to keep the environmental impact of transportation as low as possible.

For our fully recyclable thermoplastic products, up to 30% of materials from our own production are re-used in the manufacturing process. For our ArmaPET® foam product portfolio based on recycled PET, we rely on our patented rPET technology to convert used plastic bottles into long-lifetime, high-value foam core materials for composite sandwich structures. Since production started in 2010, we have re-used more than 2.5 billion recycled PET bottles in ArmaPET® foam production. For our elastomeric acoustic insulation portfolio, we re-use production waste and convert it into full-value sound insulation products, such as ArmaSound®. For our multi-layered ArmaComfort™AB range, we produce our own acoustic barriers and pair them, in the main, with our elastomeric ArmaFlex® foam.

Our compliance cards for international green building certifications such as LEED®, BREEAM® or WELL® also confirm that materials used in our production were sourced responsibly and in accordance with ISO 14001 standards for an effective environmental management system.

As far as packaging is concerned, ArmaFlex® family brand products, for example, are packaged in cardboard boxes and transported on re-usable pallets. Over-sized rolls of sheet material are packaged in polyethylene foil. The cardboard boxes are generally recycled through our partner's Interzero's dual system.

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## EXTENDING OUR PORTFOLIO OF SUSTAINABLE SOLUTIONS

#### Goal: Extend our sustainable product portfolio

 $\label{eq:KPI:New products} \mbox{ KPI: New products offering clear sustainable advantages}$ 

**7 GRI** 201-2, 302-5

+20% NET SALES Target 2023

The most conclusive proof of our sustainable business model comes from the contribution our solutions make to mitigating climate change and conserving natural resources. They do this by effectively enhancing energy efficiency, as evidenced by the product applications listed below.

ArmaFlex®, ArmaFix™ NH and ArmaLight™ Tubolit Split & Duo-Split meet all individual requirements for insulating refrigeration, air conditioning systems and HVAC equipment. A typical HVAC system accounts for 40% of the total energy consumption in commercial buildings and 70% of base building (i.e. landlord) energy consumption. That makes improving insulation one of the most energy-efficient ways of reducing  $CO_2$  emissions. In fact, cost-effective remediation of insufficient, missing or damaged industrial insulation material could reduce energy use by the equivalent of 10 million households in the EU alone.

Our tailor-made deep-freeze solutions provide systems with dependable long-term protection from energy losses and condensation.

#### Supporting green buildings

As the first manufacturer of flexible technical insulation materials to present Environmental Product Declarations (EPDs), Armacell has been setting high standards in the industry since 2015.

EPDs, which are based on an independent life cycle assessment (LCA), demonstrate the environmental friendliness of products and give customers transparent insights into all stages of a product's life cycle. An EPD entails an analysis of the raw materials used, the resources consumed, packaging, transportation, disposal and waste data. Armacell's EPDs are crucial for green and sustainable buildings, as they help constructors, architects, designers, specifiers and property owners to meet the requirements of industry rating and certification schemes, such as LEED®, BREEAM®, DGNB (linked to the German Sustainable Building Council) and the Home Quality Mark (HQM).

Our compliance cards provide clear information about which features of our ArmaFlex® and ArmaLight™ Tubolit insulation products are of relevance to each certification scheme's specific categories. The respective requirements are listed in detail, along with how these solutions achieve compliance. This saves construction companies, building owners and operators and installation firms a great deal of hassle in applying for certification.

ArmaFlex® EPDs have a binding, universally valid basis, were drawn up by experts in cooperation with Armacell and have been independently verified. This way, we provide our customers with reliable information for planning sustainable building projects. Our EPDs benefit all those involved in the construction process:

#### // ARCHITECTS. SPECIFIERS AND THOSE INVITING TENDERS

use EPDs as the basis for calculating the eco-balance of a building, which is a prerequisite for its green certification. Along with technical performance, costs, acceptance and aesthetics, environmental aspects are the key criteria when selecting construction products. Ultimately, EPDs are part and parcel of invitations to tender and the method by which environment-related requirements for planning the building are managed.

#### // REAL ESTATE DEVELOPERS AND BUILDER OWNERS

give investments and property a higher evaluation when EPDs and green certification are presented. As a result, it is now easier to market property that is designed and certified as sustainable.

#### // WHOLESALERS, RETAILERS AND USERS

find verified environment-relevant product information in EPDs and benefit from the added value resulting from sustainability in the building sector.

»Armacell is the first manufacturer of flexible technical insulation materials to present environmental product declarations.

In 2020, when we published two new EPDs for our AP/ArmaFlex pipe and sheet and roll insulation in North America, these third-party documents were the first EPDs released by any elastomeric foam insulation manufacturer in the USA. ArmaFlex® insulation is dust- and fibre-free, free of chlorofluorocarbons (CFC) and free of hydrochlorofluorocarbons (HCFC), with zero ozone depletion potential (ODP).

Armacell's EPDs are available for download on UL's SPOT® green products online database. Housing more than 130,000 products, SPOT is the largest credible sustainable product database with solutions for architects, manufacturers, retailers and professional purchasers.

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### EXTENDING OUR PORTFOLIO OF SUSTAINABLE SOLUTIONS

#### Enhancing climate-protecting energy efficiency

Day in, day out, our products significantly contribute to enhancing global energy efficiency and thus making a difference around the world. ArmaFlex® is the family brand name of a wide range of closed-cell insulation materials based on elastomeric foam that are improving the energy efficiency of commercial buildings worldwide. HVAC ducts and systems, hot and cold water, heating,

plumbing and refrigeration systems, acoustic and vibration control solutions: ArmaFlex materials protect all kinds of technical equipment against energy losses.

As Armacell's heritage product, ArmaFlex is manufactured across the Armacell world, customised to meet local requirements, and often combined with other products to create hybrid solutions. 140 times more energy is saved in an ArmaFlex product lifetime than is required to manufacture it. Moreover, based on a comprehensive life cycle assessment, the energy input needed to manufacture ArmaFlex® has paid off after just 50 days.

# ArmaGel HT HT/ArmaFlex High-temperature pipes Industrial pipes ArmaFlex Ultima Arma-Chek Silver Cladding ArmaComp Monarch ArmaComfort Barrier Electrical enclosure gaskets Mechanical equipment ArmaComp Ensolite Industrial press gaskets

Our products are used in manufacturing industrial equipment, pharmaceuticals, power generation, packaging, logistics and electrical enclosure systems. They enhance energy efficiency and lower noise levels in industrial facilities.

#### ArmaFlex® Ultima

Our patented ArmaPrene<sup>TM</sup> technology offers the highest fire standard in flexible insulation, is PVC-, antimony- and bromine-free, and complies with international green building standards. By incorporating this technology, which is based on an intrinsically flame-retardant polymer system, ArmaFlex Ultima has set a new safety standard in technical insulation. It is the first flexible insulation material that fulfils the requirements of Euroclass B<sub>L</sub>-s1,d0. By generating 10 times less smoke than standard products and thus reducing smoke density, ArmaFlex Ultima gives building occupants an unsurpassed chance of safe evacuation in the event of a fire.

→ »140 times more energy is saved in an ArmaFlex® product lifetime than required to manufacture it.

ArmaFlex Ultima has a service life of more than 50 years, which showcases the capability of our products to create sustainable value through long-lasting solutions. The insulation performance of ArmaFlex Ultima is almost entirely maintained over its long service life and is only restricted, in practical terms, by the service life of the equipment or building it is installed in.

Based on its life cycle assessment, ArmaFlex Ultima has been listed and accredited by leading green building eco databases, such as Sundahus, Nordic Swan Ecolabel, Byggvarubedömningen, and Minergie-Eco. These databases assist stakeholders in the construction sector in selecting products that meet strict environmental, health, quality and social requirements.

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## EXTENDING OUR PORTFOLIO OF SUSTAINABLE SOLUTIONS

#### Next-generation aerogel insulation technology

Armacell is utilising aerogel technology to produce its ArmaGel® product range which delivers five times higher thermal performance than competing insulation products. Our next-generation ArmaGel HT is flexible and bendable, ultra-thin and ultra-light, environmentally safe and a reliable solution for high-temperature applications. Its hydrophobicity and breathability keep pipework and mechanical equipment drier for longer and enhance protection against corrosion under insulation. It is also compliant with ATM C1728, the standard specification that indicates the mechanical, chemical and property requirements of the flexible aerogel insulation. ArmaGel HT is one of the best-performing insulation materials and up to 80% thinner than competing insulation products at the same thermal performance. This makes it simpler to install and contributes to reducing shipping volumes and a plant's footprint. ArmaGel HT is environmentally safe and disposable in approved landfill areas.

Our more recent innovative achievements include ArmaGel HTF, a high-temperature aerogel insulation material with its unique combination of thermal insulation and passive fire protection. It is a highly flexible aerogel blanket material that offers up to 120 minutes of fire protection according, to UL 1709.

ArmaGel HTF is a reliable solution for fire protection and thermal protection to reduce the risk of shutdowns in case of fire and protect assets in energy applications. It is ASTM C1728-compliant and can be used to a service temperature of up to 650°C (1,200°F).

#### ArmaPET®

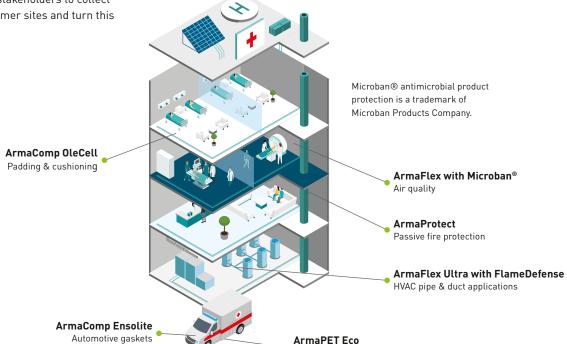
Armacell's ArmaPET products and solutions are made from recycled PET bottles and used, for example, in the construction of the rotor blades, nacelles and spinners of wind turbines and the bullet trains (e.g. China's CRH3A) that enable passengers to switch from flying to more climate-friendly rail travel.

Armacell also plays its part in working towards a circular manufacturing model by tackling single-use plastic waste. Our plants in Brampton (Canada), Suzhou (China) and Thimister-Clermont (Belgium) all produce PET foam and utilise the plastics circular manufacturing model that promotes the re-use of plastic products, generates value from waste and avoids sending recoverable plastics to landfills. Re-using plastic waste is one way to improve our environmental footprint, and we have processed 2.5 billion PET bottles in this way since 2010.

Armacell's PET foams are made without ozone-depleting HFC or CFC blowing agents. Through the use of recycled raw materials and internal scrap re-use, our process reduces  $\rm CO_2$  emissions by up to 37% compared to a standard process using virgin resin. In addition, we are currently engaging with stakeholders to collect post-application cut-off waste from customer sites and turn this into a routine by 2025.

#### Passive fire protection systems

Offering a versatile range of solutions for nearly all types of pipes and services, ArmaProtect™ firestop products provide fire-safe conditions in an emergency. They minimise the risk of fire and smoke spreading to adjacent fire compartments, thus reducing damage and saving lives. This comprehensive systems range comprises intumescent firestop wraps and collars, ablative coated firestop boards, cementitious firestop mortar and firestop sealants. Our ArmaProtect firestop products are covered by the European Technical Assessments (ETAs) and comply with global fire safety regulations such as EN 13501-2 and UL1479 for fire ratings up to 240 minutes.



Vehicle body structure

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## EXTENDING OUR PORTFOLIO OF SUSTAINABLE SOLUTIONS

#### Polymeric insulation based on recycled plastic

ArmaPET® Eco50 is a low-density solution used in building envelopes, roofs, floors and internal partitions, as well as in load-bearing applications. With a density of just 50 kg/m³, ArmaPET Eco50 achieves an outstanding insulating performance of 0.028 W/mK at 40°C. This material's excellent water resistance and closed-cell structure ensure stable thermal conductivity, even after many years of service. As these features also prevent moisture penetration, mildew and rot, they provide long-term corrosion protection while keeping maintenance to a minimum.

Thanks to Armacell's patented rPET technology, ArmaPET Eco50 is based on 100% recycled PET base and fully recyclable at the end of its life cycle. This insulation solution thus contributes to a sensible use of plastic waste and helps to reduce energy consumption and CO<sub>2</sub> emissions during the production process. In March 2022, ArmaPET Eco50 received the first-ever environmental product declaration (EPD), certified by the Institut Bauen und Umwelt (IBU), for PET-based insulating foam. The EPD provides transparent, independent and reproducible analysis of the environmental impacts of this solution, including data and figures, as well as the extent to which the product contributes to the greenhouse effect, acidification, over-fertilisation, smog and depletion of the ozone layer. The information provided is based on the international ISO 14025 standard and the European EN 15804 standard for construction products. The declaration is a cradle-to-gate EPD and registered on the IBU database system.

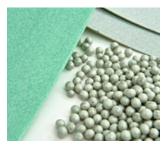
#### Ensuring beneficial acoustics

Excessive noise has become one of the greatest environmental problems of our times and impacts 76% of the world's population. Acoustic insulation in buildings adds to the occupants' ease and comfort as well as their privacy, intimacy and sense of security.

ArmaComfort™ products are highly effective, easy-to-install noise control solutions that are especially suitable for insulating rainwater and wastewater pipes. In comparison to traditional products, these multi-layer acoustic insulation materials achieve greater noise reduction with thinner wall thicknesses. They also display very good fire behaviour. For example, ArmaComfort AB Alu and ArmaComfort AB Alu Plus achieve the highest fire class rating (B-s1,d0) for organic products in the European Single Burning Item (SBI) test. The ArmaComfort AB range is lead-free and bitumen-free.

Delivering optimal performance at lower thicknesses than traditional materials, ArmaSound® RD is a uniquely advanced opencell acoustic insulation material. Depending on the thickness chosen, ArmaSound RD offers excellent sound absorption behaviour across the frequency range. With a density much greater than traditional acoustic absorption materials, ArmaSound RD is also suitable for some applications that may call for an acoustic airborne noise barrier. ArmaSound RD provides a dust- and fibre-free solution that is suitable for use in a range of industrial applications and demanding environments.

Our thermal and acoustic insulation solutions are used in manufacturing wind turbine blades, diverse energy industry systems and a variety of applications involving the production or transformation of energy.





ArmaPET®

ArmaSound®



ArmaComfort®

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## UNITED NATIONS GLOBAL COMPACT

Armacell has been participating in the United Nations Global Compact (UNGC) since 2006, when we formally joined the initiative.

As part of our culture of robust business ethics, we have thus incorporated The Ten Principles of the UNGC into our strategies, policies and procedures. This allows us to monitor and guard Armacell's value system and principles-based approach to doing business.



#### // HUMAN RIGHTS

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

The Armacell Code of Conduct, which applies throughout the Armacell Group, defines the rules for our everyday work and includes our support for the Universal Declaration of Human Rights (UDHR). Our Sanctions Policy safeguards fundamental values, including human rights.

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

As in previous years, Armacell has not been subject to any investigations, legal cases or incidents involving human rights violations.

#### // LABOUR

Armacell supports the internationally recognised labour rights promoted by the International Labour Organization (ILO). As in previous years, Armacell has not been subject to any investigations, legal cases or incidents involving labour rights protection for any of the mentioned labour principles.

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

**Principle 4:** the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour;

We uphold the above-mentioned principles in our operations. Armacell firmly disassociates itself from and will not do business with any organisation that uses forced labour or child labour. We have informed all our suppliers worldwide about our support for and compliance with the UNGC's Principles. Step-by-step, we are asking them to sign our Supplier Code of Conduct to confirm they comply with the Principles, especially in eliminating all forms of forced and compulsory labour and abolishing child labour. We are also planning supplier audits and will continuously monitor and review our suppliers' compliance.

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

Please see the 'Investing in our people' chapter and 'Enabling governance' chapter on pages 38 – 50 for our undertakings and their outcomes.

#### // ENVIRONMENT

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

**Principle 8:** undertake initiatives to promote greater environmental responsibility;

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

Please see the 'Protecting our planet' chapter on pages 29-37 for our undertakings and their outcomes. In the 'Furthering sustainable growth' chapter on pages 51-64 we explain how our product portfolio and strategies are linked to these environmental principles.

#### // ANTI-CORRUPTION

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

Across all our business activities, we are committed to acting responsibly. We enacted an Anti-Corruption Policy that reflects our commitment to integrity. A key priority in our compliance efforts is the prevention of bribery and corruption, where we operate a zero-tolerance policy.

At Armacell, we have a global Anti-Money Laundering Policy to heighten staff awareness of the need to ascertain the identity of the businesspeople they are dealing with and to be on their guard for any potential money-laundering activity.

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## UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Five of the UN Sustainable Development Goals (SDG) are intrinsically linked to our business, and we focus on them because our activities can have the biggest impact here. How Armacell contributes to SDG 8, 9, 12, 13 and 14 is outlined below.



#### **DECENT WORK AND ECONOMIC GROWTH**

Sustainable economic growth is key to tackling poverty and raising living standards. Decent work for all is a means to that end. Armacell is committed to upholding labour rights within

its organisation and also engages closely with suppliers on these topics to ensure decent working conditions. A decent job is a safe job. Armacell's Environment, Health and Safety Policy, which was launched in 2021, and its promotion of a zero-accident mindset help employees to go home from work safe and healthy. The downward trend in group-wide occupational safety statistics has continued, with the frequency index of lost-time accidents (LTA), for instance, scoring an average of 0.24 between 2020 and 2022.



## INDUSTRY, INNOVATION AND INFRASTRUCTURE

Increasing resource and energy efficiency is an economic and environmental challenge. Innovation and technological progress are the

prerequisites for developing sustainable solutions. Armacell has an outstanding record of innovation and investing in creating lasting value for its customers. Our innovation focus is geared to the goal of sustainable growth and developing solutions that benefit people and our planet. Under the brand name ArmaProtect<sup>TM</sup>, Armacell offers a wide range of firestop systems which are key to avoiding the propagation of fire and smoke in buildings. Duly certified to international fire resistance tests and safety standards, they provide fire ratings up to 240 minutes.



## RESPONSIBLE CONSUMPTION AND PRODUCTION

Worldwide consumption and production rest on the use of the natural environment and resources in a way that continues to have

destructive impacts on the planet. As a leading provider of technical insulation solutions that reduce resource consumption by enhancing energy efficiency, Armacell's commitment to quality enhances its products' sustainability and safety while its production, product performance, materials and technology innovations are driving responsible resource use. For example, assuming a service life of 20 years for cold applications and/or 30 years for hot applications, 140 times more energy is saved in an ArmaFlex® product lifetime than required to manufacture it.



#### **CLIMATE ACTION**

Armacell's insulation products are an effective means of supporting global efforts to address climate change, as they enhance the energy efficiency of technical equipment and reduce

 ${\rm CO_2}$  emissions in many industries. ArmaFlex® materials protect all kinds of technical equipment against energy losses, e.g. HVAC ducts, hot and cold water pipes, plumbing and refrigeration systems. ArmaComp Ensolite® and ArmaComp Monarch® – just two of Armacell's high-performance, custom-engineered Component Foams products – are supporting the lightweighting revolution in the automotive industry, expected to end sales of combustion engine vehicles by 2035 and significantly advance on the road to climate neutrality.



#### **LIFE BELOW WATER**

Plastic waste is seriously impacting the world's rivers, lakes, seas and oceans. Armacell's pioneering rPET technology is helping to reduce this plastic waste by re-using PET bottles and

contributing to a circular economy in plastics. Our high-performance structural rPET foams manufactured from recycled plastic bottles are used as a core material in many composite sandwich structures. By re-using PET bottles rather than producing foam from virgin resources, we have already saved over 113,000 tonnes of  $\rm CO_2$  emissions. What's more, Armacell products use verifiably registered and approved substances and mixtures and fully comply with the EU's REACH regulation to protect human health and the environment.

The United Nations' 17 Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future for everybody. They address global challenges and call on individuals, companies and organisations around the world to play their part in achieving these global goals by 2030. For more information on the SDGs, please visit: www.un.org

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## MEMBERSHIPS, INITIATIVES AND GUIDELINES

#### // PARTNERSHIPS

We actively contribute to moving towards a sustainable society. To save resources and protect the planet, we firmly believe in collaboration and support valuable initiatives that help to create the society of tomorrow.

#### Universities and research institutes

- // CellMat Technologies (Spain) foaming processes optimisation
- // Luxembourg Institute of Science and Technology (LIST) high-performing composite materials
- // PTG Eindhoven (The Netherlands) polymer synthesis, process technology and modification
- // Wroclaw University of Science and Technology (Poland) product testing and optimisation
- // Aachen University, Institute for Plastic Processing (Germany) – sustainable manufacturing and nextgeneration materials
- // Sirris (Belgium) extended developmental capabilities for semi-structural and structural materials
- // London South Bank University (UK) latest scientific approaches for acoustic performance

#### // PRINCIPLES & GUIDELINES

Following international standards and certifications.

#### ISO 9001

This standard is based on a number of quality management principles, including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. 20 of our plants have an ISO 9001 certification.

#### ISO 14001

This standard sets out the criteria for an environmental management system and can be certified to. It maps out a framework that a company or organisation can follow to set up an effective environmental management system.

14 of our plants have management systems certified to the international environmental management standard ISO 14001.

#### ISO 50001

This ISO standard provides a practical way to improve energy use through the development of an energy management system (EnMS).

Our German plants are certified to the energy management standard ISO 50001.

#### ISO 45001

This standard refers to requirements for an occupational health and safety (OH&S) management system and gives guidance for its use. It enables organisations to provide safe and healthy workplaces by preventing work-related injury and ill health, as well as by proactively improving their OH&S performance.

The occupational health and safety management systems of four plants (i. e. three in APAC and one in EMEA) are currently certified to ISO 45001 and the remaining plants follow the WAM Safety Pillar. which is aligned to the international standards and requirements imposed by ISO.

#### ISO 15804 and ISO 14025

ArmaPET® Eco50 presented the first-ever environmental product declaration (EPD) for PET-based insulating foam, compliant with ISO 15804 and ISO 14025.

#### World-class Armacell Mindset (WAM)

WAM is a principle-driven excellence programme that integrates recognised international standards into Armacell's manufacturing, sales & marketing processes to eliminate non-value-added tasks and losses and deliver an exceptional customer experience (for more information, see page 69).

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## MEMBERSHIPS, INITIATIVES AND GUIDELINES

#### World-class Armacell Mindset (WAM)

Since its launch in 2013, Armacell's excellence programme has encouraged a global mindset of continuous improvement at all levels of the company. Based on world-class manufacturing, a collection of concepts that sets standards for manufacturing and operation, the World-class Armacell Mindset (WAM) aims to improve the daily performance through constant, structured and objective analysis.

In the two already existing areas of WAM Manufacturing and WAM Sales & Marketing, this programme contributes to consistency in standards and sustains the implementation of improved processes.

- // WAM Manufacturing is based on the systemic identification of losses and non-value-added tasks at Armacell's multitechnology sites.
- // WAM Sales & Marketing focuses on the competencies, behaviour and expertise of Armacell's commercial teams and aims to create a world-class customer experience.

For WAM Manufacturing, in 2022, Panyu reached the Silver level, Pune confirmed its Silver level, while 7 Armacell production facilities (Suzhou, Münster, Środa, Friesenhofen, Spencer, Conover and Mebane) confirmed their Bronze level.

For WAM Sales and Marketing, in 2022, six commercial teams achieved or confirmed the Silver level (China, Germany, Iberia, India, Nordics and USA), while seven commercial teams achieved or confirmed Bronze (Benelux, Canada, Component Foams, France, Middle East, PET Foams and South America).

All participants, without exception, progressed in improving their processes, marketing and sales skills, and execution. In all, 20 countries or sub-regions were audited in 2021, and six teams advanced to a new award level.

The WAM Internal Process Excellence (WAM IPE) programme was further launched in 2022 to ensure our internal processes become more user-friendly, more efficient, and more controlled. We will provide more details on the progress of WAM IPE in future reporting.

## // WAM MANUFACTURING PRINCIPLES

0'

Safety is a core value built into everything we do.

02

No standard means no improvement.

03

The voice of the customer is present everywhere in the business.

04

Our target is zero losses.

05

A rigorous application of tools and methods.

06

Use visualisation to spot any abnormality and share information.

07

Aim for development on the floor.

08

Best practices are shared and adopted across the business.

09

The involvement of people is essential for success.

10

Create a sense of urgency.

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## MEMBERSHIPS, INITIATIVES AND GUIDELINES

#### // INITIATIVES

- // European FEF and PEF Interest Group (CEFEP): A syndicate for technical insulation providers and a mouthpiece for the industry in communicating the products' benefits.
- // European Industrial Insulation Foundation (EiiF): A neutral non-profit that promotes insulation as a top-of-mind method to enhance sustainability and profitability.
- // U.S. Green Building Council (USGBC): An initiative committed to transforming the way buildings are designed, constructed and operated through LEED (Leadership in Energy and Environmental Design).

#### // SELF-COMMITMENTS

- // The Global Reporting Initiative (GRI) Standards
- // The Armacell Code of Conduct
- // The Armacell Supplier Code of Conduct
- // The Armacell Responsible Procurement Policy
- // The United Nations Sustainable Development Goals (SDGs)
- // The Sustainability Accounting Standards Board (SASB)
- // The Ten Principles of the United Nations Global Compact

#### // SAFETY STANDARDS

#### Safety standards

Supporting our mission to develop innovative and safe thermal, acoustic and mechanical solutions, as well as our zero-accident mindset, health and safety considerations are deeply integrated into our products and day-to-day operations.

## REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)

This is a regulation of the European Union (EU) adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals.

#### RoHS (Restriction of Hazardous Substances Directive)

The RoHS EU Directive aims to prevent the risks posed to human health and the environment related to the management of electronic and electrical waste by restricting the use of certain hazardous substances which can be substituted by safer alternatives.

#### **CE** marking

The Conformité Européenne (CE) Mark is defined as the EU's mandatory conformity marking for regulating the goods sold within the European Economic Area. It indicates compliance with European health, safety and environmental

protection standards. Armacell is the first manufacturer of technical insulation materials to provide CE-certified products and has had this conformity marking for ArmaFlex® products since 2012.

#### UL (Underwriters Laboratories) classified mark

ArmaFlex $^{\otimes}$  Ultra with FlameDefense<sup>TM</sup> technology is the first flexible elastomeric foam insulation UL Classified as to UL 723.

#### **ASTM** certification

ASTM International, formerly known as the American Society for Testing and Materials, is an international standards organisation that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems and services.

#### 2022 Platinum Level Safety Excellence

Armacell in the USA achieved the Platinum Level in the 2022 National Insulation Association (NIA) Safety Excellence Award in the associate (manufacturer) category. NIA's Safety Excellence Award is the only national award for outstanding safety performance in the U.S. mechanical insulation industry.

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## MEMBERSHIPS, INITIATIVES AND GUIDELINES

#### // GREEN BUILDING INITIATIVES

Our compliance cards for selected products and contributions to BREEAM and LEED categories, as well as the GREENGUARD Gold certification mark for low-chemical emissions, the German DGNB certification system or the WELL Building Standard certification, help designers, architects, engineers and developers make the right choice.

#### **GREENGUARD GOLD**

This standard is designed to define low-emitting materials suitable for environments where people, particularly children and sensitive adults, spend extended periods of time in places like schools and healthcare facilities. GREENGUARD certified products are screened for more than 10,000 volatile organic compounds and face annual re-certification and regular monitoring to maintain credentials.

Most of Armacell's insulation products are certified under this programme and bear the GREENGUARD Gold certification mark. These include:

```
// AP ArmaFlex // NH ArmaFlex // ArmaFlex® Ultra // Tubolit // ArmaFlex® UT // AP/CoilFlex
```

#### **LEED®**

Leadership in Energy and Environmental Design (LEED) is the most widely used green building rating system in the world. It provides a framework for healthy, highly efficient and cost-saving green buildings.

#### **BREEAM®**

Building Research Establishment Environmental Assessment Method (BREEAM®) is a leading science-based suite of validation and certification systems for a sustainable built environment.

#### LEED and BREEAM include:

#### WELL Building Standard®

Taking a holistic approach, this is a performance-based system for measuring, certifying and monitoring features of the built environment that impact human health and well-being.

```
// AF/ArmaFlex // ArmaFlex® SF990
```

#### **DGNB**

// ArmaComfort™ AB

The Deutsche Gesellschaft für Nachhaltiges Bauen (DGNB) is a joint project of Germany's Ministry of Transport, Building and Urban Development (BMVBS) and the German Sustainable Building Council (DGNB). The non-profit association aims to promote change in the building and property market, promoting quality as the foundation for responsible and sustainable action. Its main principles revolve around a holistic understanding of sustainability, encompassing environmental, economic and sociocultural factors.

```
// NH/ArmaFlex Smart
                                 // Tubolit DG Plus
// ArmaProtect™ A1
                                 // Tubolit Split & DuoSplit
// ArmaComfort™ AB Alu
                                 // Tubolit DG
// AF/ArmaFlex Evo
                                 // Tubolit DG B1
// ArmaFlex Ultima
                                 // Tubolit S
// ArmaComfort™ AB Plus
                                 // Tubolit S Plus
// ArmaComfort™ AB Alu Plus
                                // Tubolit AR Fonowave
// AF/ArmaFlex
                                 // Tubolit AR Fonoblok
// HT/ArmaFlex
                                 // Tubolit ARS
// SH/ArmaFlex
                                 // Tubolit DHS Quadra
// ArmaSound® RD 240
// ArmaFlex® Protect
```

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#### // ECOLABELS AND DATABASES

Based on its life cycle assessment, ArmaFlex® Ultima has been listed and accredited by leading green building eco databases, such as Sundahus, Byggvarubedömningen, Nordic Swan Ecolabel and Minergie-Eco. These databases assist stakeholders in the construction sector in selecting products that meet strict environmental, health, quality and social requirements.

IN-DEPTH INFORMATION AND DATA // ABOUT THIS REPORT

## **ABOUT THIS REPORT**

Armacell International S.A. (referred to as Armacell or Armacell Group) is the inventor of flexible elastomeric foams for equipment insulation.

The majority shareholders of Armacell are private equity funds managed by PAI Partners. The remaining shares are held by the holding and investment company KIRKBI and Armacell's senior management team.

Armacell has reported the information cited in this GRI content index for the period from 1 January 2022 to 31 December 2022 with reference to the GRI Standards. The report also uses the 2018 SASB Construction Materials Industry Standard for disclosure to investors and the financial community. The content index covers all the information provided in the report, even if the available information on the individual indicators does not fully meet the requirements. Armacell is working intensively on collecting data and facts more comprehensively and reporting in accordance with the GRI Standards in the near future.

This Sustainability Report is complemented by the content of our Annual Report 2022. The latter provides extensive insights into the development of the company, its strategic approach, and how business and sustainability are connected.

The annual report can be downloaded from our website:

https://www.armacell.com/investors/annual-report-2022

Further information on current sustainability projects can also be found on our website:

https://www.armacell.com/sustainability

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<sup>1</sup>Armacell made minor restatements of information during this reporting period: for more information and data 🗋 see page 79.

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<sup>&</sup>lt;sup>2</sup> This report has not been subject to external assurance. Armacell will successively introduce such a process with the next reporting year in preparation for the obligations of the Corporate Sustainability Reporting Directive (CSRD).

<sup>3</sup> At Armacell, there are no employees who work for our company without having an employment relationship with our company.

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#### // MATERIAL TOPICS

Areas of Commitment	Material Topics	Goals	KPIs
Investing in our People	Providing a safe place to work	Aim for zero accidents every year	Lost-time accidents frequency index
	Providing a safe place to work	Increase safety awareness	Training and information sessions
	Promoting employee satisfaction and people engagement	Increase people engagement	Launch bi-annual employee survey
	Fostering equal opportunities to grow and succeed at all levels of the organisation	Promote employee competences	Training and career development
	Fostering equal opportunities to grow and succeed at all levels of the organisation	Identify and develop future leaders	Internal promotions
	Fostering equal opportunities to grow and succeed at all levels of the organisation	Continued emphasis on local teams	Leadership team staffed locally
	Fostering equal opportunities to grow and succeed at all levels of the organisation	Employee performance feedback	Track annual performance feedback for all employee
	Supporting local communities	Improve the quality of life in local communities	Voluntary donations and activities
Protecting our Planet	Contributing to the transition to a low-carbon economy and reducing $\text{CO}_2$ emissions	Reduce production-related CO <sub>2</sub> emissions	Tonnes of CO <sub>2</sub> emissions
	Designing solutions that preserve natural resources	Reduce production-related water consumption	Litre per metric tonne of finished goods
	Designing solutions that preserve natural resources	Reduce production-related energy consumption	MJ per metric tonne of finished goods
	Promoting recycling and accelerating our journey towards a circular economy	Increase recycling of production-related waste	Percentage of waste recycled
	Promoting recycling and accelerating our journey towards a circular economy	Increase recycled PET consumption	Percentage of rPET in ArmaPET® foams
Enabling Governance	Driving compliance and fostering a culture of robust business ethics	Foster a culture of robust business ethics	Employees trained on our Code of Conduct
	Protecting our business, reputation, and customer data	Mitigate IT risks	Reinforced security policies and mandatory training sessions
	Ensuring compliance in our value chain	Assess suppliers' level of compliance	Supplier assessments
	Ensuring compliance in our value chain	Perform supplier audits	Number of audits across regions every year
Furthering Sustainable Growth	Investing in low-impact and durable performance products	Increase customer satisfaction	Interact with customers on ESG topics
	Maintaining the highest product quality standards	Enhance safety, quality, and material efficiency in our solutions	Number of quality tests performed
	Maintaining the highest product quality standards	Extend sustainable product portfolio	New products offering clear sustainable advantages

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// INVESTING IN OUR PEOPLE

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# Reference/KPI20202021LTA Gravity Index¹total number of lost workdays per 100,000<br/>working hours3.844.26LTA Frequency Index¹total number of lost-time accidents > 1 day0.240.25Medical Treatment Frequency Index¹number of accidents leading to an absence0.560.54

LTA Frequency Index <sup>1</sup>	total number of lost-time accidents > 1 day	0.24	0.25	0.23
Medical Treatment Frequency Index <sup>1</sup>	number of accidents leading to an absence from work of ≤1 day per 100,000 working hours	0.56	0.54	0.34
Employees trained on safety measures	total number	2,300	2,378	2,335
Employee feedback process	% of total employees		> 90	> 90
New employee hires	total number	453	692	846
Employee turnover	% of total employees	13.7	19.8	22.0

<sup>&</sup>lt;sup>1</sup>The data covers 23 out of 27 plants.

Age groups	20 and under	21 – 30	31 – 40	41 – 50	51 – 60	61 – 64	65 and over	Headcount
Total number of employees <sup>2</sup>	44	613	1.070	891	603	134	35	3,390
Employees in %²	1.3	18.1	31.6	26.2	17.8	3.9	1.1	100

<sup>2</sup>Includes regular employees, fixed-term contracts and apprentices, not on leave.

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#### // PROTECTING OUR PLANET<sup>1</sup>

	Reference/KPI	2020	2021	2022
Energy consumption	in MJ total consumption	_ 445,844,963	488,200,145	482,097,408
	in MJ per tonne of finished goods	5,114	5,568	5,601
Electricity consumption	in kWh total consumption	123,808,063	135,562,804	133,866,663
	in kWh per tonne of finished goods	1,420	1,546	1,555
Renewable energy production	in MWh	749	749	749
Gas consumption	in m³ total consumption	13,437,762	17,205,361	17,538,481
	in m³ per tonne of finished goods	154.13	196.22	203.76
CO <sub>2</sub> emissions	in kg total	84,500	97,692	93,762
	in kg per tonne of finished goods	0.97	1.11	1.09
CO₂e Scope 1	in tCO <sub>2</sub> e		31,470	34,818
CO₂e Scope 2	in tCO <sub>2</sub> e	_	55,155	56,226
CO₂e Scope 1 & 2	in tCO <sub>2</sub> e	-	86,625	91,045
CO₂e Scope 3	in tCO <sub>2</sub> e		82,491	719,682
Water consumption	in m³ total consumption	124,196	175,001	167,946
	in litre per tonne of finished goods	1.42	2.00	1.95
Waste	total in tonnes	13,480	18,276	17,778
hazardous	in tonnes	_	499	620
non-hazardous	in tonnes	_	17,777	17,158
recycled	in tonnes		11,072	10,042
	%	65	61	56
to landfill	in tonnes		4,248	4,018
	%	22	23	23
to incinerator	in tonnes		2,734	3,058
	<del></del> %		15	17

Data covers 18 of our 27 plants; not included are the smaller and recently acquired plants in China (Yingde), Denmark (Ølstykke), Italy (Leini), Germany (Friesenhofen and Münster North), Austria (Gödersdorf) and Serbia (Zrenjanin).

Also not included are the two workshops/training centres in Japan (Tokyo) and Singapore. All numbers were restated.

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#### // ENABLING GOVERNANCE

	Reference/KPI	2020	2021	2022
Employees acknowledge code of conduct	total number	3,167	3,269	3,390
	%	100	100	100
Non-compliance with laws & regulations	total number	0	0	0
Fines or non-monetary sanctions	total number	0	0	0
Complaints concerning customer privacy	total number	0	0	0
Raw materials suppliers confirming code of conduct	total number	_	~ 400	~ 400
	<del>%</del>		10	22

#### // FURTHERING SUSTAINABLE GROWTH

	Reference/KPI	2020	2021	2022	
Products non-compliant with regulations and/or voluntary codes	total number	0	0	0	
Total number of finished goods (in tonnes)	total number	87,185	87,683	86,076	

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