



# SUSTAINABILITY REPORT 2020



## ABOUT US

Armacell is the inventor of flexible elastomeric foams for equipment insulation. We develop innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for our customers. Day in, day out, our products make a significant difference around the world. As a multi-material and multi-product company, we operate two main businesses: Advanced Insulation and Engineered Foams. Our product focus is on insulation materials enhancing the energy efficiency of technical equipment, high-performance foams for sophisticated and lightweight applications, 100 % recycled PET products and next-generation aerogel technology.

## CONTENTS

- |  |  |                                    |
|--|--|------------------------------------|
| <b>04</b> ARMACELL AT A GLANCE                 | <b>13</b> <b>OUR SUSTAINABLE PRODUCT PORTFOLIO</b> | <b>40</b> OUR RESPONSE TO COVID-19 |
| <b>06</b> LETTER FROM THE CEO                  | 14 Solutions for global megatrends                 | <b>41</b> CYBER SECURITY           |
|  | 15 Armacell is everywhere                          |                                    |
| <b>07</b> <b>OUR SUSTAINABILITY COMMITMENT</b> | <b>19</b> <b>OUR AREAS OF COMMITMENT</b>           | <b>42</b> UN GLOBAL COMPACT        |
| 08 Our approach to sustainability              | 20 Employees first                                 |                                    |
| 09 Sustainability management                   | 25 Driving growth                                  | <b>43</b> ABOUT THIS REPORT        |
| 10 Materiality analysis                        | 30 Protecting our planet                           |                                    |
| 11 Four areas of commitment                    | 37 Fostering communities                           |                                    |
| 12 Sustainable Development Goals               |  |                                    |

### NAVIGATING THE REPORT AT THE CLICK OF A BUTTON



Home



Search



Page forward



Page backward




Previous view



Interactive element





OUR VISION IS TO BE THE GLOBAL  
LEADER IN PROVIDING INNOVATIVE  
TECHNICAL INSULATION SOLUTIONS  
AND COMPONENTS TO SAVE  
ENERGY AND MAKE A DIFFERENCE  
AROUND THE WORLD.

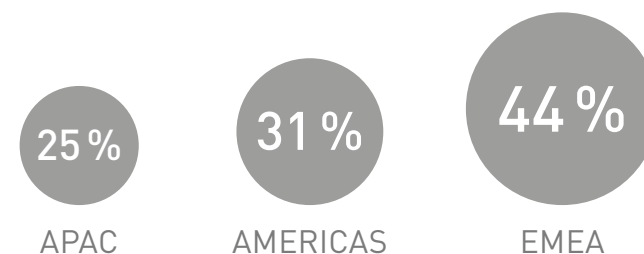
## 2020 FINANCIAL RESULTS

€590.5m  
Total Net Sales

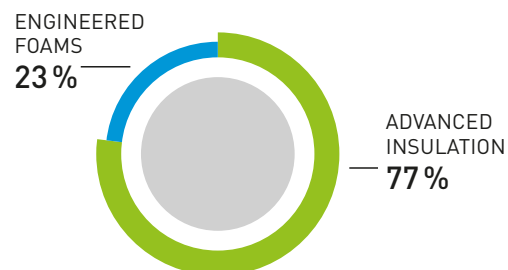


€119.6m  
Adjusted EBITDA

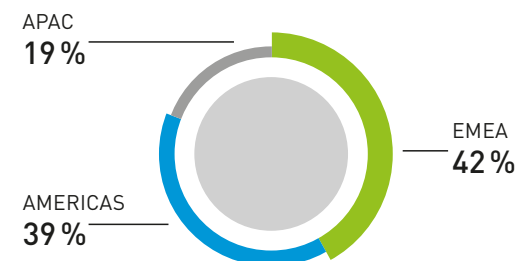
20.2 %  
EBITDA margin



NET SALES by business division



NET SALES by region



For more information about the financial results, please see [Annual Report 2020](#)

## 2020 SUSTAINABILITY INDICATORS

### EMPLOYEES FIRST

70+

different nationalities

### DRIVING GROWTH

30,000

quality tests performed

### PROTECTING OUR PLANET

400

million PET bottles re-used

### FOSTERING COMMUNITIES

2,000

socially engaged employees

For information about our areas of commitment, please see page 11

1

CORPORATE  
HEADQUARTERS

3

REGIONAL  
HEAD OFFICES

23

MANUFACTURING  
FACILITIES

100+

COUNTRIES WHERE  
CUSTOMERS ARE SERVED



## LETTER FROM THE CEO



### DEAR READERS,

At Armacell, we are dedicated to delivering sustainable solutions to address the global megatrends of sustainability, energy efficiency, urbanisation, globalisation of the food supply chain, lightweighting, and acoustic comfort and vibration control. Sustainable solutions that help to protect the environment and mitigate climate change are at the heart of our business model.

We are specifically committed to three of the United Nations' Sustainable Development Goals (SDGs) that are intrinsically linked to our business [see page 12](#): SDG 9 (Industry, Innovation and Infrastructure) because our innovative spirit creates added value for customers through our solutions to global challenges; SDG 13 (Climate Action) in that our products improve energy efficiency and help lower CO<sub>2</sub> emissions; and SDG 14 (Life Below Water) since our rPET foams are reducing plastic waste and contributing to a circular economy in plastics.

### Tackling climate change

In 2020, we saw how the ESG-related megatrends were accentuated by the Covid-19 pandemic. In addition to fighting the pandemic, governments around the world committed to sustainability targets. The EU Green Deal was launched to tackle climate change. The U.S. government is targeting a 50-52% decrease in GHG emissions by 2030 (vis-à-vis 2009 levels). The EU raised its target to 55% and included the Green Deal as a pillar of its post-Covid recovery plan. NGOs and public pressure are inducing industrial companies to reduce their carbon footprint. ESG enablers in the building materials sector are being rewarded by the market.

### Benefiting from megatrends

In all this, Armacell is strongly positioned to benefit from these megatrends. Effective insulation is the #1 energy-saving opportunity to reduce GHG emissions. Even in the specific circumstances of 2020, Armacell increased its market shares in sustainability-oriented applications as its high-performance solutions enabled greater energy efficiency for technical equipment. This performance is grounded on our ongoing investment in research and development of innovative and safe thermal, acoustic and mechanical solutions to save energy, enhance acoustic comfort and improve vibration control.

### New ESG governance structure

One significant development in the year under review was the establishment of a new Group-wide ESG governance structure incorporating the highest levels of management. In this, the Sustainability Steering Committee (SSC) plays a key role. We are working towards the implementation of GRI reporting standards, which will also apply to our annual Communication on Progress Report. For 15 years, we have been supporting the UN Global Compact (UNGC) and aligning our strategies and operations to the Ten Principles of the UNGC [see page 42](#).

### Corona countermeasures

Our top priority in 2020 was to safeguard the health and well-being of our employees and ensure business continuity. We enacted effective measures to protect employees who could not work from home and set up an Armacell Solidarity Fund to help employees and their families who were financially impacted by the pandemic. To support healthcare facilities in local communities, we donated insulation material to hospitals being built in Turkey, China and the USA as well as materials to make protective face shields in Europe and North America. All these measures reflected our sense of corporate responsibility to vulnerable groups within the company and in societies worldwide.

2020 was certainly a challenging year. That we were still able to make progress in putting our ESG goals into practice is largely due to the tireless efforts of our employees around the world, to whom I should like to express my gratitude. In addition, it is through the support of our shareholders in these unprecedented times that we have been able to continue investing to enable our company's sustainable growth.

Yours sincerely,

**Patrick Mathieu**  
President and CEO  
Armacell Group

# OUR SUSTAINABILITY COMMITMENT

- 
- 08 OUR APPROACH TO SUSTAINABILITY
  - 09 SUSTAINABILITY MANAGEMENT
  - 10 MATERIALITY ANALYSIS
  - 11 FOUR AREAS OF COMMITMENT
  - 12 SUSTAINABLE DEVELOPMENT GOALS
- 



## OUR APPROACH TO SUSTAINABILITY

In line with our strategic sustainability concept, we report each year on our ESG (environmental, social and governance) performance in our Annual Report ( [Annual Report 2020, pages 42-47](#) ) and Sustainability Report.

### // CODE OF CONDUCT

Our Code of Conduct governs the framework for our employees to establish a positive, customer-centric culture and expresses our compliance with the laws and regulations applicable in every country where we do business.

### // UN GLOBAL COMPACT

Responsible and ethical conduct is fundamental to the way we do business. Our accountability and commitment to a better and cleaner future date back to 2006. Since then, Armacell has been committed to the Global Compact and reports annually on its progress [see page 42](#).



### // INITIATIVES AND ALLIANCES

Armacell works through multiple initiatives and alliances to promote sustainability and a more efficient use of energy in buildings, which account for 30-40% of global CO<sub>2</sub> emissions.

- **European Alliance for Companies for Energy Efficiency in Buildings** (EuroACE): Working with European institutions to move Europe forward in energy efficiency.
- **Renovate Europe Campaign** (REC): A EuroACE initiative and the only EU-wide campaign focusing solely on the renovation of building stock in the EU.
- **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).

Human rights  
Anti-corruption  
Environmental topics  
Fair practices  
Consumer-related topics  
Labour practices  
Local community activities

### // CORPORATE GOVERNANCE

Corporate Governance focuses on human rights, fair practices, consumer-related topics, labour practices (workplace conditions and relations) as well as involvement in local communities and the protection of our environment. The governance principles upheld at Armacell safeguard ethical conduct, compliance with legislation and human rights, accountability, and the prioritisation of stakeholder interests and dialogue. Guidelines including Armacell's Code of Conduct and Environment, Health & Safety Policy, as well as international memberships and local partnerships, support the implementation of the company's corporate governance and our four areas of commitment.



## SUSTAINABILITY MANAGEMENT

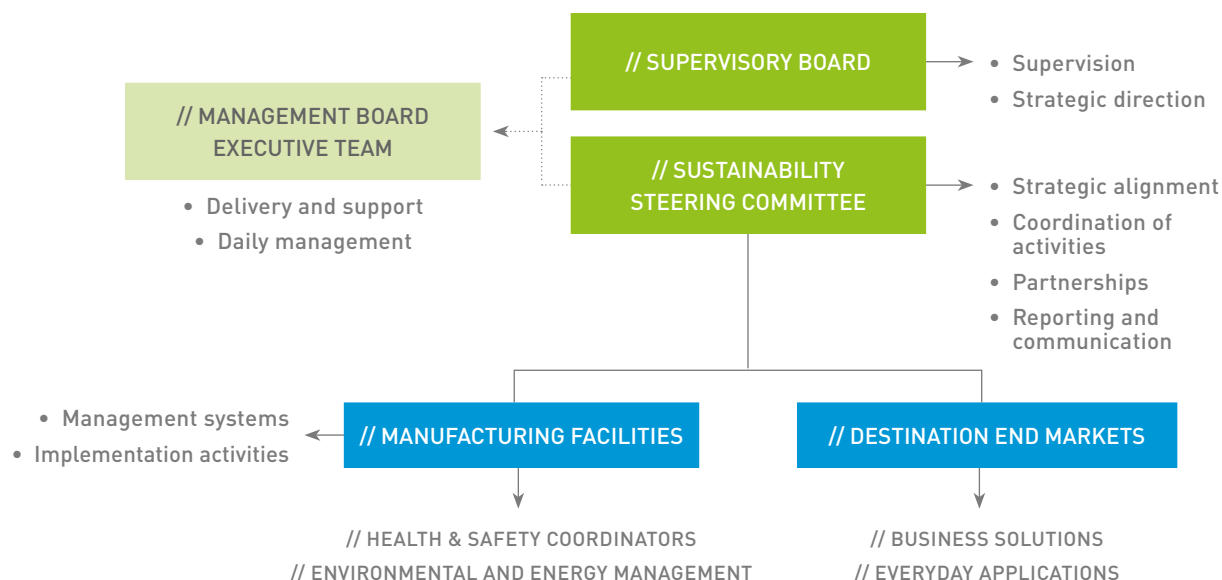
Creating sustainable value for our customers is our overarching goal. Sustainability is at the heart of our business strategy and innovation efforts. Sustainability-related activities in core areas such as health & safety and environment management are deeply integrated into our day-to-day operations.

In our efforts to embed sustainability across the Armacell Group and in the minds of our employees, we focus on these **four areas of commitment**:

- **EMPLOYEES FIRST**
- **DRIVING GROWTH**
- **PROTECTING OUR PLANET**
- **FOSTERING COMMUNITIES**

In 2020, sustainability took on a very real and personal significance in view of the impact of the Covid-19 pandemic on the health, safety and well-being of our workforce. For details of our response [see page 40](#) of this report.

### // ESG GOVERNANCE STRUCTURE



#### Roles and responsibilities

In the year under review, a new ESG governance structure incorporating the highest levels of management was established (see diagram). A central role is played by the Sustainability Steering Committee (SSC), whose main responsibilities are to identify areas of commitment, develop sustainability focus topics, review and improve ESG reporting standards, maintain best-in-class ESG communications and positively influence stakeholder opinions. The Supervisory Board is mainly responsible for providing input for the SSC's strategic direction and for supporting larger-scale sustainability projects and the KPI setting process on sustainability metrics.

## MATERIALITY ANALYSIS

# OUR SUSTAINABILITY FOCUS

In the second half of 2020, Armacell's Sustainability Steering Committee conducted a materiality analysis based on internal and external data. The objective of this analysis was to determine how the company had contributed to economic, environmental and social conditions at a local and global level.

The materiality analysis, which involved evaluating scientific studies, expert opinions and other contributions, helped us to better understand the role played by our industry, and specifically that of Armacell, in sustainable development. By applying the results of this analysis, Armacell was able to prioritise specific targets in the areas shown in the table below. Moreover, the material topics revealed in this analysis are reflected in the four areas of commitment that govern the implementation of our sustainability activities, [see page 11](#).

In our business of developing innovative and safe thermal, acoustic and mechanical solutions for diverse industrial applications, the ecological follow-up analysis particularly focuses on sustainability topics relating to climate, energy and emissions. Quantifying our company's carbon footprint by defining targets, improving data collection, and determining Scope 3 emissions are our top priorities.

An important social topic is the ongoing training of our employees to ensure safety at work and trouble-free operations in our 23 manufacturing facilities around the world. After all, safe and

compliant operations are the basis of good relations with our local communities. Implementation of GRI reporting standards is a current priority in the field of governance. Besides aligning the KPIs already surveyed for corporate controlling with the information required for GRI reporting, the focus here is on preparing GRI-compliant management approaches for the main topics involved. As for the stakeholders in our supply chain, we are currently completing a code of conduct for Armacell suppliers. This represents an important step forward with respect to the sustainable management of supply chains.

## // SUSTAINABILITY FOCUS TOPICS 2021

TOPIC	TARGET	PRIORITIES
Carbon Footprint	Establish baseline for Scope 1 & 2 emissions	Collect additional data (e.g. car fleet, offices)
	Consider inclusion of Scope 3 emissions	Define spectrum for future data collection
EHS Policy	Implement global policy for Environment, Health & Safety	Compile existing EHS documentation and standardise at Group level
Health & Safety	Define H&S goals and define additional KPIs	Add offices to scope and review procedures already in place
Whistleblowing	Establish and implement a preventative speak-up tool and policy	Set up and promote new tool (phone & email)
Governance	Create an ESG governance at Group level	Designate Board members, define responsibilities and frequency of meetings
Supply Chain	Risk analysis and mapping of all raw materials	Perform risk management review to increase sustainability factors/targets
	Assess fulfilment of requirements by suppliers (e.g. Supplier Code of Conduct/Slavery Act)	Publish Supplier Code of Conduct (incl. supplier subcontractors)

## FOUR AREAS OF COMMITMENT

1

**EMPLOYEES FIRST** [more](#)

We prioritise our employees' health and safety by engaging in an interactive dialogue to ensure good working conditions, enable training, enhance well-being and improve the work-life balance.

**Health & Safety**

- Training

**Internal dialogue**

- Working conditions
- Well-being
- Work-life balance

**i MATERIAL TOPIC****Health & Safety**

- Define H&S goals and additional KPIs

**Whistleblowing**

- Establish and implement a preventative speak-up tool and policy

2

**DRIVING GROWTH** [more](#)

The pillars of sustainable growth at Armacell are our commitment to the highest product quality and innovations that consume resources responsibly and green our product portfolio.

**Product quality**

- Durable raw material quality and processes
- World-class Armacell Mindset (WAM)
- ISO 9001 certifications
- Product testing

**Innovation**

- Employee engagement

**i MATERIAL TOPIC****Supply chain**

- Risk analysis and mapping of all raw materials
- Assess fulfilment of requirements by suppliers

3

**PROTECTING OUR PLANET** [more](#)

With our energy-saving products and solutions, our efforts to boost the circular economy, better resource management and multiple environmental initiatives, we are helping to protect our planet.

**Resource management**

- Environmental goals and measures
- Reduction of energy consumption and CO<sub>2</sub> emissions
- Waste management

**Recycling plastic****Plant certifications**

- ISO 14001, ISO 50001

**i MATERIAL TOPIC****Carbon footprint**

- Establish baseline for Scope 1 & 2 emissions
- Inclusion of Scope 3 emissions

**EHS Policy**

- Implement global policy for Environment, Health & Safety

4

**FOSTERING COMMUNITIES** [more](#)

In 2020, the Armacell family donated time and energy to their local communities to help children and the elderly. As a company, we facilitate and fully encourage our employees' volunteering efforts.

**Supporting local communities**

- Helping children
- Caring for people
- Donating time

**Supporting global initiatives****i MATERIAL TOPIC****Community investments**

- Voluntary donations and activities

## SUSTAINABLE DEVELOPMENT GOALS

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



### WHY IS IT RELEVANT TO US?

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 continues to invest in creating lasting value for its customers through innovative products.

### ARMACELL'S KEY CONTRIBUTIONS

Our focus on innovation is geared to the goal of sustainable growth. By engaging our employees around the world to deliver creative ideas, we turn these ideas into solutions that benefit people everywhere and our planet. The products and solutions we offer in response to global megatrends are positively impacting our activities and making a sustainable difference in the 100+ countries we do business in.

A recent innovation, ArmaFlex® Ultra with its FlameDefense™ technology, is the first flexible elastomeric foam insulation to receive UL 723 classification. That means it burns more slowly, produces less smoke, and gives occupants and first responders more time to escape from or enter a building.



### WHY IS IT RELEVANT TO US?

In recent years, it has been increasingly obvious that greater efforts are required if we are to put a brake on the global temperature rise this century and keep it well below 2 °C above pre-industrial levels.

In this crucial field, Armacell's insulation products are making a key contribution to improving the energy efficiency of technical equipment and lowering CO<sub>2</sub> emissions in many industries.

### ARMACELL'S KEY CONTRIBUTIONS

ArmaFlex® is the brand name of a wide range of insulation products that are enhancing the energy efficiency of commercial buildings around the world. HVAC ducts and systems, hot and cold water, heating, plumbing and refrigeration systems, acoustic and vibration control solutions: ArmaFlex® materials are protecting all kinds of technical equipment against energy losses.

ArmaComp Ensolute® and ArmaComp Monarch® – just two of Armacell's Component Foams high-performance, custom-engineered products – are supporting the light-weighting revolution in the automotive industry, which is forecast to lower CO<sub>2</sub> emissions by up to 40 % by 2050.



### WHY IS IT RELEVANT TO US?

Plastic waste is seriously impacting the world's rivers, lakes, seas and oceans. The aim of this SDG is to prevent and significantly reduce all kinds of marine pollution.

Armacell's pioneering recycled rPET technology is helping to reduce plastic waste by reusing PET bottles and thus contributing to a circular economy in plastics.

### ARMACELL'S KEY CONTRIBUTIONS

Our high-performance structural rPET foams, which are entirely manufactured from recycled plastic bottles, are used as a core material in many composite sandwich structures. More than 1.5 billion PET bottles have already been reused to manufacture ArmaPET® products – plastic waste that may well otherwise have ended up in the oceans.

By reusing PET bottles rather than producing the foams from virgin resources, we have already saved more than 67,000 metric tons of CO<sub>2</sub> emissions. That also pays into SDG 13. What's more, Armacell products contain no REACH Substances of Very High Concern, i.e. chemicals that have serious effects on human health or 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](https://www.un.org)

# OUR SUSTAINABLE PRODUCT PORTFOLIO

- 
- 14 SOLUTIONS FOR GLOBAL MEGATRENDS
  - 15 ARMACELL IS EVERYWHERE
-



## SUSTAINABLE SOLUTIONS FOR GLOBAL MEGATRENDS



MEGATREND

### SUSTAINABILITY

Environmental protection and climate change mitigation are gaining ground in public awareness worldwide. That opens up opportunities for Armacell to increase its market shares in sustainability-oriented applications.



MEGATREND

### GLOBALISATION OF FOOD SUPPLY CHAIN

As the demand for fresh foods rises, the need for lightweight, cost-efficient, end-to-end insulation solutions is growing. Even during the Covid-19 pandemic, the global food supply chain has remained robust.



MEGATREND

### URBANISATION

The UN forecasts that 68 % of the world's population will be urbanites by 2040. Every year, tens of millions are moving from rural to urban areas. The demand for housing is increasing energy distribution requirements and the need for high-performance insulation products.

ARMACELL'S ENERGY-SAVING AND NOISE- AND VIBRATION-ATTENUATING SOLUTIONS ARE PRINCIPALLY ADDRESSING SIX GLOBAL MEGATRENDS.



MEGATREND

### 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.



MEGATREND

### LIGHTWEIGHTING

In many industries, lightweighting is a must to reduce CO<sub>2</sub> 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<sub>2</sub> by 2050, lower fuel costs for consumers, and help achieve emission and environmental footprint targets.



MEGATREND

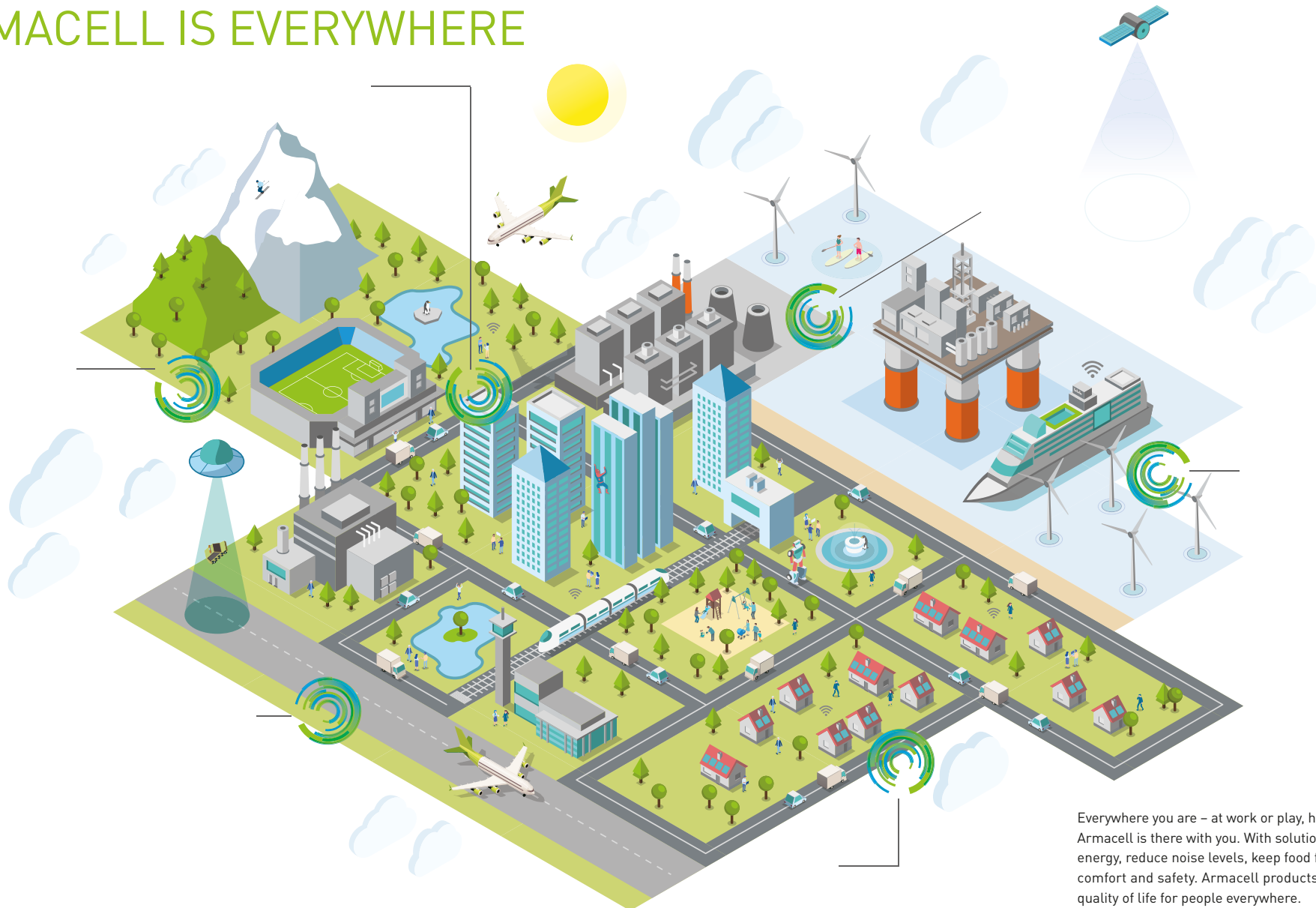
### ACOUSTIC COMFORT & VIBRATION CONTROL

20 % of Europe's population is exposed to harmful noise levels. The mega-cities of Asia, Africa and the Americas are even louder. More and more noise pollution regulations require the kind of custom solutions Armacell can provide.



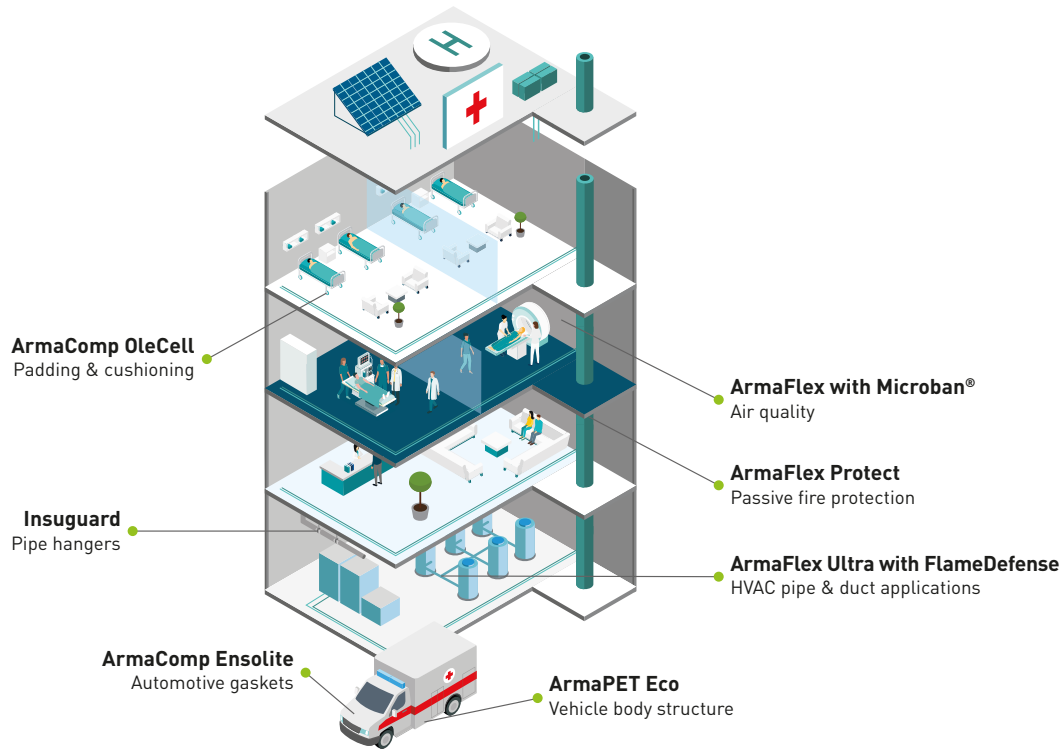
Armacell is everywhere

# ARMACELL IS EVERYWHERE



Everywhere you are – at work or play, home or leisure – Armacell is there with you. With solutions that conserve energy, reduce noise levels, keep food fresh or add comfort and safety. Armacell products improve the quality of life for people everywhere.

Armacell is everywhere



## ENERGY SAVING

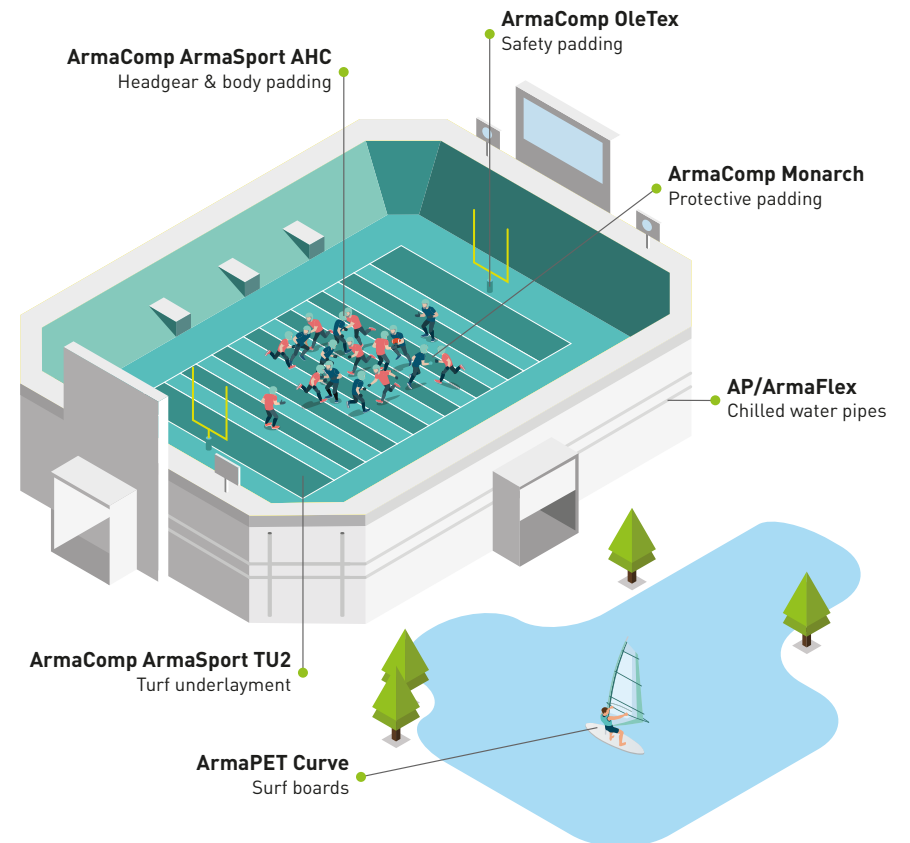
### COMMERCIAL EQUIPMENT

As buildings worldwide account for over a third of energy-related CO<sub>2</sub> emissions, the energy savings Armacell insulation products make possible in HVAC ducts and systems, hot and cold water, heating, plumbing and refrigeration systems are key to a more sustainable future.

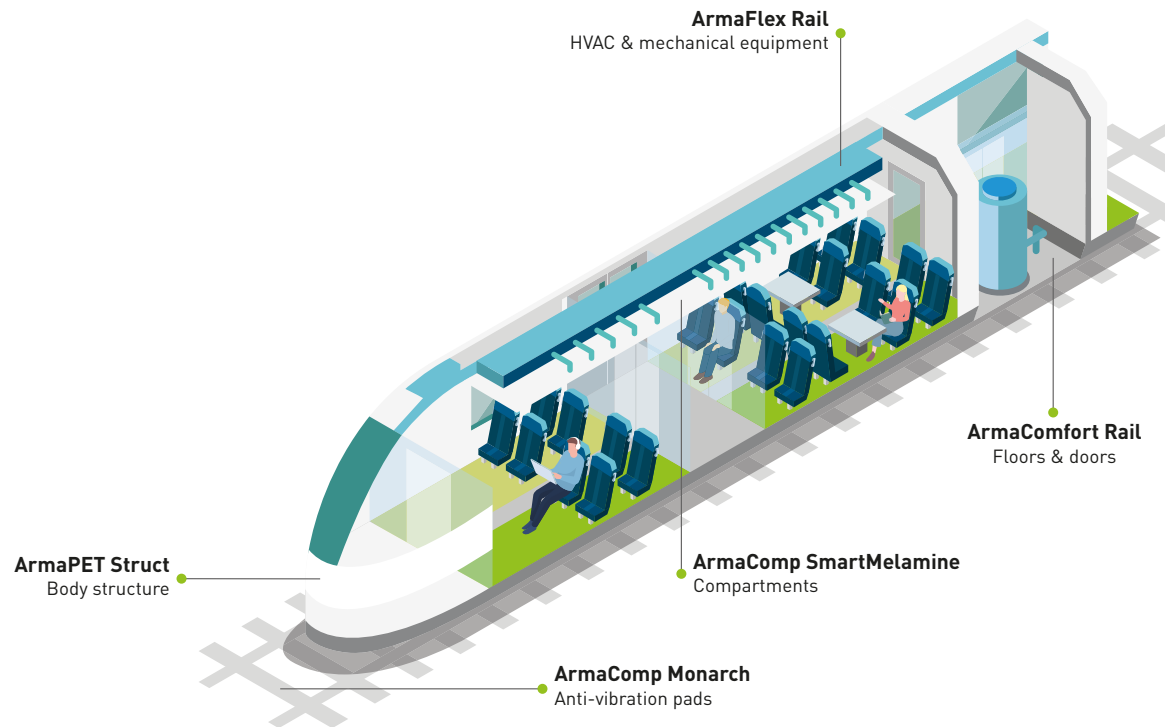
## VIBRATION CONTROL

### SPORTS & LEISURE

Shock absorption is the key benefit of Armacell products used in sport turf, floor underlays, helmet paddings or life jackets – and in all applications where impact cushioning, flotation or lightweighting are essential. All qualities that enable a longer life.



Armacell is everywhere



# LIGHTWEIGHTING

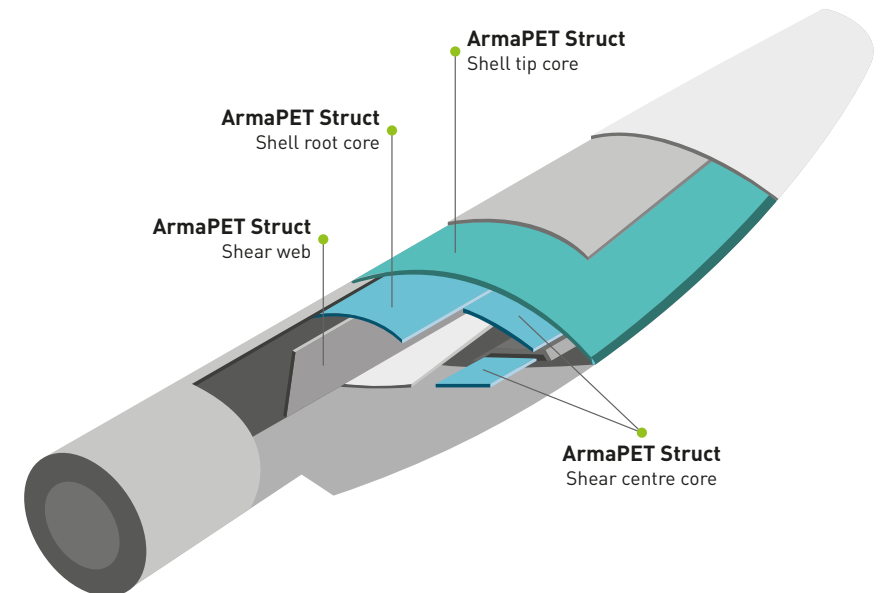
## TRANSPORTATION

Energy efficiency in multiple means of transport: Armacell products make the duct systems of ships and trains more energy-efficient; its lightweight thermal and acoustic insulation materials enhance the performance of composite panels in trains, trucks and trailers.

# SUSTAINABLE

## ENERGY

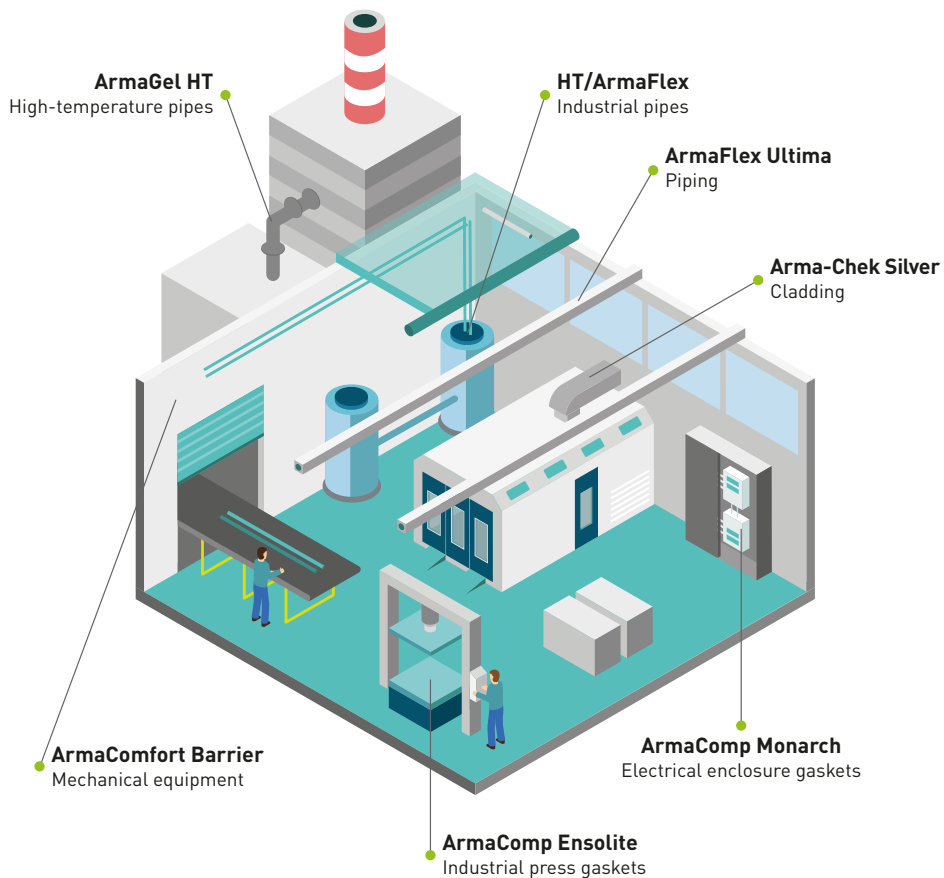
Armacell's thermal insulation solutions make a sustainable contribution to the energy industry by enabling a more efficient production, transformation and distribution of energy, and by opening up new and innovative energy conservation opportunities.



# SOUND ATTENUATION

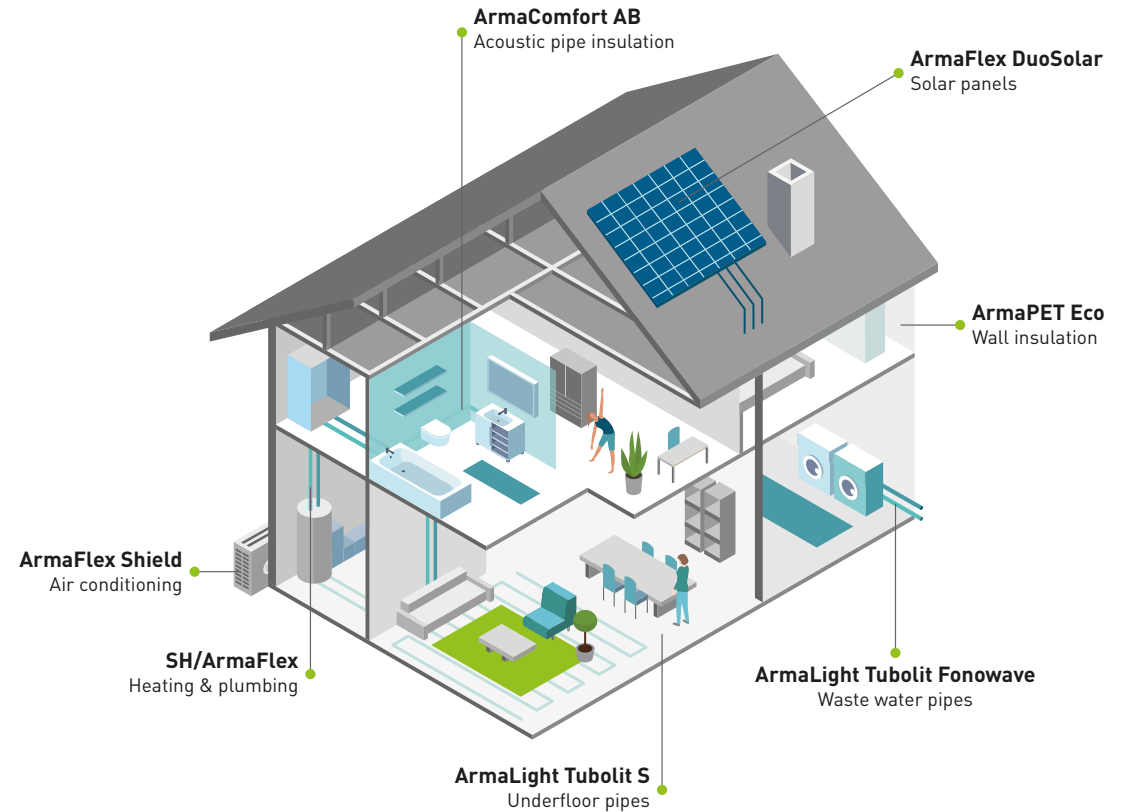
## INDUSTRIAL

The manufacturing industry is attaching greater importance to enhanced energy efficiency and improved working conditions. Armacell products are making a sustainable difference in industrial equipment, pharmaceuticals, power generation and electrical enclosure applications. They enhance energy efficiency and lower noise levels in industrial facilities.



## OUR SUSTAINABLE PRODUCT PORTFOLIO

Armacell is everywhere



# QUALITY OF LIFE

## RESIDENTIAL EQUIPMENT

Armacell insulation products save energy in residential heating, plumbing, ventilation, air-conditioning and hot and cold water applications; sound attenuation and vibration control products add to the quality of life in residential buildings.

# OUR AREAS OF COMMITMENT

- 
- 20 EMPLOYEES FIRST
  - 25 DRIVING GROWTH
  - 30 PROTECTING OUR PLANET
  - 37 FOSTERING COMMUNITIES
- 



## EMPLOYEES FIRST



### Health & Safety

- Training

### Internal dialogue

- Working conditions
- Well-being
- Work-life balance

### Workforce

# 3,167

employees on 31 December 2020  
(+10% compared to 2016)

### Staff diversity

# 70+

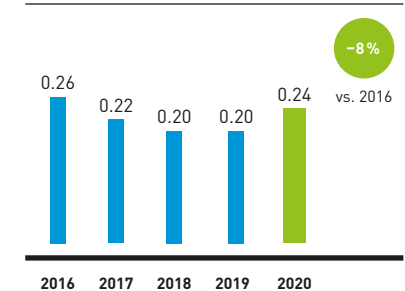
nationalities working at Armacell sites  
around the world

### Gender diversity

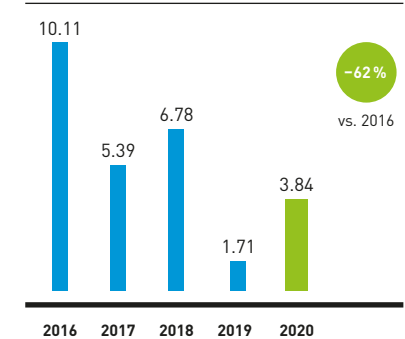
# 80/20

ratio is typical of the type of manufacturing industry we operate in

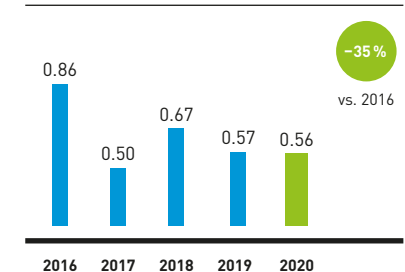
### LTA FREQUENCY INDEX<sup>1</sup>



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



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



### Prioritising health, safety and training

We create safe and healthy working environments for our employees, so they can go home to family and friends as fit and well as they arrived at work. We are dedicated to developing the capabilities and competencies of our people through internal and external training programs. We are committed to ethical behaviour based on our Code of Conduct and global anti-corruption, anti-money laundering and sanctions policies. People matter to us.

<sup>1</sup> Lost-time accidents (>1 day)

<sup>2</sup> Number of lost workdays per 100,000 working hours

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



## HEALTH AND SAFETY

# MANAGING GLOBAL EHS STANDARDS

As employees' health and safety is a top priority, Armacell is committed to high standards of Environmental, Health and Safety (EHS) performance. To this end, a Global EHS Policy was drawn up in 2020 and became applicable for the entire Armacell Group, its wholly owned subsidiaries, industrial sites and offices in 2021.

This policy contains guidelines for enabling environmental protection and creating safe and healthy working conditions. The ultimate responsibility for its implementation lies with Armacell's Management Board. Within the Executive Management Team, it is the Chief Technology Officer who is specifically responsible for monitoring and safeguarding the highest possible EHS standards. Across the Group, the localised EHS policies, which take national regulations into account, will continue to supplement the global policy. That, in turn, is based on the following principles:

- Ensuring compliance with all applicable EHS legislation and regulations in all the countries Armacell operates in.
- Effectively managing EHS risk and performance through proactively looking for and acting on any sensible opportunities to reduce this risk and to improve performance.

- Reducing the environmental impact of Armacell products throughout their lifecycle.
- Choosing suppliers and business partners who share the same EHS priorities.
- Motivating and training Armacell employees to conduct their work in a safe and environmentally responsible way.
- Cultivating an ongoing dialogue with external stakeholders, local communities and other interested parties on the Group's EHS performance and progress.

Armacell's environmental and energy management systems are subjected to regular auditing by external authorities. 13 Armacell plants operate environmental management systems certified to ISO 14001-2015, while two (Münster and Friesenhofen) are also certified to ISO 50001-2018. The Thimister plant in Belgium and

### // ZERO ACCIDENT MINDSET

We strive to achieve this goal by promoting adherence to all the relevant occupational health and safety standards at our sites and offices. We are proud that ten of our plants have recorded 1,000 days without a lost-time accident or LTA (Bahrain, Brampton, Bursa, Cheonan, Conover, Münster-Nord, Oldham, Panyu, Suzhou and Yingde). In all, we had 8% fewer LTAs in 2020 than in 2016, and our group-wide occupational safety statistics continue along a positive trend [see page 20](#).

the Panyu and Suzhou plants in China have ISO 45001-2018 certification. Five U.S. plants have fulfilled the requirements of the Safety and Health Achievement Recognition Program (SHARP).

Those responsible for the Global EHS Policy are committed to periodically communicating its content to Armacell employees worldwide, as well as to the company's suppliers, subcontractors and site visitors. Moreover, regular policy reviews will be conducted to evaluate its efficacy and undertake any necessary revision.

**"We are particularly proud that the U.S. National Insulation Association has named Armacell as one of the winners of its highest safety excellence award and that Panyu was awarded Safety Management Model Plant by the local government."**



**Roberto Mengoli**  
Chief Technology Officer,  
Armacell Group

## DIVERSITY

### DIVERSITY

More than 3,100 employees, 23 manufacturing facilities, 15 countries, four continents – Armacell is a truly global operator with an internationally diverse workforce comprising more than 70 different nationalities amongst staff worldwide. Our employees are our most valuable resource, and we always strive to develop their talents and further their skills – irrespective of gender, social or ethnic origin, sexual orientation, religion, ideology or age. We encourage our employees, for their part, to cultivate a work climate of mutual respect and trust to ensure diversity is lived out in practice.

**70+**  
nationalities



## PEOPLE MANAGEMENT IN PRACTICE

# FURTHERING SKILLS, FOSTERING TALENTS

Armacell's people are its most important single resource. Encouraging and enabling them in their career development, furthering skills and fostering talents are the pillars of people management at Armacell.

Further training and personal development measures are available to all Armacell employees worldwide. The courses on offer deal with subjects as varied as shop floor safety, manufacturing skills and strategic selling. In addition, each site focuses on measures of particular relevance and suitability to the local employment conditions and requirements.

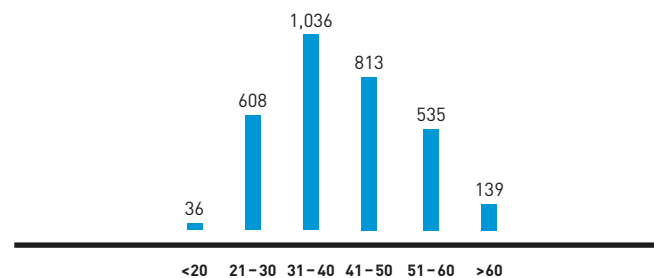
The global program to empower talents includes the senior management leadership curriculum IMPACT, building a culture of leadership and engagement through Leadership@Armacell, and 200+ one-hour WAM Manufacturing training modules for white- and blue-collar employees. The Product Quality program implements systematic quality specifications throughout the product portfolio, while the Process Technology program sustains fundamentals and continuous improvement in process engineering.

Around the world, industrial relations are determined by country-specific regulations and traditions. Accordingly, industrial relations at Armacell are structured and managed locally. In Germany, where employer-employee co-determination and works councils have a decades-old tradition, four collective agreements are in place and employees can be affiliated to 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. Armacell has no history of social unrest, as labour relations are characterised by quiet cooperation at all its sites.

Armacell's worldwide workforce is highly diverse, with some 70 nationalities represented [see page 22](#). Although the Armacell Group employs many women at various levels of management and in other areas of the company, its average gender ratio of approx. 80/20 is typical of the type of manufacturing industry we operate in.

### AGE DIVERSITY



While diversity through gender and ethnicity is extremely important, age diversity is another equally important piece. As illustrated below, Armacell's worldwide workforce is characterised by a healthy range of age groups. With mixed-age work teams, productivity remains high and age diversity helps reduce employee turnover and drive innovation.

**“Employee engagement is the positive emotional connection the employee has to the organisation and its goals.”**



**Sophie Ancelin**  
Chief Human Resources Officer,  
Armacell Group

# OUR PEOPLE

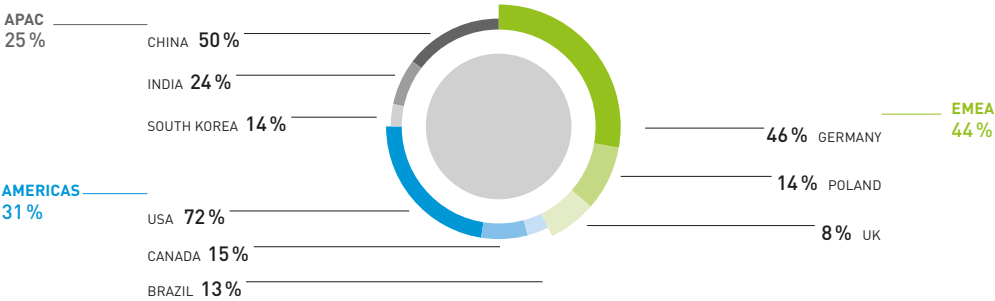
The winning plant relocation team from Cheonan, South Korea.

Part of training is learning from each other in multi-disciplinary teams.

## // PEOPLE RECOGNITION

In recognition of our employees’ engagement, we launched our ArmaWay Award scheme in 2013 to further support our efforts to manage our activities in the ArmaWay and encourage even stronger teamwork. The awards are presented to winning teams in the following four categories: **APPRECIATE our customers, RAISE our efficiency, MANAGE our cash, ACT to empower our employees.** In 2020, the ArmaWay Awards competition was more successful than ever, registering a record of 174 applications. Despite facing unprecedented demands, we are proud of our several outstanding achievements. Our colleagues managed to out-perform themselves, adapting to a different set of needs and requirements. The winning teams from various locations were a true reflection of our company’s global presence and an inspiration in promoting Armacell’s winning culture.

TOP 3 COUNTRIES BY REGION employees in %







## DRIVING GROWTH



### Product quality

- Durable raw material quality and processes
- World-class Armacell Mindset (WAM)
- ISO 9001 certifications
- Product testing

### Innovation

- Employee engagement

### Product quality and innovation – driving sustainable growth

In 2020, we continued to invest in ensuring product quality and encouraging innovative research and development. Consistent raw material quality and processes, product testing and plant certifications ensure compliance with the highest product standards. Important innovations are delivering solutions to global megatrends. We continue to invest in our pioneering PET technology that enables high-tech foam to be manufactured from recycled PET bottles [□ see page 27](#), puts the circular economy into practice and is helping to mitigate the critical issue of plastic waste. The use of alternative raw materials reduces our dependence on fossil fuels. Our flexible foam systems prevent energy-wasting corrosion under insulation. Our low-smoke elastomeric foams give building occupants and first responders precious extra time to escape from or enter a building in the event of a fire. All these products are fulfilling our commitment to sustainability and driving growth.

### Quality management

30,000

individual quality tests performed  
in four different categories in 2020

### R&D

€30m

invested in research and development  
over the past three years

### Innovative leadership

300+

active patents in 50 patent families –  
evidence of Armacell's innovative strength



## SUSTAINABLE GROWTH STRATEGY

# INCORPORATING MULTIPLE DIMENSIONS OF SUSTAINABILITY

At Armacell, we focus on creating sustainable value. Our vision is to be the global leader in providing innovative technical insulation solutions and components to save energy and make a difference around the world. Armacell's product portfolio is strategically oriented to respond to six global megatrends [see page 14](#). Our exposure to a broad range of end markets and our diversification across equipment verticals provide multiple sustainable growth opportunities. Our strategy outlined below is fully supported by our executive management team and by the company's majority shareholders, PAI Partners and KIRKBI.



### // EXPANSION

As a multi-material and multi-product company, Armacell has a successful track record of expanding into adjacent technical insulation sectors, e.g. by regularly extending the temperature range and application horizon of our materials.



### // EFFICIENCY

We strive to enhance the efficient use of raw materials, natural resources and energy. As a result, we maximise our operational efficiency while optimising our production costs. In this way, we create the basis for Armacell's financial strategy, which aims for dynamic growth based on first-class profitability.



### // EXCELLENCE

ARMACELL PROVIDES ENERGY-EFFICIENT SOLUTIONS OFFERING RELIABLE, CERTIFIED PERFORMANCE AND EXTENDED LIFETIME TO CUSTOMERS WORLDWIDE.

# 23

MANUFACTURING FACILITIES IN 15 COUNTRIES DELIVER CERTIFIED OPERATING EFFICIENCY, CUSTOMER SERVICE AND EXECUTION EXCELLENCE.



### // ENABLEMENT

Armacell has become the global leader in flexible foams by enabling energy efficiency for technical equipment. Driven by global megatrends, we pursue a multi-pillar growth strategy and aim to grow sustainably. Our prevailing goal is to drive the adoption rates for intelligent energy-saving solutions.



### // INNOVATION

After more than half a century as the industry and technology leader, innovation and entrepreneurship have become an integral part of the Armacell DNA. That drives the launch of new and sustainable technologies involving industry-leading solutions.





## rPET TECHNOLOGY

# PIONEERS IN RECYCLING PLASTIC

From empty plastic bottles to high-tech foams, Armacell is moving towards a circular economy by means of its disruptive, 100 % recycled rPET technology.

The innovative eco-friendly PET foam solutions this technology enables deliver high levels of mechanical resistance and thermal and/or acoustic insulation. Turbine blades, nacelles and engine housings for the sustainable wind industry are just some of the end products based on Armacell's PET foam solutions.

The impact of plastic on our global ecosystem is omnipresent. According to the UN Environment Programme, one million plastic drinking bottles are purchased per minute worldwide. Most of these bottles end up polluting soil or seas. Plastic takes hundreds of years to decompose; plastic microparticles now pollute our entire planet.

### Turn waste into a high-quality resource

Armacell has been a pioneer of recycled rPET technology. In 2010, we launched the world's first foam cores made from 100 % recycled PET. Our patented rPET technology uses plastic bottles that are rejected for re-use by the PET recycling industry. In other words, we turn plastic waste into a high-quality resource and feed it back into the production cycle to manufacture products of sustainable value. Over the past years, Armacell has converted

around 1.5 billion plastic bottles into long-lasting foam products that help to improve the environmental footprint of multiple composite core materials.

Throughout 2020, we continued to invest in our rPET technology. In May, we began operating our PET foam extrusion line at our Suzhou facility near Shanghai. This is Armacell's fourth industrial-scale PET foaming line worldwide and the first in China. In September, we started extending our PET production facility at our PET Foams headquarters in Thimister-Clermont, Belgium, to accommodate two additional PET production lines. Once the two new lines are operational, the plant will be producing 180,000 m<sup>3</sup> of PET foams a year from 100 % recycled plastics.

### // CONTRIBUTION TO SDG 14

We are committed to SDG 14: Life Below Water and contribute to reducing marine pollution [see page 12](#). More than 8 million tons of plastic leak into the oceans every year. An integrated approach to address pollution from land to ocean is needed to sustainably manage marine and coastal resources. Through recycling plastic bottles, Armacell is part of the solution.

## FOR A BETTER CARBON FOOTPRINT

Our plastic recycling saved more than 67,000 metric tons of CO<sub>2</sub> emissions – the equivalent of...

19,774  
cars

Mid-sized car running  
20,000 km per year:  
Medium consumption of  
6.0 l / 100 km, diesel oil



Brussels - New  
York: One way,  
Economy, approx.  
5,900 km, 1 traveller

71,020  
flights



26,598  
cruises



10-day cruise:  
Cruise liner,  
1 passenger

## QUALITY MANAGEMENT

### ENSURING THE HIGHEST QUALITY STANDARDS

In the year under review, approximately 30,000 mechanical, chemical, physical and fire-safety tests (see textbox below) were conducted at our main testing centre in Münster, Germany. Armacell's market leadership in insulation materials and high-performance foams is a commitment to consistently high quality standards that also enhance the safety and sustainability of our products. Certified quality management systems ensure compliance with strict national and international requirements. Around 100 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. By building on the sound foundations of long-lasting quality and innovation, Armacell has a growth strategy that is both successful and sustainable.

#### Mechanical

Determining the haptic appearance and performance of materials to external mechanical influences during installation and subsequent operation.

#### Chemical

Measuring and calibrating the content and mix of chemical components and substances paramount to application performance, e.g. mitigation of corrosion under insulation.

#### Physical

Definition of physical properties, e.g. water vapour transmission, thermal conductivity, sound absorption and cell structure and density of the foam.

#### 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.

A woman with short brown hair, wearing safety glasses and a grey lab coat over a dark blue shirt, is smiling and looking towards the camera. She is holding a clear plastic test apparatus with a blue cap and a tube. The background is a blurred industrial or laboratory setting with blue structural elements.

30,000  
QUALITY TESTS  
PER YEAR



## INNOVATION



CERTIFIED  
PFP

# SUSTAINABLE GROWTH BASED ON FIRE-STOPPING PRODUCTS

## Making safety a top priority

The widespread switch to remote working in the Covid-19 pandemic is impacting the commercial property market worldwide. Experts agree that remote working is here to stay. Moody's Analytics expects roughly one in five offices in America to be empty in 2022. A significant proportion of the floor space in many high-rise office towers will end up being converted to alternative uses. Redesigning such buildings and dividing up open-plan office space into much smaller units will boost the demand for passive fire protection products in general and fire-stopping systems in particular.

### Single-source supplier

Passive fire protection (PFP) is far bigger than stopping a fire. As PFP customers increasingly expect a full range of solutions from a single supplier, Armacell is becoming a holistic PFP vendor with the key customer benefit of supplying thermal, acoustic and PFP solutions from a single source. This will become even more interesting to high-rise owners and construction contractors as redundant office space is converted to other uses. As such, PFP products will continue to drive Armacell's growth.

### Fire-stopping products

Armacell has a portfolio of fire-stopping products that act as penetration seals at the point where services pass through a fire-rated wall or ceiling. The ArmaFlex® Protect products for steel piping are now being supplemented by new fire protection products sold under the ArmaProtect™ family brand.

### Enhanced safety and energy efficiency

One of Armacell's latest innovations, ArmaFlex® Ultra with its FlameDefense™ technology, combines best-in-class foam insulation with certified PFP. ArmaFlex® Ultra is the first flexible elastomeric foam insulation to receive UL classification (UL 723 with a 25/50 rating). In the event of fire, UL 723-classified materials burn more slowly and produce less smoke, which gives building occupants and first responders more time to escape or enter. Moreover, FlameDefense™ technology goes beyond the required building codes and international safety regulations. The UL Classification Mark gives engineers, specifiers and building owners the assurance that ArmaFlex® Ultra will perform consistently year after year. In addition, this technology meets the International Mechanical Code third-party certification standard that no other flexible elastomeric insulation manufacturer has met. A truly sustainable technology.

### ArmaProtect™

The latest fire protection solutions include certified Armacell systems for fire stopping of plastic pipes, metal pipes, composite pipes and other services.



## PROTECTING OUR PLANET



### Resource management

- Environmental goals and measures
- Reduction of energy consumption and CO<sub>2</sub> emissions
- Waste management

### Recycling plastic

### Plant certifications

- ISO 14001, ISO 50001

### Climate-friendly

37 %

fewer CO<sub>2</sub> emissions through manufacturing products using recycled PET flakes

### Saving energy

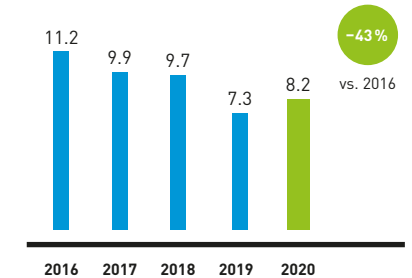
140x

### Recycling waste

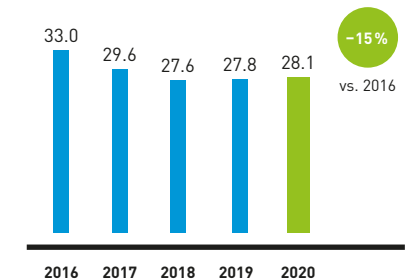
+54 %

of production-related waste recycled over the past five years

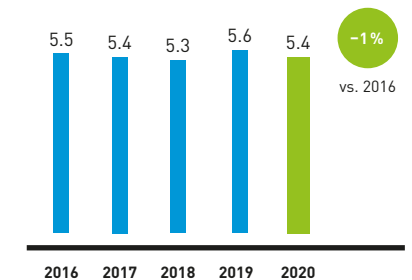
### WATER CONSUMPTION\* in l



### ENERGY CONSUMPTION\* in MJ



### CO<sub>2</sub> EMISSIONS\* in kg



### Saving resources and enhancing energy efficiency

Armacell products and solutions improve the management of finite resources by reducing energy consumption and CO<sub>2</sub> emissions. We give waste plastic bottles a second life and convert them into long-lasting, high-value foam core materials. 13 of our plants operate environmental management systems certified to ISO 14001:2015 or ISO 50001:2018.

\* per metric ton of finished goods, 2019 numbers restated  
read more about our data on CO<sub>2</sub> emissions on [page 43](#)



## ENVIRONMENTAL MANAGEMENT

# RESPONSIBLY UTILISING RESOURCES

Environmental protection is a key parameter in the everyday operations of our 23 manufacturing facilities. In line with our commitment to products and solutions that enhance sustainability in different destination end markets, we evaluate our own operations by the same standards. All our plants have environmental monitoring methods, and we exchange ideas and best practices via an internal communications network.

### Energy consumption

By encouraging every employee to take responsibility for and proactively reduce energy consumption [see page 30](#), we further reduced our overall energy consumption and worked towards more energy-friendly plants in the year under review. Of the seven steps undertaken to achieve the goal of lowering our energy consumption, the Mutually Exclusive, Collectively Exhaustive (MECE) system for identifying energy losses is of particular significance. The widely ranging countermeasures implemented in the next step are centred on Energy Cost Deployment. This procedure takes the losses related to the use of energy at Armacell plants into account and identifies any losses relating to the energy efficiency of machines and processes as well as their energy management.

Renewable energy plays an important role in cutting our energy consumption and associated CO<sub>2</sub> emissions. Some of our manufacturing facilities have solar panels on their roofs. At the Thimister plant in Belgium, for example, 2,800 solar panels covering approx. 10,000 m<sup>2</sup> of roof space generate 749 kWh of electric power. At the Pune plant in India, solar panels generate the electricity required to provide the canteen and sanitary

installations with hot water. In all, 30 % of the Pune plant's electricity is generated by wind power, with a related 30 % reduction in CO<sub>2</sub> emissions.

### Water consumption

Across all its operations, Armacell used 27 % less water in 2020 than in 2016. This significant reduction in water consumption was largely due to a heightened degree of employee awareness and is evidence of the concrete environmental benefits the World-class Armacell Mindset (WAM) program is bringing. Employees

know their individual responsibility for water use and realise how they can make a difference in reducing water consumption. In addition, our detailed annual record of water consumption figures indicates where potential savings are possible.

### Waste management

In 2020, Armacell recycled 54 % more of its production-related waste than in 2016. Excellent progress in waste reduction was achieved by using the so-called 5R approach: Refuse/Reject (i.e. not producing waste in the first place), Reduce (waste), Reuse

### // KPIs AND CERTIFICATIONS

We collect key performance indicators (KPIs) on energy use, CO<sub>2</sub> emissions, water consumption and waste management in order to evaluate and continually improve our sustainability performance. 13 of our plants are environmentally certified to ISO 14001, with the energy management systems at our German facilities in Münster and Friesenhofen certified to ISO 50001 as well. Environmental management at Armacell is implemented in line with the Environment Pillar of the World-class Armacell Mindset (WAM) program [see textbox page 32](#).





## ENVIRONMENTAL MANAGEMENT



Briefing in Pune, India – evaluating the plant's environmental performance.

(before waste is even produced), Recycle (waste) and Recover (energy recovery). The 5R approach has brought significant advances at several plants.

In Panyu, China, powder from the dust collectors is reused as raw material, which saves 7.5 metric tons a year in waste and raw material terms. Elastomeric scrap from the Begur plant in Spain is granulated and shipped to the Oldham plant in the UK for use in the production of ArmaSound® acoustic insulation

material, which saves 1.2 metric tons of landfill waste per year. A further 1.7 metric tons of waste is avoided by putting less film into the pallets of finished goods. At the Środa Śląska plant in Poland, 310 metric tons of waste are saved by reusing rubber waste to produce the surfaces of tennis courts. And at the Pune plant, 13 metric tons of carton paper are saved by reducing the amount used in packaging for finished goods. In our manufacturing processes, we continue to make every effort to “close the loop” as a key sustainability goal.

### // WORLD-CLASS ARMACELL MINDSET

Armacell launched its excellence program in 2013 to encourage a global mindset of continuous improvement at all levels of the company. The aim is to improve the daily performance through continuous, structured and objective analysis.

In the two areas of WAM Manufacturing and WAM Sales & Marketing, this program maintains consistency in standards and sustains the implementation of improved processes.

- **WAM Manufacturing** is based on the systematic identification of losses and non-value-added tasks at Armacell's multi-technology 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.

In 2020, four Armacell production facilities won Bronze in WAM Manufacturing (Begur, Conover, Mebane and Suzhou), while six commercial teams achieved Silver or Bronze levels in WAM Sales & Marketing (BeNeLux, China, Germany, Nordics, Poland and USA).



## ENHANCING ENERGY EFFICIENCY



### MAKING BASICS BETTER

More than ever during the Covid-19 pandemic, people around the world realised the essential role local supermarkets and grocery stores play in their lives. By definition, the refrigeration equipment in a supermarket has to run 24/7. Consequently, the efficient use of energy is key to tackling the high overheads and improving the tight margins common in the retail sector. In the U.S., for example, 56 % of a supermarket's total electricity consumption is, on average, accountable to refrigeration. To achieve the top performance required for energy-efficient operation, these refrigeration systems need proper insulation. Armacell solutions are ideal for insulating pipes, refrigeration lines or HVAC cooling systems. They save energy and also prevent condensation on below-ambient temperature surfaces – a critical issue for supermarkets and grocery stores.

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**56 %**  
of power for refrigeration

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## SUSTAINABLE SOLUTIONS FOR THE BUILDING INDUSTRY

# ENABLING GREEN BUILDING CREDITS

With the world experiencing climate change, a shortage of finite resources and rapid urbanisation, the sustainable construction and operation of buildings have become an increasingly important issue. Armacell products enable buildings to earn green building credits in key areas.

### Contributing to green building certification

Green building schemes such as the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED®), the WELL Building Standard®, the Living Building ChallengeSM, BREEAM® or Green Globes Building Certification expect material transparency to achieve green building credits. Armacell's commitment to such transparency is evidenced by its position as the first and only elastomeric insulation manufacturer in North America to publish Environment Product Declarations (EPDs), two of which were published in October 2020 for AP/ArmaFlex®.

The LEED® scheme is one example of how Armacell products help to fulfil the criteria required for green building certification. Technical insulation influences three of the nine LEED® assessment categories. In the Energy & Atmosphere category Armacell products are enabling greater levels of energy efficiency and savings. In the Material & Resources category, Armacell is the first and as yet only elastomeric insulation manufacturer in North America to publish Environment Product Declarations (EPDs). Besides, Armacell products contain no REACH "substances of very high concern". In the Indoor Environmental Quality category, Armacell's duct liner solutions significantly reduce noise caused by HVAC systems and are UL GREEN-GUARD® Gold Certified as low-emitting materials.

In other green building schemes such as the WELL Building Standard®, the International Living Future Institute's Living Building Challenge, BREEAM®, and the Green Building Initiative's Green Globes Building Certification, Armacell products also enable building owners or operators to earn credit points in the respective rating categories thanks to the properties such as those outlined above. An additional advantage of Armacell insulation material is that it prevents the growth of mould and mildew through the anti-microbial protection offered by Microban®.



BUILDINGS HAVE A SUBSTANTIAL ENVIRONMENTAL IMPACT. GLOBALLY,

# 30-40 %

OF CO<sub>2</sub> EMISSIONS, 40 % OF ENERGY USE, **25 % OF WATER CONSUMPTION** AND **50 % OF NATURAL RESOURCES CONSUMPTION** CAN BE ATTRIBUTED TO THE CONSTRUCTION, OPERATION AND MAINTENANCE OF BUILDINGS.





## SUSTAINABLE SOLUTIONS FOR THE BUILDING INDUSTRY

# SUSTAINABILITY IN PRACTICE

Green building schemes were developed to focus on the environmental effects of a building throughout its life cycle. This vision is shared by Armacell in creating products that reduce a building's energy consumption and otherwise help to improve its environmental footprint, as illustrated by the following examples.



ASHRAE's new global HQs in Atlanta, Georgia (USA).

### // ASHRAE HEADQUARTERS ATLANTA, USA

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), an industry leader with 50,000+ members in 132 countries, committed to a net-zero energy goal for its new headquarters. Armacell insulation systems enabled the building to be well on its way to achieving fully net-zero energy.

### // EMPIRE STATE BUILDING NEW YORK, USA

Even an icon like the Empire State has to move with the times, e.g. in ensuring energy-efficient insulation. Although the ArmaFlex® Duct Liner had been installed years before, on inspection, it still proved up to scratch and helped the Empire State to gain LEED Gold® certification through energy efficiency, good indoor air quality and noise attenuation.

### // SATHORN SQUARE BANGKOK, THAILAND

Bangkok's Sathorn Square is a Grade A office building and LEED®-certified project that achieved GOLD level certification. ArmaFlex® was installed on the chilled water system to prevent condensation and minimise energy losses.

### // LENOVO HEADQUARTERS BEIJING, CHINA

In this building, which was designed to achieve LEED® Platinum Certification, the installation of 2,000 m<sup>3</sup> of ArmaFlex® C1 to insulate water pipes and air ducts against condensation and energy losses contributed to this goal.

## SUSTAINABLE APPLICATIONS



### SUSTAINABLE APPLICATIONS

High-performance kiteboards: A thrilling sport made possible by high-tech materials such as ArmaPET® Curve. This 1.5 mm sheet material that can take up to 300 kg/m<sup>3</sup> is used as a deck reinforcement in a composite sandwich with bamboo and fiberglass fabric-reinforced epoxy skins. ArmaPET® Curve is environmentally beneficial as it is made entirely from recycled plastic bottles, which adds up to a substantial reduction in CO<sub>2</sub> emissions compared to the PVC material it replaces. ArmaPET® Curve is also extremely easy to thermomould to any shape and greatly enhances the rigidity of the final sandwich structure.

**100 %**  
recyclable



## FOSTERING COMMUNITIES



### Supporting local communities

- Helping children
- Caring for people
- Donating time

### Supporting global initiatives

### Global Armacell Day

# 2,000

Armacell employees worldwide engaged in charity activities

TEAM YUKON – Building homes for local communities in Oklahoma.

### Community involvement

# 100+

countries we do business in and support local communities

TEAM ŚRODA – Raising funds to support disabled people.

### UN Global Compact (UNGC)

# 10

principles of the UNGC we follow to support local communities

TEAM PANYU – Supporting farmers in China's Yunnan province.

### Donating time and energy around the world

In well over a hundred countries that Armacell operates in, our employees are working to improve the quality of life in their local communities. Through their volunteering activities, which the company facilitates and encourages, Armacell employees are primarily helping and caring for children and the elderly or supporting cancer charities.

## GLOBAL ARMACELL DAY

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# ARMACELL FAMILY GET-TOGETHER

The global Armacell family donates time, effort and money to their local communities. In responding to specific local needs, the focus is on helping vulnerable groups in society, and in particular children and the elderly. Armacell fully encourages and facilitates these volunteering efforts. The theme of the Global Armacell Day from 26-30 October 2020 was Recycling and Sustainability. Each of Armacell's sites was invited to build a sustainable "Armacell City of the Future" from LEGO® bricks. This teambuilding effort was implemented in different ways from country to country depending on the respective corona-related restrictions. In all, 350,000 LEGO® bricks were distributed to the sites around the world, and after the event most of them donated the bricks to their local communities. We are particularly grateful to the LEGO® Group for altruistic support in enabling these activities.





## RUNNING FOR CHARITY

### HELPING FEET

#### RUN4CANCER

For the seventh time in succession, a highly motivated team from the Armacell site in Begur, Spain, partnered up with the Oncology Foundation of Girona. Armacell Iberia and the foundation organised two running events to raise funds for innovative treatments and advanced equipment destined to cancer patients and their families. Despite the pandemic, Run4Cancer and Oncotrail were particularly successful in 2020, gathering more than 5,000 participants, including over 30 Armacell employees. While Run4Cancer is a popular event where people pay a participation fee to walk or run, Oncotrail is an international competition where teams of 8 have to cover 100 km to make it to the finish line.



## COVID-19 PANDEMIC

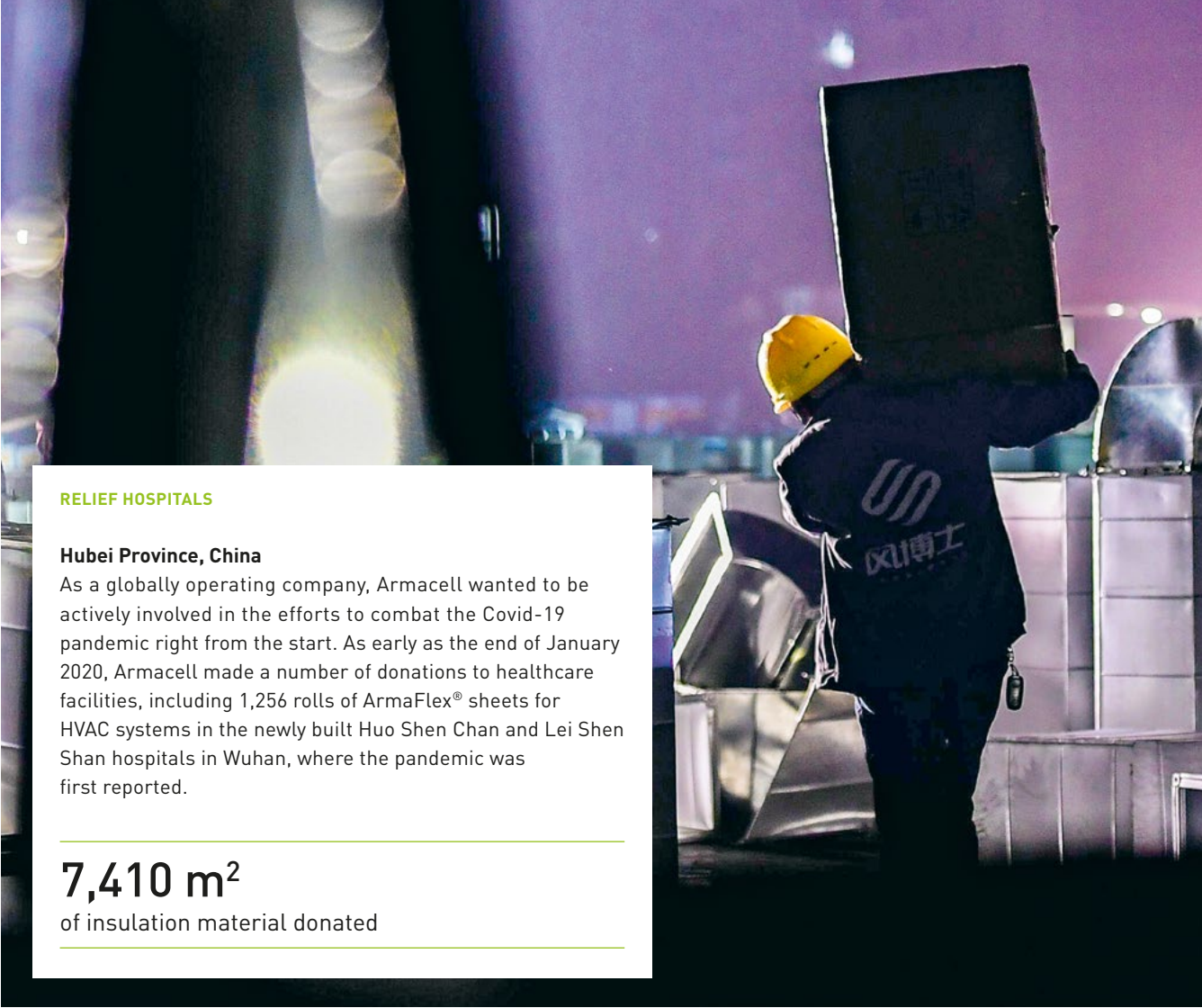
### RELIEF HOSPITALS

#### Hubei Province, China

As a globally operating company, Armacell wanted to be actively involved in the efforts to combat the Covid-19 pandemic right from the start. As early as the end of January 2020, Armacell made a number of donations to healthcare facilities, including 1,256 rolls of ArmaFlex® sheets for HVAC systems in the newly built Huo Shen Chan and Lei Shen Shan hospitals in Wuhan, where the pandemic was first reported.

**7,410 m<sup>2</sup>**

of insulation material donated



ArmaFlex® tubes and sheets – the preferred choice for the construction of Istanbul's first pandemic field hospital (Atatürk airport).

### // ARMACELL SOLIDARITY FUND

Charity begins at home, as the saying goes, and in Armacell's case this meant helping those employees and their families who were most affected by the pandemic. In addition to doing everything to safeguard the health of employees who could not work from home, a Solidarity Fund was set up to financially support employees and their families. The Executive Management Team set a good example by waiving part of their salary to support the Solidarity Fund, from which some 60 employees and their families ultimately benefited.

## CYBER SECURITY

# STRENGTHENING THE DEFENCES

In response to a cyber attack in Q4 2020, Armacell has implemented a wide range of additional security measures to strengthen the Group-wide defences. In January 2021, a new Group Cyber Security Policy was published to provide guidance on how to safeguard data, secure the IT infrastructure and mitigate security risks.

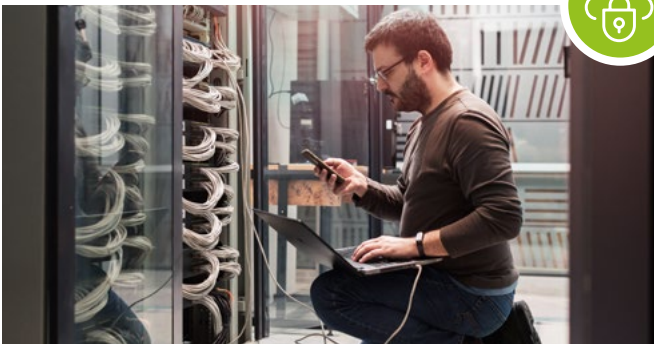
In line with most manufacturing peers, Armacell is exposed to risks arising from cyber threats or digital disruption of its IT infrastructure. From discrete infiltrations in mid-November, the cyber threat developed into an unprecedented malware attack in mid-December, which attempted to delete server backups, cripple applications and prevent employees from reading any data. Armacell's IT team responded immediately by disconnecting the servers and the network to prevent further spreading of the malware and limit damages to our systems.

Armacell's legal team addressed the case to the Luxembourg Cyber Crime Unit and Europol. A formal investigation followed.

In an unparalleled joint effort involving IT experts across the Armacell Group, the malware's damaging impact was quickly terminated. A powerful software for threat detection and machine protection was deployed on all servers, desktops and laptops to detect, quarantine and delete malware. The top priority then was to ensure production lines were safe and secured so production

could restart. Thanks to the prompt response and round-the-clock recovery work, business continuity was ensured. In close cooperation with a cyber security company, Armacell then initiated the necessary recovery steps.

The lessons have been learned. Armacell's cyber security defences have been strengthened and, just as importantly, staff has been made aware of the tricks cyber criminals use to launch cyber attacks.



Restoring servers and networks.



Team USA – going the extra mile.



Team Germany – keeping spirits high.

## UN GLOBAL COMPACT COMMUNICATION ON PROGRESS REPORT 2020

Our commitment and support to the United Nations Global Compact (UNGC) dates back to 2006 when we joined the initiative.

This report details how we at Armacell work to comply with and embed the Ten Principles of the UNGC into our strategies and operations. The yearly Communication on Progress Report is a visible expression of our commitment to sustainability and fulfils the requirements of the UNGC for participating companies. We have cross-referenced to sources where applicable.

### // HUMAN RIGHTS

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

The Armacell Code of Conduct, which is valid 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 that 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 own operations. Armacell firmly dissociates itself from and will not do business with any organisation that upholds forced labour or child labour. We have informed all our suppliers worldwide about our support for the UN Global Compact's Principles and, step by step, are asking them to sign documents confirming that they comply with the principles, especially in eliminating all forms of forced and compulsory labour and abolishing child labour. Signing the Armacell Supplier Code of Conduct is part of a biennial evaluation process by Armacell's Corporate Purchasing Department.

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

Please see the 'Employees First' chapter on [pages 20–24](#) 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 30–36](#) for our undertakings and their outcomes. In the 'Driving Growth' chapter on [pages 25–29](#) and in more detail in our Annual Report 2020, we demonstrate how our product portfolio and strategies are linked to 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.


Three years ago, Armacell enacted a new global Anti-Money Laundering Policy to raise staff awareness of the need to ascertain the identity of the business people they are dealing with and to be on their guard for any potential money-laundering activity [see page 8](#).

## ABOUT THIS REPORT

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This is the third Sustainability Report published by Armacell.

The Sustainability Report 2020 covers the operations of Armacell International S.A. (Armacell or Armacell Group) over the 12-month period from 1 January to 31 December 2020.

If not specified otherwise, the facts and figures presented include 23 manufacturing facilities in 15 countries  
 [see Armacell Annual Report 2020 pp. 40–41](#). Local data is collected and consolidated through our management system.

The data on CO<sub>2</sub> emissions cover 20 of our 23 plants; the newly acquired plants in Canada (Insugard), China (De Xu), Denmark (Danmat) and Italy (Guarto) are excluded. Armacell calculates and discloses Scope 1 & 2 CO<sub>2</sub> emissions. The applied fuel types are converted into CO<sub>2</sub> equivalents through the conversion factors for global warming potential (GWP) published by the Intergovernmental Panel on Climate Change (IPCC) in its Second Assessment Report published in 1996.

This Sustainability Report is complemented by the content of our Annual Report 2020. 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-2020>

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

 <https://www.armacell.com/sustainability>

## CONTACTS & CREDITS

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### Concept, design and realisation

HGB Hamburger Geschäftsberichte  
GmbH & Co. KG  
Hamburg, Germany

WE ARE COMMITTED TO



WE SUPPORT

