



# THE ARCHROMA WAY TO A SUSTAINABLE WORLD

Sustainability report  
FY2019



OUR COMPANY 4

SAFE 24

EFFICIENT 58

ENHANCED 72

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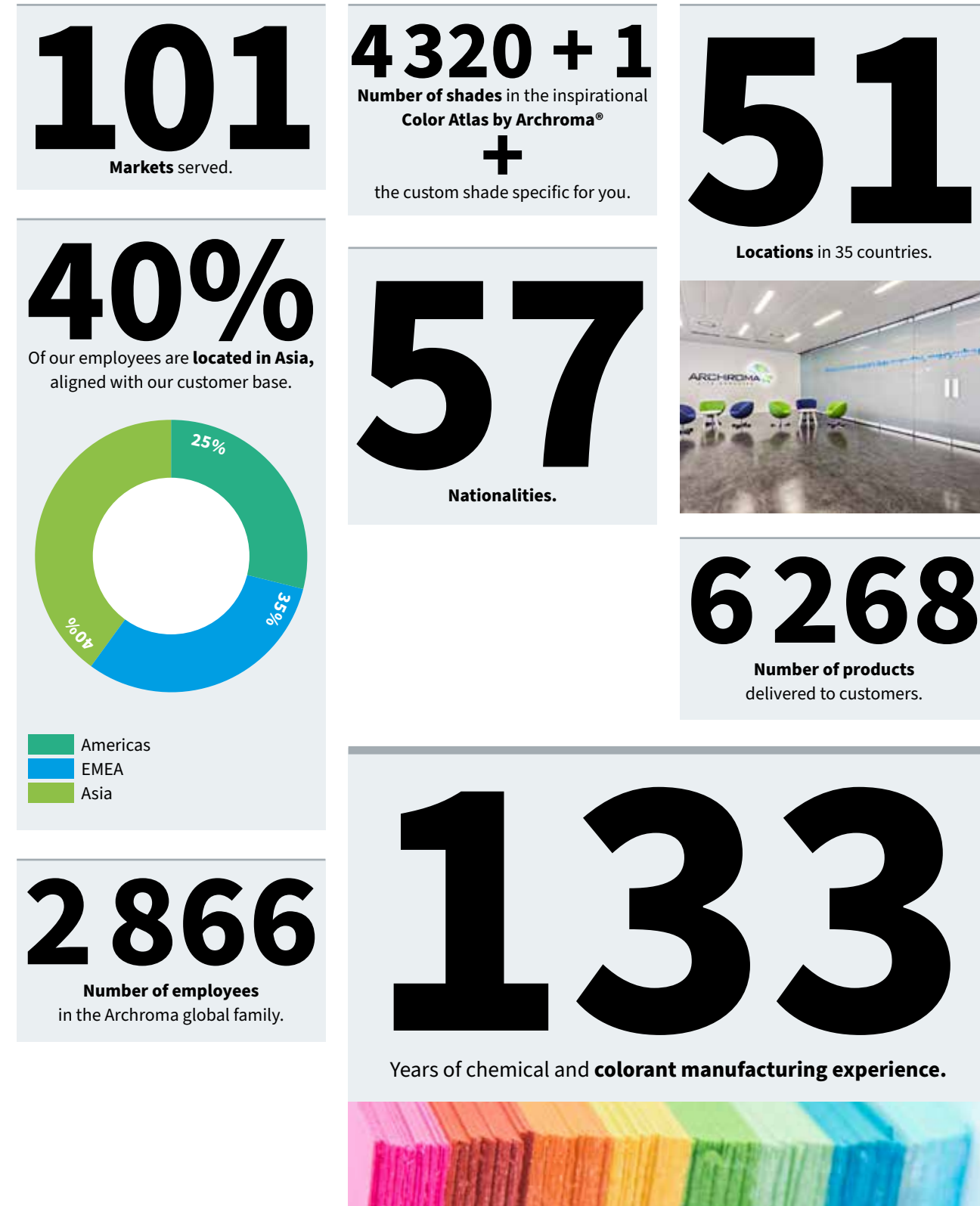
# THE **ARCHROMA** WAY TO A **SUSTAINABLE** WORLD

SAFE, EFFICIENT, ENHANCED, IT'S OUR NATURE.

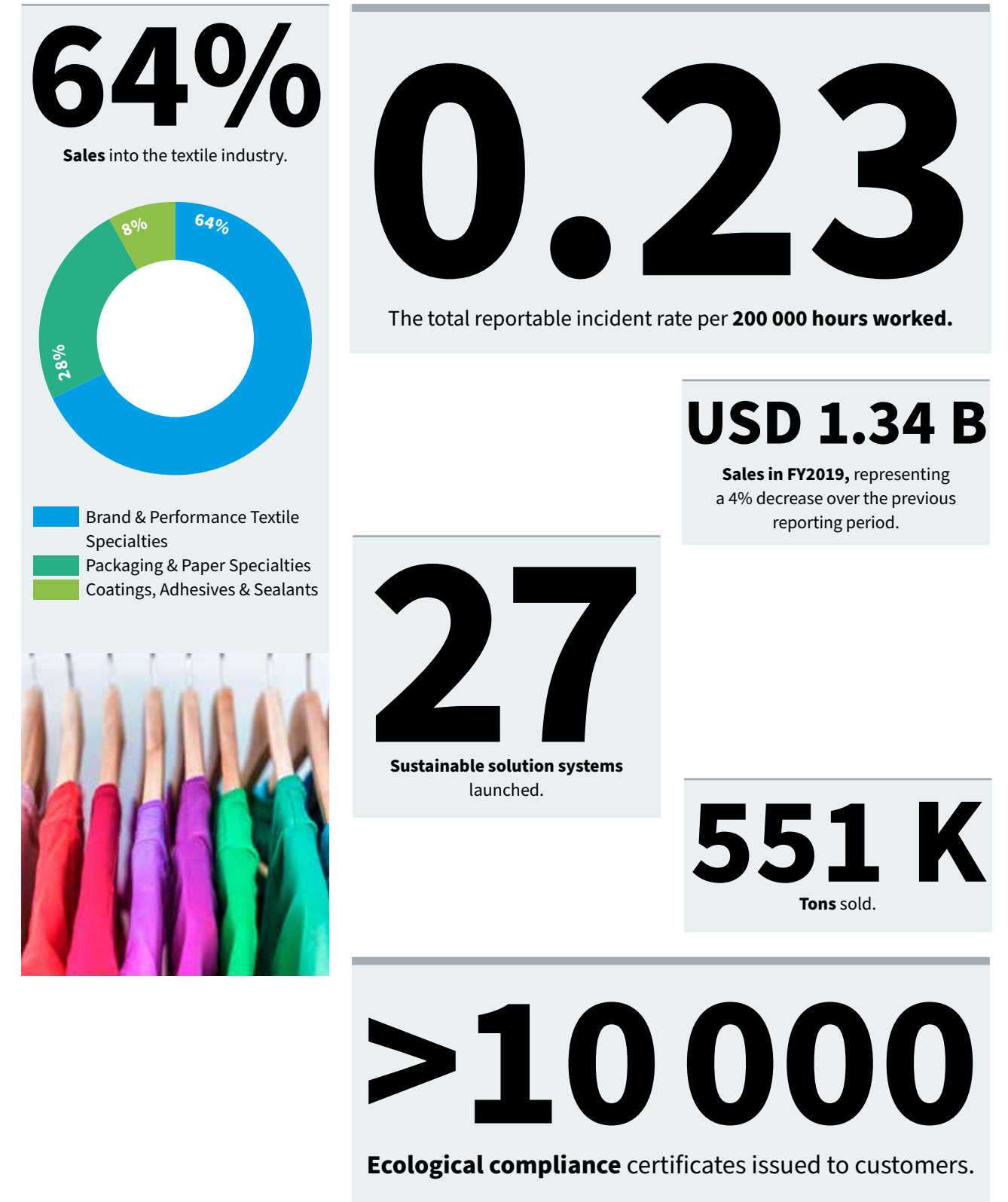


# OUR COMPANY

## WHO WE ARE



## WHAT WE DID IN FY2019





## MESSAGE FROM OUR CEO

### It's our nature.

I am delighted to present you with our third Sustainability Report for our fiscal year 2019.

Archroma strives to create essential solutions aimed at making our value chain and the industries we serve more sustainable every day, everywhere.

I personally had the privilege to take over the reins of Archroma in January 2020. One of the key factors that attracted me to Archroma was how the company had managed, in just a little bit more than 7 years of existence, to help drive the sustainability agenda forward in its industry and end-use market.

Consider this: In FY2019 alone, Archroma launched 7 new innovations and more than 25 new solution systems developed along the lines of what we call “The Archroma Way to a Sustainable World: safe, efficient, enhanced, it's our nature”.

Designed along the principles of safety, efficiency and enhanced value, “The Archroma Way” focuses on reducing the consumption of natural resources, thereby decreasing our customers' environmental footprint.

We launched eco-advanced innovations such as a water-based textile coating binder based on renewable natural ingredients (Appretan® NTR) and an FDA-approved optical brightener suitable for food contact, high-whiteness packaging and paper (Leucophor® AFCN).

Archroma also engages with relevant stakeholders in order to support and foster initiatives that bring concrete and ambitious solutions and innovations. We feel that only through active positive participation will we be able to bring about step change.

In particular, in June 2019, we joined the ZDHC Foundation (ZDHC) as an active contributor, aiming to support the ZDHC Manufacturing Restricted Substance List (MRSL) and the related conformity system designed to eliminate duplicative and counterproductive approaches to lists and standards.

As our industry navigates through the COVID-19 pandemic, the temptation will be for some to push back on the urgent need to address the climate emergency.

### We cannot allow that.

We hope that this report will provide you an insight into what we do, how we do it and, more importantly, why we do it: because after all, it's our nature!



**Heike van de Kerkhof**  
CEO

## ABOUT THE REPORT

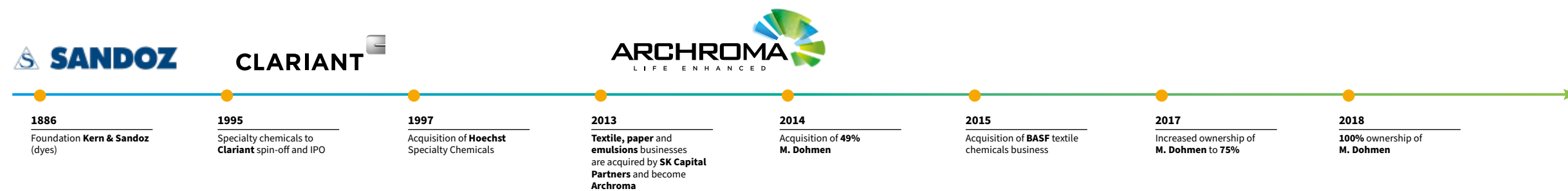
- **This report covers Archroma's fiscal year 2019 (FY2019), from 1st October 2018 to 30th September 2019.**
- **The report covers Archroma's sustainability approach and strategy, summarizing the sustainability performance and associated activities.**
- **The scope of the report covers all wholly owned subsidiaries and any joint ventures in which Archroma has a majority shareholding and significant influence on operations.**
- **The data and information used in this report come from Archroma's official documents both those publicly available and internal reports.**
- **This report has been prepared in accordance with the Global Reporting Initiative (GRI): Core option.**

## ARCHROMA IN A NUTSHELL

Archroma is a global specialty chemicals company headquartered in Reinach near Basel, Switzerland. It operates with approximately 2 900 employees over 35 countries and with 25 production sites. Archroma innovates, creates, manufactures and sells specialty chemicals to 101 countries and is split into three core business units – Brand & Performance Textile Specialties (BPT), Packaging & Paper Specialties (PP), and Coatings, Adhesives & Sealants (CAS) – to deliver specialized performance and color solutions to meet customers' needs in their local markets, touching and coloring people's lives every day, everywhere.

Archroma is passionate about delivering leading and innovative solutions, enhancing people's lives and respecting the planet. The company is committed to challenging the status quo in the deep belief that it can make its industry sustainable; an approach reflected in its innovations, world class quality standards, high service levels and cost-efficiency.

# OUR HISTORY



The heritage of our company dates back to 1886, when Kern & Sandoz was founded in Basel, to produce textile dyes.

In 1995 Clariant was formed, as a spin-off from Sandoz, and in 1997 acquired the specialty chemicals business of Hoechst.

In September 2013, SK Capital acquired the Textile Chemicals, Paper Specialties, and Emulsions businesses from Clariant AG. The three divisions were combined into an integrated, market-focused, and collaborative company and was renamed Archroma upon becoming an independent entity.

SK Capital targets investments in the specialty materials, chemicals and pharmaceuticals sectors, working collaboratively with management to support the realization of their strategic, operational, financial, and sustainability objectives.

SK Capital is comprised of individuals that have spent their careers in the specialty materials, chemicals and pharmaceuticals industries as operators, owners and investors. SK capital leverages their experience to acquire companies with unrecognized potential and then work closely with management to enhance and expedite its realization.

SK Capital portfolio companies currently generate revenues of approximately USD 9 billion annually and employ approximately 10 000 people globally. As of March 2020, SK Capital had approximately USD 4.86 billion of assets under management.

Archroma continues to grow with additional acquisitions, since its corporate carve-out from Clariant in 2013, Archroma is set on becoming a clear industry leader in supplying innovative chemistry solutions, with the goal to make the industries it serves more sustainable. Archroma made a first move in this direction when it acquired the textile chemicals business of BASF in 2015. In July 2018 Archroma completed the acquisition of M. Dohmen SA, an international group specializing in the production of textile dyes and chemicals for the automotive, carpet and apparel sectors. This latter acquisition incorporated 3 additional production sites, located in Korschenbroich in Germany, San Vittore in Switzerland and Ulsan, in South Korea, bringing the total number of production sites to 25, distributed over all continents.

**Through this direct lineage, Archroma has a knowledge and experience of chemical manufacturing and the industry spanning more than 130 years.**





# OUR COMPANY

Archroma is organized into 3 business units:

## BRAND & PERFORMANCE TEXTILE SPECIALTIES



From fiber to finish, Archroma's Brand & Performance Textile Specialties Business plays a key role throughout the entire textile supply chain, with special chemicals for pretreatment, dyeing, printing and finishing of textiles. Our system packages enhance the properties of apparel and other textiles in applications as diverse as high fashion, home textiles, automotive and special technical textiles.

**Textile Value Chain**  
Archroma offers systems to processors of yarn, fabrics and garments.

**Significant Systems & Services**  
The Archroma Way; 31 Systems for 6 market sectors:  
Automotive & Transport      Workwear & Uniforms  
Denim & Casual Wear      Outdoor & Activewear  
Fashion & Formal Wear      Home & Intimate Textiles  
ONE WAY process analysis  
Color Atlas, color specification and standards

**Significant Brands**  
Fiber: Afilan®, Arkofil®  
Coloration: Kieralon®, Leucophor®, Drimaren®, Foron®, Dorospere®, Nylosan®, Denisol®, EarthColors®, Diresul®  
Fabric Finishing: Arkofix®, Nuva® N, Sanitized®, Smartrepel®

## PACKAGING & PAPER SPECIALTIES



Archroma's Packaging & Paper Specialties Business provides expertise in the management of whiteness, coloration, special coatings and strength for all kinds of papers. By combining our focused product systems with the application services of our paper experts around the globe, we enhance both the optical and functional properties of packaging, paper and tissue.

**Paper Value Chain and key markets**  
Archroma offers systems to paper manufacturers.

**Significant Systems & Services**  
Color management

**Significant Brands**  
Coloration: Cara®, Cartosol®, Cartazine®, Diresul®, Cartaren®, Flexonyl  
Whiteness: Leucophor®  
Surface & Coating: Cartabond®, Cartaguard®, Cartaseal®, Cartacoat®  
Process: Cartafix®, Cartaspers®, Cartafen®, Antimussol®

## COATINGS, ADHESIVES & SEALANTS



From paints, adhesives and construction to the textile and paper industries, Archroma's Coatings, Adhesives & Sealants Business provides solutions for a wide range of applications. Literally thousands of satisfied customers have been a witness to the outstanding success of Archroma's Mowilith® emulsions since its first patent obtained in 1912.

**Coatings, Adhesives and Sealants Value Chain and key markets**  
Paints - Decorative interior/exterior, primers, varnishes, industrial applications  
Construction - Concrete applications, roofing, tiling, sealants, primers, mortars admixtures  
Adhesives - Wood, paper, lamination, packaging and Pressure sensitive adhesives

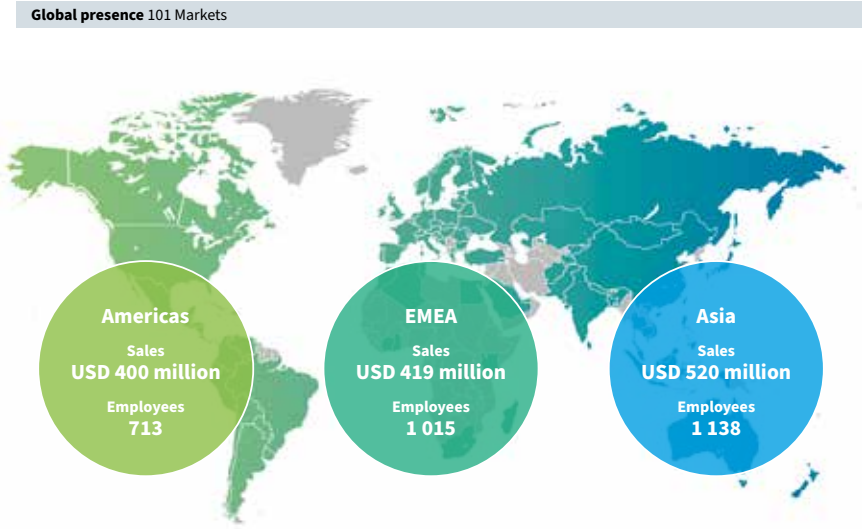
**Significant Brands**  
Mowilith®, Mowicoll®

## Economic Performance

Archroma's total revenue for FY2019 was USD 1.340 bn. This reflects a 4.2% decrease to the previous reporting period. The quantity of goods sold also decreased slightly to 551 thousand metric tons.

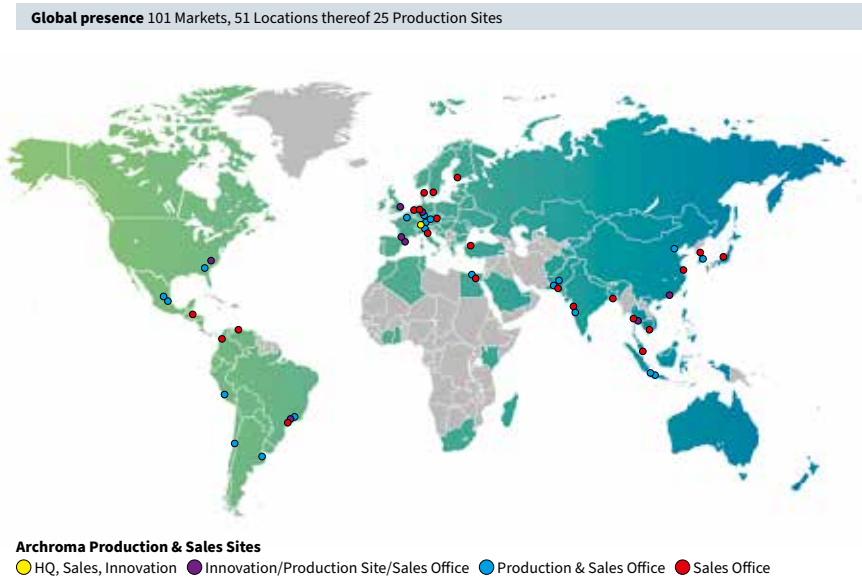
## Markets served

We currently serve 101 markets worldwide. During the reported period, we have organized these markets into three regional zones, the Americas, incorporating North, Central and South America; Europe, Middle East and Africa (EMEA); and Asia.



## Scale of operations

Archroma has 51 office and production sites in 34 countries worldwide. Eight of these locations are shared sites, where the sales organization is located on the same site as one of the 25 production facilities, and 26 are offices with additional service centers.



# THE ARCHROMA WAY TO A SUSTAINABLE WORLD: IT'S OUR NATURE

In 2018 we redefined our internal and external approach, communication and behavior to our business. This ensures that we have a consistent approach to how we operate and communicate our core values to the markets. It also helps our organization to focus on those aspects of our business, from research and development, production all the way through to sales, which positively affect our sustainability footprint and that of our suppliers and customers. In this way we are motivated to identify and address current deficiencies in the value chains that we serve, and positively challenge the status quo.

This we termed the “The Archroma Way to a Sustainable World”. It is defined into three elements: safety, efficiency and enhanced value. We examined how we affect these three elements both from an internal and external perspective; what we do and how we do it, how we impact and enable third parties.

As a global manufacturer and supplier of specialty chemicals and colorants to the textiles, paper and coatings industries, the impacts of Archroma’s products extend far beyond our own operations. The dyes, auxiliaries, and functional finishes that serve as raw materials for a broad variety of products, positively impacting the cost, production time, resource requirements, product quality and overall value of our customers’ products. In many cases, Archroma products impact the issues that matter most, or the material issues, for our customers, their customers, and the consumers who use and dispose of their products. As it travels through the supply chain, the impact of a single kilogram of an Archroma product can grow exponentially as it helps, for example in the textile industry, transform fiber to yarn to textile to finished product. Throughout our own operations, we strive to ensure that these indirect impacts are positive, and are always improving the overall value along the supply chains that we serve.

We believe that sustainability does not have to come at a higher cost, and we are committed to demonstrate this to our partners by using our ONE WAY Process Simulator. The ONE WAY Process Simulator is a calculation tool designed and used by our textile processing experts to provide our customers and partners with an accurate estimate of the process costs, resource utilization, effluent discharge quality, and CO2 emissions of the existing production process and of the newly evaluated system. This is how we validate, quantify and support the “Efficient pillar” of The Archroma Way. Further details can be found on page 66 of this report.

## **SAFE – It’s our nature to protect**

A solid core: Our deeply rooted goal to protect people and our planet.  
Safe to use, safe to release and also safe to wear.

## **EFFICIENT – It’s our nature to rethink sustainable manufacturing**

Innovating application processes that minimize resources and maximize productivity, both in our and our customers’ manufacturing as well as by setting ourselves ambitious sustainability goals.

## **ENHANCED – It’s our nature to add another level of value**

Innovation is critical. With it, we create additional effects, functionalities and aesthetics and sustainable differentiation to bring additional value, helping consumers to achieve their goals, for a life enhanced.

After all, **it’s our nature....**



These indirect impacts are not just a nice story for Archroma, they are critical to our ability to succeed as a manufacturer and supplier. The industries we serve developed and grew without much regard for safety of key stakeholders or the environment. Many chemical and raw materials that started as breakthrough innovations have been driven to be cheap commodities. These are bought and sold based only on the cost per kilogram without regard for their impacts on quality, safety, or the environment. In addition, the growth of these industries was built on cheap (often free) and easy access to clean fresh water with no requirements of how that water would be used or returned to the environment. The result has been that these industries were able to grow and prosper by purchasing inexpensive low quality materials and chemicals and polluting huge volumes of water that was supplied to them at little or no cost. As we have learned more about the harmful effects and impacts of this business model and about the scarcity and value of water, it has become obvious that the only way for these industries to sustain their business will be with raw materials and chemicals that are safe, efficient, and that add value. At Archroma, we believe that we can make our industry more sustainable, and that we will do this by providing products that are higher quality, safer, more efficient and that provide resource savings for our customers all along the value chain.

Innovation at Archroma does not take place in a silo, but is a collaborative effort to get inputs from multiple stakeholders in order to identify problems to solve, prioritize them and align them with solutions. Great ideas can come from any part of the organization, and a key part of our management approach to innovation is to engage with internal expertise and also with our externally facing teams, sales and value chain interaction teams, in order to get their input on imminent challenges and opportunities facing our key mill customers and their key brand customers.

These insights enable us to focus on our customers, and to prioritize the projects that will have the greatest impact to them. Our product stewardship organization provides insights into the dynamic landscape of public concerns and government regulations pertaining to the chemical industry. This collaboration ensures that Archroma is leading in our efforts to produce chemicals that are safe to use in a responsible manner. External collaboration is also an important part of our approach, and we have strong relationships with leading raw material suppliers and the technology providers who make the machinery necessary for our customers to use our products. This collaborative and engaging foundation ensures that our approach to innovation is strategic, intentional, and purposeful.





# OUR GOVERNANCE

Archroma has a flat management structure that allows us to effectively communicate the strategic direction throughout the organization, closely monitor the implementation of initiatives and required activities needed to implement the strategy, and to rapidly respond to business needs, opportunities and challenges.

The main senior management decision-making body during the reported period is the Archroma Global Leadership Team (LT). The LT possesses a wide range of competencies, business and financial skills, chemistry and market knowledge and international experience and is responsible to determine the strategy and structure to set the pace for current operations and future development. The LT consists of thirteen senior executives of the company and is responsible for the execution of the strategy and direction approved by the Board of Directors (BoD). This includes reviewing and evaluating the external current and future opportunities, threats and resultant risk to markets, the strengths and weaknesses of the current and future organization and resultant risk to the business, and to decide upon the strategic options required and the means to implement and support them. The LT structure incorporates all the key functions of Archroma management.

The BoD supervises the LT, on behalf of the main shareholder, and has two levels of operation. Its primary function is to liaise with the LT and review and approve the proposed strategy, the underlying tactics to achieve the strategy, and financial planning including targets. Remuneration and risk management also falls within the BoD responsibility.

Its secondary function is to actively support specific projects within Archroma, this being dependent upon the competencies of the individual directors appointed to the board. Thus, the BoD has a two-tier working principle equivalent to a traditional single tier board.

External quality management auditing of Archroma to international standards falls within the responsibility of the Quality Management team, reporting directly to the Senior Vice President of Operations. Furthermore, a Compliance Committee, which has the responsibility to ensure an ethical business culture through the Archroma Code of Conduct and incorporates our Whistleblower Policy. It is led by the Senior Vice President of Supply Chain & Strategic Initiatives.

## Archroma Holdings Sarl Board of Directors



**Barry Siadat**  
President



**Alexander Wessels**  
Vice-President



**Miguel Kohlman**  
Member



**Jared Kramer**  
Member



**Isabelle Lambert**  
Member



**Reynald Tavoillot**  
Member



**Douwe Terpstra**  
Member

## Archroma Leadership Team (October 2020)



**Heike van de Kerkhof**  
Chief Executive Officer (CEO)



**Danielle Blomert\***  
Senior Vice President,  
Supply Chain  
Vice President, Strategic  
Initiatives, Sustainability &  
Communication



**Simon Clementson\***  
Senior Vice President,  
Human Resources



**Emrah Esder**  
Vice President,  
Sales Middle East & Africa



**Marcos Furrer**  
Chief Marketing Officer &  
Head of Innovation



**John Jansen**  
Senior Vice President,  
Sales Latin America  
Vice President,  
Sales North America



**Beate Plückhan**  
Senior Vice President,  
Sales Europe



**Anjani Prasad**  
Vice President,  
Sales India



**Mujtaba Rahim**  
Vice President,  
Sales Pakistan



**Roland Waibel**  
Chief Financial  
Officer (CFO)



**Andreas Wickli**  
Senior Vice President,  
Operations



**Silke Wischeropp\***  
General Counsel



**Michel Zumstein**  
Senior Vice President,  
Sales Asia Pacific

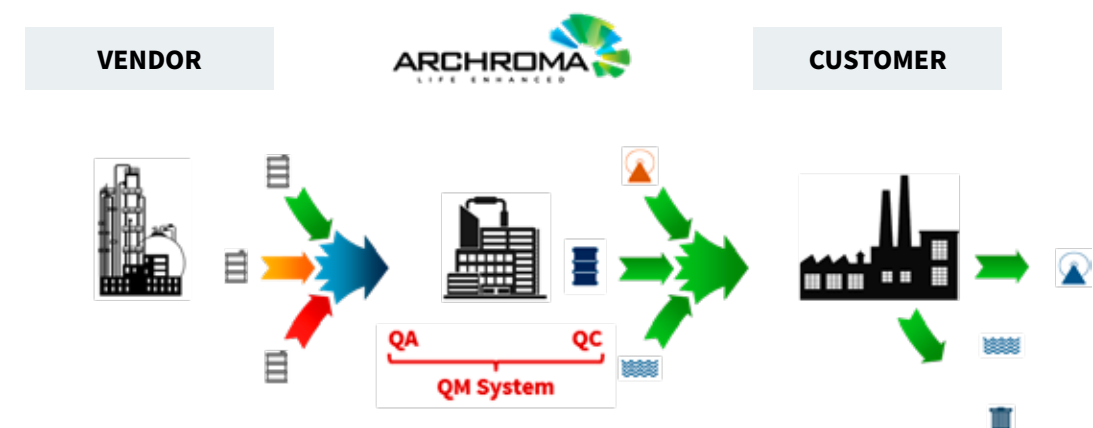
\* Members of the Archroma Compliance Committee

# OUR QUALITY MANAGEMENT

**Archroma and all subsidiaries operate according to global standardized management systems:**

- SN EN ISO 9001:2015 Quality Management Systems Standard
- SN EN ISO 14001:2015 Environmental management Systems Standard
- BS 18001:2007 Occupational Health and Safety Management System Standard

Initial third party audit and certification in 2014, re-certified in 2017 with a current validity until January 2021. Internal audits are made throughout the year on Archroma sites by the quality management team. Ownership of the quality management system is by our Head of Quality Management reporting functionally to the Chief Executive Officer. Quality management reviews are held bi-annually with the Leadership Team to monitor progress on system development and corrective action plans.



Since the publication of the International Standard for Occupational Health and Safety Management Systems ISO 45001:2018, BSI canceled its BS OHSAS 1800x standards and adopted the ISO standard as BS ISO 4500. As a result Archroma has planned to migrate over to the ISO 45001:2018 standard during FY2020.

There are a number of advantages in moving over to ISO 45001. In the new standard, there is a stronger focus on the organization's context. With ISO 45001, organizations have to look beyond their own internal health and safety issues and consider what their interested parties expect from them regarding health and safety. ISO 45001 requires the incorporation of health and safety aspects into the overall management system of the organization, thus driving top management to have a stronger leadership role with respect to the occupational health and safety management system.

ISO 45001 focuses on identifying and controlling risks rather than hazards, as is currently required in OHSAS 18001.

ISO 45001 requires organizations to consider how suppliers and contractors are managing their risks.

Thus the new standard brings a more holistic approach to the overall goal: to reduce unacceptable risks and ensure the safety and wellbeing of everyone involved in an organization's activities.

Quality management plays a critical role in our activities, in particular quality assurance and subsequent control to prevent either the introduction of, or the production of, unwanted hazardous substances in our commercial products. This is reported in further detail in our chapter referring to "Safe" (see page 24).





# AFFILIATIONS AND MEMBERSHIPS

Archroma engages with relevant stakeholders in order to support and progress initiatives that are bringing concrete and ambitious solutions and innovations.

We feel that only through active positive participation will we be able to bring about measurable change.

In particular, in June 2019, we decided to join the ZDHC Foundation (ZDHC) as an active and engaged contributor, aiming to support the ZDHC Manufacturing Restricted Substance List (MRSL) and the related “pyramid” conformity system designed to eliminate duplicative, and counterproductive, approaches to lists and standards.



Archroma is a member of the United Nations Global Compact. This voluntary initiative is a commitment to implement universal sustainability principles and to take steps to support the United Nations goals, by aligning strategies and operations with the universal principles of the United Nations Ten Principles on human rights, labor, environment and anti-corruption; and to take strategic actions to advance broader societal goals, such as the UN Sustainable Development Goals, with an emphasis on collaboration and innovation. A requirement of this commitment is the annual submission of a “Communication of Progress” which outlines the implementation and measurement of outcome of the activities to support the ten principles, under the 4 pillars of Human Rights, Labor, Environmental and Anti-Corruption. The document can be found here: <https://www.unglobalcompact.org/what-is-gc/participants/119991#cop>



Archroma is a signatory of the International Council of Chemical Associations Responsible Care® Global Charter since 2014. Responsible Care is a commitment to an ethic of safe chemicals management and performance excellence in the chemical industry. It enhances public confidence and trust in the industry's dedication to safely manage chemicals throughout their lifecycle, while ensuring that chemistry contributes to improving living standards, enhancing our quality of life and protecting the environment.



Archroma is an active member of the European Chemical Industry Council (CEPIC), a non-profit organization which represents large, medium and small chemical companies across Europe. CEPIC is devoted to promoting a thriving European chemical industry that is broadly recognized to provide sustainable, safe and resource efficient solutions, foster prosperity, growth and investments in Europe and to provide safe and resource efficient solutions to meet the challenges for future generations.



Archroma is a bluesign® technologies system partner, an independent organization that represents the vision and mindset of responsible and sustainable manufacturing of textile consumer products, that acts as an independent verifier to secure trust and transparency. Archroma has over 1000 products which have been bluesign® approved for the use in manufacturing textiles with the highest degree of safety for the consumer, the lowest possible impact on people and the environment and with the responsible use of resources.



Archroma is a member of, and is represented on the board of, the Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD), an independent international association for colorant-producing companies. ETAD provides a voluntary framework within which the member companies and their value chain can cooperate for the benefit of health and the environment, promote responsible care principles and product stewardship and cooperate with authorities to harmonize health and environmental regulations.



Archroma is also a member of the Association of Manufacturers of Process and Performance Chemicals TEGEWA (Textil, Gerbstoff u. Waschmittel). TEGEWA is an organization that fosters pre-competitive dialogue and collaboration of manufacturers of process and performance chemicals for industrial users.

As a member of TEGEWA and ETAD Archroma has advised towards the ZDHC Joint Roadmap (Zero Discharge of Hazardous Chemicals) programs.



ZDHC oversees the implementation of the Roadmap to Zero Programme and is a global multi-stakeholder initiative of more than 160 contributors within the fashion and footwear industry. The vision is widespread implementation of sustainable chemistry, driving innovations and best practices to protect consumers, workers and the environment. ZDHC uses collaborative engagement to drive a holistic, industry-focused and practical approach to sustainable chemical management. ZDHC Guidelines, ZDHC Platforms and solutions drive large-scale industry-wide implementation that advances the industry as a whole towards the zero discharge of hazardous chemicals.



Archroma is also a member of industry related associations, such as the Society of Dyers and Colourists (SDC) and the American Association of Textile Chemists and Colorists (AATCC), and as such we support their respective conventions and workstreams.



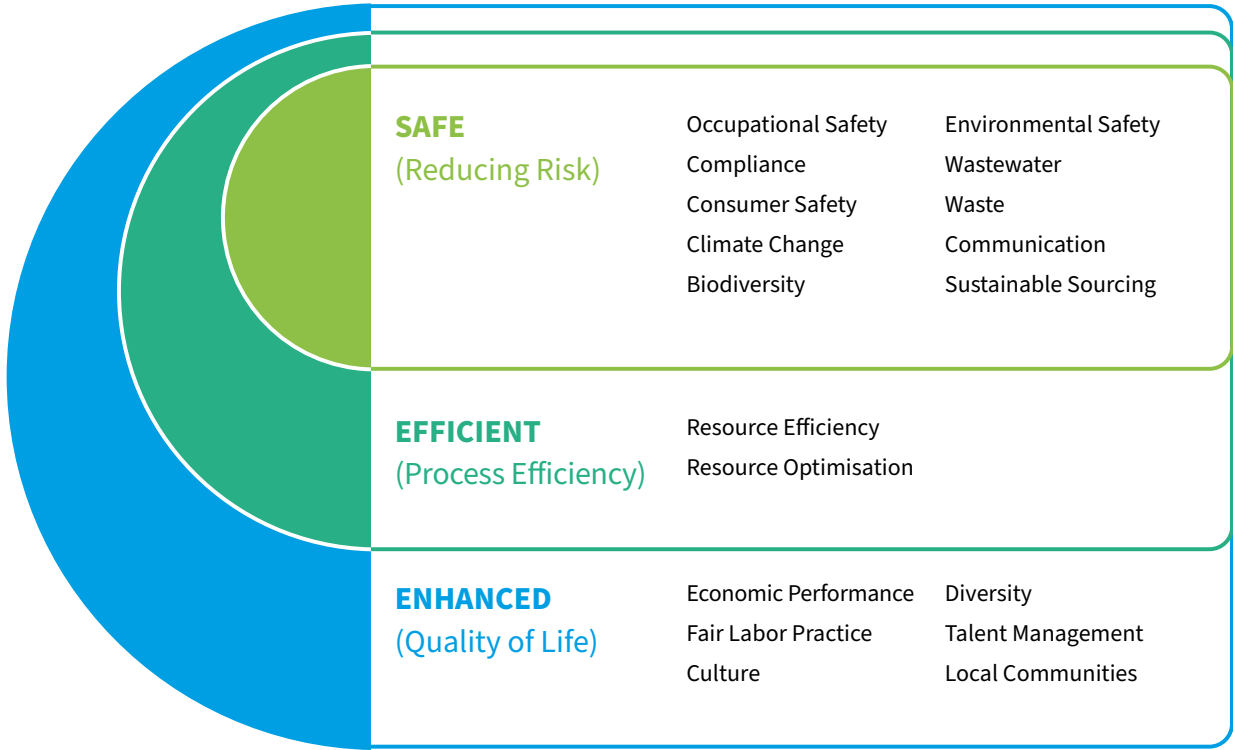
# OUR MATERIAL TOPICS

## Archroma Materiality Index

- Occupational Safety
- Economic Performance
- Compliance
- Fair Labour Practice
- Resource Efficiency
- Consumer Safety
- Climate Change
- Resource Optimisation
- Biodiversity
- Environmentally Safety
- Culture
- Wastewater
- Waste
- Diversity
- Talent Management
- Communication
- Sustainable Sourcing
- Local Communities



## The Archroma Way



Communication with stakeholders is done both in a formal and ad hoc manner, dependent upon the stakeholder groups’ requirements and relevancy to the Information.

| Stakeholders              | Inbound                                       | Outbound  |
|---------------------------|---|---|
| Society                   | Survey, news monitoring                       | Internet, news release                                  |
| Authorities, Legal Bodies | Legal department, 3rd party service providers | Legal department  |
| Regulatory Bodies         | Product Stewardship Department                | Product Stewardship Department                          |
| Investors                 | BoD meeting                                   | BoD meeting   |
| Employees                 | Structured meetings, ad hoc                   | Cascade, intranet, webinars                             |
| Customers                 | Salesforce, news monitoring                   | Salesforce, Internet, Product Information, news release |
| Suppliers                 | Specialist department (e.g. Procurement, QM)  | Specialist department (e.g. Procurement, QM)            |

From these stakeholder engagement activities and internal analysis, Archroma has identified the topics most material to both our external stakeholders and our business, and has prioritized them accordingly, with those topics occupying the top right quadrant having greatest priority. The topics have been re-appraised in comparison to the previous reporting period. As a result the relative importance of each topic has not fundamentally altered in comparison to the previous reporting period and therefore remains unchanged.

All topics, which have been identified by our external/internal stakeholders as being material to our business, were subsequently clustered into The Archroma Way, and will be presented in the following pages under the three pillars of Safe, Efficient and Enhanced.

This report has been prepared according to the Global Reporting Initiative: Core option. The material references can be found in the GRI Content Index within the Appendices beginning on page 96.

Any questions regarding the report or its contents should be directed to:

**James Carnahan**  
Global Sustainability Manager  
Email: sustainability@archroma.com





# THE ARCHROMA WAY TO A SUSTAINABLE WORLD

IT'S OUR NATURE TO PROTECT.

## 2023 TARGETS

### SAFE

#### Occupational safety

##### Zero accidents

- Total reportable incident rate per 200 000 hours worked of less than 0.2

#### Consumer safety

##### Safe to use

- All sales products compliant to the Archroma MRSL

#### Environmental safety

##### Protecting our planet

- Carbon neutral
- -40% water abstraction in water stressed areas
- No hazardous waste to landfill

# SAFE

SAFETY IS ARCHROMA'S UNCOMPROMISED TOP PRIORITY. IN ORDER TO PROTECT PEOPLE AND THE ENVIRONMENT, WE SET AMBITIOUS GOALS FOR SAFETY, SECURITY AND THE ENVIRONMENT WHICH ARE APPLIED THROUGHOUT THE COMPANY, AND MONITORED ACROSS ALL OUR ACTIVITIES.



# OCCUPATIONAL SAFETY

This topic refers to our internal focus, management and performance for the safety of our employees. Chemical manufacturing is a specialized process involving the handling and storage of large volumes of chemical substances of varying hazardous nature, synthesis processes requiring complex machinery often using high temperatures and pressure, and waste streams that require particular treatment before being discharged into the environment.

Following our principle that we are all responsible for safety, Archroma has developed 12 “Life Saving Rules”. Each employee is trained on these rules and gives a signed commitment to ensure they are followed.

Accountability for occupational safety lies with the Senior Vice President Operations and the Global Safety, Health and Environment (SHE) manager. Each site/location manager has a zero Total Reportable Rate (TRR) target. This has resulted in the overall Total Reportable Rate (TRR) of 0.23 incidents measured per 200 000 hours worked for the reporting period. This shows a significant improvement over the previous reporting period (FY2018 TRR 0.47). This is well below the U.S. National Safety Council chemical manufacturing industry average of 1.9 for 2018. The TRR target for FY2023 is less than 0.2 incidents per 200 000 hours worked.

## Archroma 12 “Life Saving Rules”

|  |   |   |   |
|--|---|---|---|
| <br><b>NO DRUGS WHILST WORKING</b><br><b>NO ALCOHOL AT WORK</b><br><b>NO SMOKING OUTSIDE DESIGNATED AREAS</b> | <br><b>WORK WITH A VALID PERMIT WHEN REQUIRED</b>  | <br><b>PROOF THAT ATMOSPHERE IS SAFE BEFORE ENTERING IN A CONFINED SPACE</b> | <br><b>LOCK OUT, TAG OUT AND TRY OUT BEFORE WORK ON MACHINES OR EQUIPMENT BEGINS</b> |
| <br><b>OBTAIN AUTHORIZATION BEFORE LINE BREAKING</b>  | <br><b>OBTAIN AUTHORIZATION BEFORE OVERRIDING OR DISABLING CRITICAL SAFETY EQUIPMENT</b> | <br><b>PROTECT YOURSELF AGAINST A FALL WHEN WORKING AT HEIGHT</b>            | <br><b>LIFTING AND HOISTING: DO NOT ENTER A DANGER ZONE WHERE OBJECTS CAN FALL</b>   |
| <br><b>COMPLY WITH MANAGEMENT OF CHANGE WHEN REQUIRED</b>   | <br><b>FOLLOW YOUR JOURNEY MANAGEMENT PLAN</b>   | <br><b>WEAR YOUR SEATBELT</b>  | <br><b>DRIVE RESPONSIBLY AND COMPLY WITH LOCAL LAW</b>                               |



### Peet De Waal, Head of Safety, Health & Environment

*Safety is our first priority. Everyday we work hard to improve our safety performance, so that all employees can return home to their family at the end of the working day. This brings us joy and happiness, and that is why we never let our guard down.*





## Occupational health & safety risk and emergency management

A comprehensive assessment of risks related to our operations and products is prerequisite to our business processes. A local and global emergency organization is in place to ensure comprehensive emergency management and response.

We take initiatives to reduce safety and health risks in the production, storage, distribution and usage of our products and in the disposal of waste. In order to manage the risks associated with chemical manufacturing, process hazard analyses are conducted. Each manufacturing site and standalone laboratory has its own risk portfolio, particular to the manufacturing processes and chemicals used at that site. The primary hazards are fire/explosion, chemical properties and personal injury. This risk portfolio is updated annually, or ad hoc when an additional manufacturing process is initiated on the site.

Each manufacturing site has a Safety and Environment Officer (SEO), who reports on a monthly basis to the global Safety, Health and Environment (SHE) Manager. Individual goals are set for each site. There are three safety pillars: prevention of incidents, training and safety audits.



## Incident prevention

To support prevention, Archroma operates an “observation” program in order to identify opportunities for improvements which can then be distributed across all sites. We have found this approach particularly successful identifying actions for continuous improvement, and this is also monitored on a monthly basis.

## Training

To support training, every site has a comprehensive training program that has been developed specifically for that site and focused upon specific knowledge improvement requirements. Broader training topics for the organization are conducted by regular webinars. These cover more general topics, which maintains the awareness within the organization towards our current safety performance and allows experience sharing, and all employees to participate in safety.

## Safety audits

Site safety audits against the guidelines are conducted on a 3-year program. These audits are conducted over one week by internally qualified safety experts at a frequency of 8 - 10 sites per annum. The audits are conducted against 25 comprehensive guidelines which describe all safety processes, the transportation, storage and use of all materials. Any corrective action plans are set and monitored against a specific timeframe.

Toll manufacturers are audited on their safety performance by qualified Archroma personnel, and this is an area of increasing focus.

In FY2019 our internal auditing team consists of 15 experienced auditors. It is planned that in FY2020 we will train additional auditors to strengthen the current team; a specific target has not as yet been defined.

General visitors to the sites follow a mandatory safety briefing before entrance, which is the responsibility of the hosting Archroma employee, covering the 12 “Life Saving Rules” in addition to site specific risks and hazards. Third party contractors employed for specific maintenance or construction contracts are trained before commencement of the particular contractual work. New employees will be trained before and in parallel to their duties, and are afforded additional supervision.

General health improvement initiatives are managed on a local level at the sites. No global initiatives have been conducted during the reporting period.

In FY2019, we instituted safety training via online tools for all employees equipped with computers and mobile devices, and physical onsite training for those with no online access.

## CONSUMER SAFETY

Of high importance to our value chains – increasing focus is being given to ensure that products used in manufacture do not pose a health and safety risk to the users and final consumers. Environmental health is referred to under the other topics of climate change, resource optimization, wastewater and waste management.

The Product Stewardship organization is fully integrated within Archroma's processes in order to ensure that hazardous chemical risks are identified and controlled. Current and future knowledge of regulatory requirements, often specific to countries and regions, is essential. In addition, other value chain stakeholders (consumers, brands, NGOs) influence market demand and the resultant required specification in order to manage the risk of chemistry that poses a hazard to consumers and the environment. All these requirements have to be gathered, consolidated and communicated to all related internal stakeholders to ensure that product design, innovation, registration, production and the resultant application conforms to these changing requirements. The Product Stewardship organization has the gatekeeper function for raw material sourcing and production processes. An essential process required in specialty chemical manufacturing is a competent chemical inventory management system incorporated in master data management systems.

The Product Stewardship organization has three dedicated testing laboratories at its disposal in order to control and confirm product compliance to market-related restricted substance lists in addition to regulatory requirements. These laboratories are located in Pakistan, India and China. In order to support the necessary regulatory support processes and market required compliance certifications, we have invested in a dedicated global team, trained and qualified with the necessary scientific knowledge in order to deliver the highest standard of product stewardship in the industry. How we interact with the respective value chains is reported under the topic of communication.

### It's our nature to protect

For our innovation efforts, this means making chemical products that are safe to manufacture, safe to use by our customers, safe for consumers using our products, and safe for our environment at every stage of our products lifecycle. To enable this, we have developed a market-related Manufacturing Restricted Substances List (MRSL), designed to limit unintended hazardous substances in our commercial formulations. Through diligent portfolio and vendor management, we are committed to optimizing our entire product range so that by the end of 2023 all of our commercial formulations meet the criteria of the Archroma MRSL.

During the reporting period we did not have any reported incidents of non-compliance concerning the health and safety impacts of our products and services.

In line with our philosophy to challenge the status quo, we continuously examine ways in which we can deliver products which not only meet but dramatically exceed current levels of purity.

An example of this was the development of Denisol® Pure Indigo. This product was introduced to the market in May 2018 and bulk production started in our Jamshoro plant in Pakistan in September 2018. We have seen a high conversion rate on all denim production markets with early adopters such as Tuong Long (Vietnam) and Absolute Denim (Thailand), leading increase in production over FY2019.

During the reporting period, we introduced many other innovations such as: Helizarin® LTC New liq, a formaldehyde-free\* low temperature curing binder for pigment prints; Lurapret® N5396 & N5392 liq, water-based ultra-low VOC polyurethane (PU) polymer coating technology; Foron® SP-WF dyes range for high wet-fast color in sportswear; Diresul® Smartdenim Blue, an eco-advanced liquid sulfur blue dye designed to mimic indigo; Fadex® AS New, a 'super UV protector' for automotive and transportation textiles; and Appretan® NTR, a water-based textile coating binder based on renewable natural ingredients.

\* Below limits of detection according to industry standard test methods

Further information can be found at <https://www.archroma.com/news-stories/news>



The Foron® SP-WF range launched in FY2019 is the basis of FAST SPORT x HYDRY, a system for sportswear that combines safe and efficient benefits, with enhanced added value for performance and sustainability.

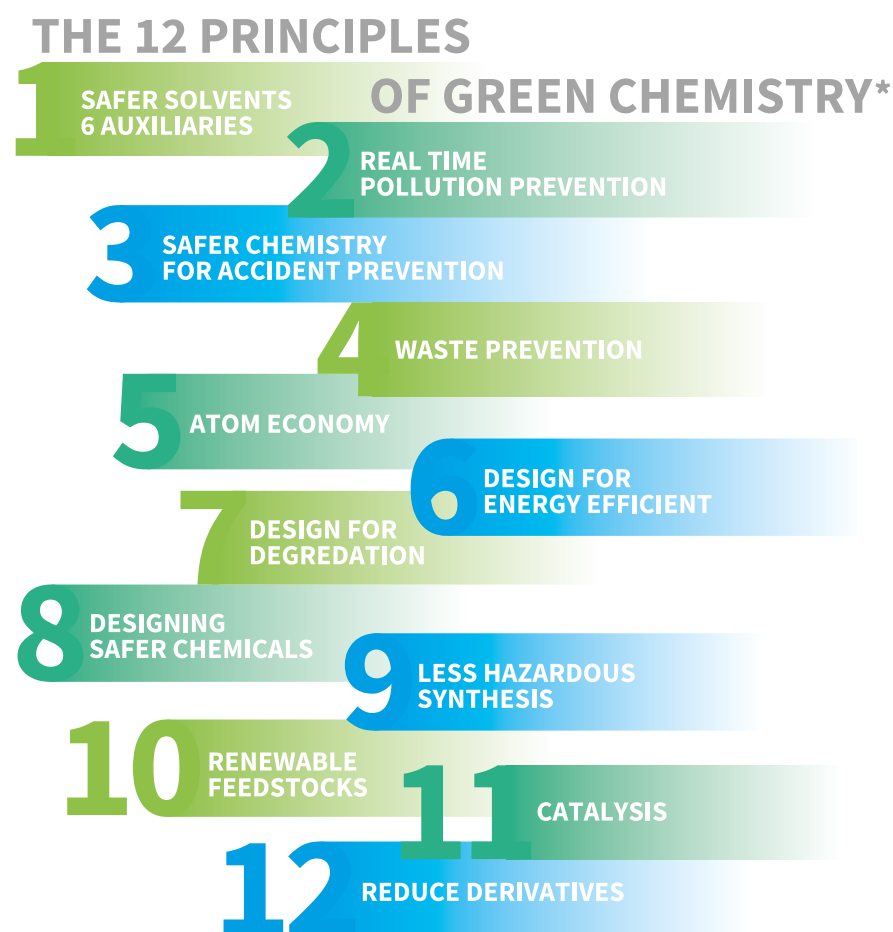


# ENVIRONMENTAL SAFETY

We take initiatives to reduce environmental risks in the production, storage, distribution and usage of our products and in the disposal of waste. This includes the efficient use of energy and resources and the continuous improvement of our processes to minimize the impact of our activities on the environment. We apply a simple concept of analyzing our production processes to, where possible, avoid or reduce emissions and waste, recycle waste streams, and wherever necessary dispose of waste in an environmentally acceptable manner. We comply with all local regulations, and have online effluent monitoring in major sites which allows a control mechanism to achieve and surpass emission limits.

Accountability for environmental management lies with the Senior Vice President of Operations. Manufacturing processes are developed in line with the “Principles of Green Chemistry”<sup>\*</sup> (see graphic below); maximizing process yields which ensures that minimum waste is generated, and to minimize unintentional contaminants of raw materials and intermediates within the final product. Production technology, that is the implementation, installation, monitoring and ongoing improvements of production processes, is globally managed in two areas: 1) Chemicals, and 2) Dyes & optical brightening agents. This has been done due to the distinctly differing natures of chemistries involved in these two areas.

Short term and long term key performance indicators and associated targets are defined for each production site for energy use, waste and effluent, both in absolute terms and per unit of production. These are monitored on a monthly basis using scorecards by the manufacturing department and corrective actions taken where necessary. In addition, specific projects are initiated regarding operational excellence, especially in process simplification and production yield improvement.



<sup>\*</sup> Anastas, Paul T.;  
Warner, John C. (1998)  
Green Chemistry:  
Theory and Practice.



## James Carnahan, Head of Sustainability

*The Archroma Way to a Sustainable World has become a bright guiding light for everyone at Archroma. This is because the Archroma leadership constantly challenge the organization to rethink the way we operate. Nature needs us, which is why we say that in creating safe, efficient, and enhanced innovations and solutions, it's our nature!*

## Non-conformances

There are strict guidelines covering environmental safety non-conformities. All sites and standalone laboratories have at their disposal a well prepared and trained emergency response team to cover spills, fires, accidents or injury. Training of these teams is conducted on a regular basis, and certified to conform to local regulations. The magnitude and/or the impact of an incident will determine the response level according to the global emergency management procedures, by either the Local Emergency Management (LEM) team or the Global Emergency Management (GEM) team. The local authorities are notified and the appropriate remedial actions taken. Archroma employees are always a part of any emergency team, even if Archroma is not the site owner, as in some cases we have shared sites with third parties.

In addition to the specialized training received by the emergency management teams, all production employees are trained on safety, energy, waste and wastewater management as a part of the Archroma Academy “MAKEPERT” initiative, developed to build knowledge from a bottom-up approach. This initiative also builds a good platform to define improvements towards achieving the particular annual and long term goals.

During the reporting period we had one production related incident in Resende (Brazil) in September 2019, releasing some hydrochloric acid to the air which impacted the neighborhood and city. Archroma and external emergency teams worked very well together and reduced the impact to a minimum. Archroma received a fine of 4 500 USD relating to this incident.

## Air emissions

Airborne emissions from the production plants include exhaust gas from operations and boiler flue gas. All production plants and standalone laboratories are equipped with modern facilities to collect and treat air emissions. All air emissions are continually monitored and meet with the relative standard limits as stipulated by local environmental authorities.

## Water & effluent

Water is a critical resource for Archroma during chemical manufacture. It is primarily used as a processing aid in cooling, cleaning and air scrubbing/washing, and as a raw material in the production of commercial liquid based formulations, such as liquid dyes and polymeric dispersions. Water is also evaporated during the production of dry formulations.

Archroma withdrew a total of 8.76 million m<sup>3</sup> of water in FY2019, which represents a 1% decrease compared to the reported figure for FY2018 (8.83 million m<sup>3</sup>). Of the total withdrawn 49 % is directly sourced from surface water and 25% from groundwater. The remaining 26% is supplied from third parties, such as corporation water supply and industrial site services.

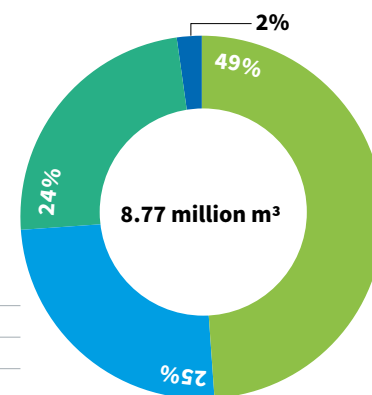
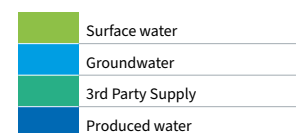
7 of our production sites are located in water stress areas as defined by the WRI Aqueduct Water Risk Atlas. This has changed from the previous report (10 sites reported in the previous FY2018) due to changes in the WRI analytical process.

With the revised Aqueduct 3.0, there are three major changes: the indicators within the water risk framework, the hydrological model which underpins these indicators and the hydrological sub-basins.

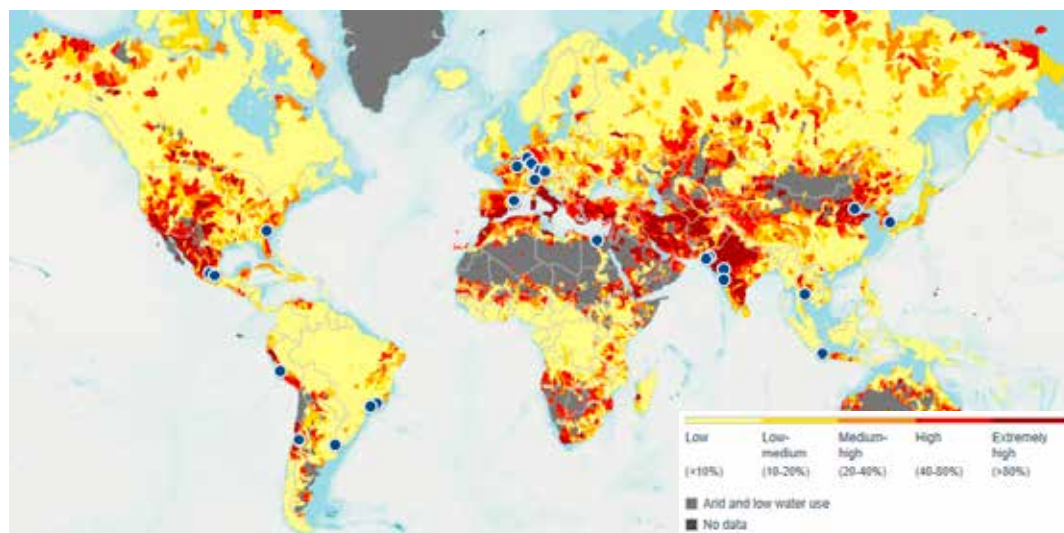
More details can be found at:

<https://www.wri.org/resources/maps/aqueduct-water-risk-atlas>.

### Total water withdrawal



BETA  
**AQUEDUCT** WATER RISK ATLAS



Water Stress Areas

| Production Site         | Baseline Water Stress Rating |
|-------------------------|------------------------------|
| Santa Clara, Mexico     | Extremely high (>80%)        |
| Salvatierra, Mexico     | Extremely high (>80%)        |
| Maipu, Chile            | Extremely high (>80%)        |
| Ameriya, Egypt          | High (40-80%)                |
| Suzano, Brazil          | High (40-80%)                |
| Lamotte, France         | High (40-80%)                |
| Korschenbroich, Germany | High (40-80%)                |

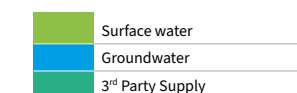
Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and non-consumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users

In these sites Archroma withdrew 0.18 million m<sup>3</sup> of water in FY2019. Of this 9% of the water withdrawn in these areas was sourced from groundwater and 5% from surface water. The remaining 86% was supplied by third party water suppliers. Of the total water supplied by third party suppliers, 78% originated from surface water. Thus we are minimizing any effect on the aquifer in water stressed areas, in order to reduce the depletion of this valuable resource. In these areas, our target will be to reduce water withdrawal in these sites by 40% to a total 112 000 m<sup>3</sup> withdrawn in 2023.

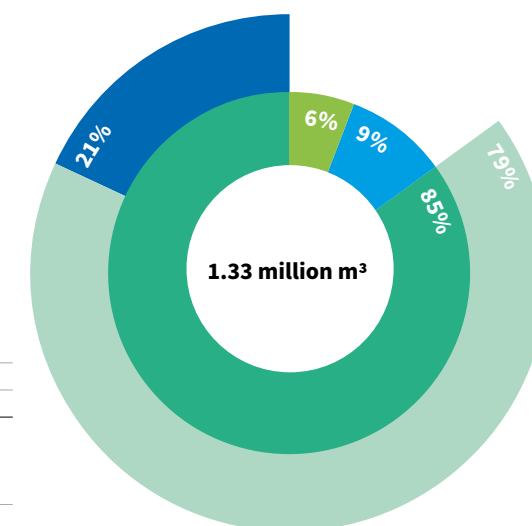
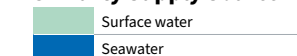
| ARCHROMA TOTAL                             | FY2018  | FY2019  | TARGET 2023    |
|--|---------|---------|----------------|
| Stress Water Abstraction (m <sup>3</sup> ) | 218 665 | 188 389 | 112 000 (-40%) |
| Hazardous Waste to Landfill (mt)           | 382     | ZERO    |                |
| Local Communities                          |         |         |                |

One of these sites is our site in Jamshoro, Pakistan. As we have employed water recycling to reuse 70% of the required water for the plant, as a part of the “Sustainable Effluent Treatment” system established in 2012, we only withdrew 800 652 m<sup>3</sup> from the Indus River in the reporting period. As a product raw material, and to allow for evaporation loss, we consumed 435 417 m<sup>3</sup>, the remaining water, 365 235 m<sup>3</sup>, was supplied as input water for a neighboring industrial plant (110 011 m<sup>3</sup>), to the local community for drinking water (166 118 m<sup>3</sup>) and also for plant irrigation (89 106 m<sup>3</sup>).

### Water withdrawal – Water stress sites



### 3<sup>rd</sup> Party Supply Source



Water consumption in FY2019, which is water used, for example, as a raw material, to generate steam or lost through evaporation, amounted to 1.88 million m<sup>3</sup> which represents 21% of the total water withdrawn. In the water stressed areas water consumption increases to 42% of water withdrawn, which is indicative of the water recycling initiatives used in some production sites.

| Water consumption (m <sup>3</sup> ) | All areas | Areas with water stress |
|-------------------------------------|-----------|-------------------------|
| TOTAL                               | 1 882 569 | 79 369                  |



## DATA & PROTECTION

In line with its third culture pillar: Customer & Market Focus (see page 80), Archroma is committed to the protection of the information and data of its customers, and partners in general.

Whilst Archroma needs to have access to the information and data that is required to operate its business and better serve the needs of its customers, the company is also extremely careful to comply with the laws and regulations related to data privacy, fair competition or intellectual property, as well as with the expectations of its customers and partners in this respect.

To do this, the Archroma Code of Conduct contains rules and guidelines aiming to the protection of sensitive and confidential customer information. All our employees are trained to the Archroma Code of Conduct to ensure that awareness is high on compliance issues, via an annual online training as well as regular live or web-based meetings.

Archroma has a Whistleblowing Policy and a Compliance Officer in place to ensure that suspected non-compliance incidents can be signaled, even anonymously, and properly inquired.

Archroma's IT systems, including internet and intranet management systems, databases, Customer Relations Management (CRM) tools, Enterprise Resource Planning (ERP) system, end-user computing applications, and other operating systems, are strongly protected by solid firewalls and password-protected accesses. The company has established an Information Security Officer during the reported period.

Archroma continuously invests in technology security initiatives as part of its digital agenda to effectively manage our business operations with best-in-class industry standards. We rely across our operations on 100% cloud-ready IT "eco-systems" with certified information security platforms which provide us high levels of reliability and capacity to protect our daily processes and transactions, as well as the company's intellectual property and other sensitive business information.

We take threats seriously and continue to work to improve our systems and processes, which are constantly monitored and regularly updated so they provide the most effective security to protect our technology systems, processes and data.

As cybersecurity is continuously evolving, education is another essential part of our approach to protection, and we strive to reinforce a cybersecurity-aware culture at Archroma. Our employees are required to complete cybersecurity and data protection e-learning courses which are regularly updated based on the latest types of attacks and security best practices.

For the most sensitive and confidential cases, projects are handled in secure online data rooms that can be accessed only after the Archroma employees involved in the project have agreed to a non-disclosure and confidentiality obligation.

In the reported period, Archroma recorded no incidents nor complaints related to the theft, loss, or leaks of customer information, and no incidents of breaches of confidentiality. One third party (a customer) suffered a cyber-attack. Fortunately, the incident did not involve any loss of data related to Archroma or its customers, providers or other partners.

## PRODUCT STEWARDSHIP & COMMUNICATION

As part of our core commitment "Safe", we believe that providing accessible and adequate information to our stakeholders (our customers, partners, and their employees, as well as authorities, NGOs and consumers) about the environmental and social impacts of our products is essential.

In particular, we produce information and documents aimed at allowing our stakeholders to make informed purchasing choices or specifications, and then to handle, use and dispose of our products in a safe, efficient and sustainable manner.

### Some of this information is highly regulated such as:

- Material Safety Data Sheets (MSDS) - which provide information regulated under the United Nations (UN) Global Harmonized System (GHS) about potential health hazard, product classification, presence of dangerous ingredients, and the instructions on Personal Protection Equipment (PPE) and safe handling. Whereas standards such as GHS may not be applicable in all countries or may differ from one country to another, Archroma follows the highest applicable standard wherever its products are manufactured or delivered.

MSDS are therefore available in all countries where we operate, and available in the local language. These are made available to concerned stakeholders via a dedicated web interface fed by a specific Environmental Health and Safety (EHS) module within our SAP IT infrastructure: Archroma employees and contracted warehouses, companies providing us with emergency assistance services, and key distributors. MSDS are also proactively distributed to customers on initial orders, and subsequent annual orders or whenever there are changes in product composition, or substance hazardous classification.

- Packaging labels - which provide GHS and transport handling information aligned on the product MSDS in a more visual form such as danger and hazard pictograms. To ensure alignment between labels and MSDS, Archroma is using the same specific SAP module that feeds directly to the label printers available on all Archroma packaging sites.

Each country will either follow the GHS or have its own classification standard. In every eventuality Archroma will comply both with the GHS and, in addition, with the standard applicable in the country of production and destination, and in local language.

Archroma also provides documents that are not regulated but are requested from our customers by their customers, as well as brands and retailers:

- Compliance certificates - which are established on request from customers and aim to certify compliance of Archroma products to a number of industry standards that apply in their markets.

These standards can be edited by:

- Regulatory authorities, such as FDA food contact approval, the ISEGA certification by the German Federal Institute for Risk Assessment (BfR), the Blue Angel, Nordic Swan or EU Eco-label.
- Third-parties such as bluesign technologies ag or Cradle to Cradle Products Innovation Institute.
- Brands and retailers with their own specific requirements such as restricted substance lists (RSL's) and/or manufacturing restricted substance lists (MRSLs).

In total, Archroma maintains a library of about 32 000 of the above mentioned documents. Annually we receive about 10 000 requests for such documents, and this is increasing as markets become more sensitive regarding hazardous substance content and the inherent risk to the consumer and the environment.

### In order to be able to support this demand, product stewardship at Archroma is managed focusing on three areas:

1. Laboratory support to ensure compliance of our products and resultant manufactured products to the health, safety and environmental standards of authorities, or brands and retailers.
2. An advocacy program, aimed at assisting authorities, NGOs, brands and other stakeholders to increase understanding of the environmental and social impact of our products and their chemical components. In this respect, Archroma has become partner and regularly consults on topics and ingredients which are under scrutiny or evaluation.
3. An annual operating plan with strict targets and monitoring tools and processes aimed at increasing the efficiency of product stewardship at Archroma with timely updates of regulatory documentation.

Archroma has strict internal guidelines in place to ensure that eco-toxicological information is established, maintained and communicated following the highest standards.

Archroma communicates directly with our customers with standard documents aimed at directing customers in the most efficient use of Archroma products to maximize levels of productivity and minimize resource usage.

### This information is provided in the form of:

- Technical Data Sheets (TDS) - which are established for each product and provide information about its technical properties (for example appearance, pH, density etc.), application field, typical application recipe, available packaging and handling recommendation.

An online database of product TDS is maintained and managed by the respective product manager and is accessible to all Archroma sales and marketing organizations for communication to customers.



#### Carole Mislin, Head of Product Stewardship

*Competence in chemical hazard assessment is a hygiene factor in today's chemical industry – without this a company should not have the license to operate. We need to ensure that risk is minimized during the complete life cycle of a consumer good, from manufacture to end-use to final disposal or reuse.*

### All new global products are launched with a package addressed to the marketing & sales organization and containing:

1. An internal launch letter containing information on e.g. marketing positioning, business opportunity, production site, packaging options, performance, application field, recipe, fastness tests, and the available certifications.
2. The respective technical data sheet(s).
3. The respective material safety data sheet(s).
4. Promotional information to support the new product(s), such as promotional flyers, supporting technical customer presentations, etc

Innovations are also further introduced to the marketing & sales organization in dedicated webinars allowing deeper training.

The marketing & sales organization is then responsible for the introduction of the product to the customers and market, supported on an ad hoc basis by media activities such as press releases and advertisement, or social media activities. All products removed for the portfolio or reformulated also trigger a similar information notification process to the sales organization.





# COMPLIANCE

Archroma fully supports and complies with the 1948 United Nations Universal Declaration of Human Rights. Archroma does not undertake any business with any country or regime with known human rights abuses. Archroma fully supports and complies with United States Sanctions Laws and the European Union Restrictive Measures and regulations.

For Archroma, there is no other way to do business than in a sustainable and responsible way. Archroma is therefore committed to act with integrity and in strict compliance with the law.

Archroma has a Code of Conduct for employees, signed by the Chief Executive Officer and publicly available, which sets out the binding rules and guidelines for the employees and officers of Archroma. This enables employees to rely on the Code as a navigation guide, and one another's good judgement, to uphold a high standard of integrity for the individual and Archroma.

Each employee is required to give a personal commitment to meeting the Code of Conduct when joining the group. As a general rule, Archroma conducts re-training on the Code of Conduct to all employees on an annual basis. In addition, compliance topics are included in all meeting agendas to reinforce the training and awareness throughout the organization.

Archroma takes responsibility for its employees, its customers, its suppliers, its other stakeholders and the environment in order to achieve profitable long-term business development. Archroma commits to maintaining an ethical and sustainable operation, and business development in all activities according to its own Code of Conduct and Responsible Care®.

The Archroma Code of Conduct links all Archroma employees around the world in a collective commitment to integrity and excellence in all they do, by providing tools that will guide them in making consistent, sustainable decisions.

Archroma also has a Whistleblowing Policy in place that allows the anonymous reporting of any suspicious situation of violations of our Code of Conduct or the law.

In addition, Archroma and its affiliated companies are committed to integrity and an open culture where everybody feels secure in seeking advice or raising concerns, and has confidence that reports are handled in a professional and transparent way. To help in its ability to provide advice and enable employees to report concerns or misconduct, the Archroma Code of Conduct and Whistleblower Policy are essential elements of integrity in the commitment to an open culture where people feel secure in seeking advice and in raising concerns. Archroma ensures a retaliation-free environment to anyone who comes forward in good faith to ask questions or report violations.

Archroma strictly prohibits all forms of corruption and any business conduct that could create the appearance of improper influence. Archroma applies a zero tolerance policy regarding bribery in every kind of commercial setting.



**Silke Wischeropp, General Counsel**  
*Setting high expectations for our corporate and social responsibilities and that of our partners is critical to drive integrity throughout our organization and set ourselves rules which quite often exceed local regulations. We have a reputation and a level of behavior that we are proud of.*

## These principles are summarized in three rules:

1. No bribery under any circumstance;
2. Do not accept or offer kickbacks, even if moderate in value;
3. Third parties hired by Archroma are subject to these above principles.

It is a duty and responsibility of all employees and associated persons to take whatever reasonable steps are necessary to ensure compliance with this policy. According to the company's Code of Conduct and Whistleblower Policy, employees shall immediately disclose to the company any knowledge or suspicion of plans to offer, promise or give a bribe or to request, agree to receive or accept a bribe in connection with the business of the company.

Archroma has set up a Compliance Committee and a Compliance Officer holding regular meetings and responsible for investigating any potential violations in a professional and consistent manner, while safeguarding fundamental legal principles such as confidentiality, fairness and objectivity.

Any breach of the Code of Conduct is reported to the Compliance Committee, investigated and, if necessary, prosecuted according to the company's disciplinary procedure and/or criminal action, should the case apply.

Regular internal audits are performed by the Group Internal Audit function. The audit plan is based, in addition to other elements, on the Corruption Perception Index, that is published annually by Transparency International.

# RISK MANAGEMENT

Archroma is committed to a strong risk management throughout the company, supported by the Leadership Team and Board of Directors. The risk management function is under the responsibility of the Head of Risk Management & Internal Audit, reporting on risk management areas to the Chief Finance Officer in his capacity as member of the Leadership Team.

The company has a Risk Management Policy in place since 2015 and has been undergoing regular risk evaluation reviews.

In February 2019, a completely new risk mapping exercise was performed and since then, a review with the Leadership Team is regularly performed (at least once per year). These reviews include the definition of risks in terms of impact and likelihood as well as establishing and follow-up of action plans and persons responsible for execution.

The results of every update to the risk mapping are shared with the Audit Committee of the Board of Directors.



## Jordi Martinez, Head of Risk Management & Internal Audit

*Understanding and managing business risk is essential in order to implement mitigation strategies to ensure Archroma's sustainable future. Climate change and sustainability have become two of the most important factors, as it could affect the supply of one of our key raw materials; water. We are looking ahead ensuring that these types of risks are proactively managed.*

Archroma initiated the risk management project with the objective first to have an overview of the main risks. Risk management is a very broad topic and therefore requires to be prioritized to identify the areas that require attention.

Archroma has put in place an assessment report comparing where we are at the end of FY2018 with regards to our ambitions and to industry benchmark. This report will serve as the basis for Archroma's action plan to increase our preparedness, methodology and processes towards risk management.

In particular, Archroma is in the process of implementing a risk management platform where risk owners of occupational risk, health and safety, IT security, etc. will be clearly identified, and the risks and the management of risk will be consolidated and centralized, and monitored, providing a clear overview of risk management at Archroma.

The only risk specifically mentioned by the GRI criteria is very much focused on societal risk or climate change, but we know from a commercial perspective there are many other risks, and Archroma has identified about 45 areas of potential risks, for example environmental risk, credit risk, raw material supply etc., that we monitor and assess on a regular basis.

The need for stronger focus for risk management was supported by the Audit Committee of the Board of Directors of Archroma. Our approach to risk management was well perceived by our external stakeholders, such as our external auditors, but the management team identified a potential for a more systematic approach.

In FY2018 the team started to update the risk profile, proceeded to its mapping and to draw the company's risk management action plan for deployment in FY2019. In order to better support its risk management going forward, the company also decided to implement a tool where it is possible to map and rate risk in terms of likelihood and impact. This will allow to consolidate the results, and to set the action plan and the overall company audit plan considering the risk elements.

The data is gathered on a standalone platform, "TeamRisk", a professional software which supports risk management.

Internal audits are also used as a source of risk identification and mitigation, one that allows to avoid unidentified risks to fall through the cracks which the team may have missed in our periodical reviews.

The company is keen to raise awareness about risk management across the organization. The most effective factor in doing so is the annual frequency of the risk assessment, and action planning and execution. The effectiveness of the approach is demonstrated by the fact that our insurance and financial partners are taking Archroma's risk-mitigating efforts in account when calculating our insurance premium level.





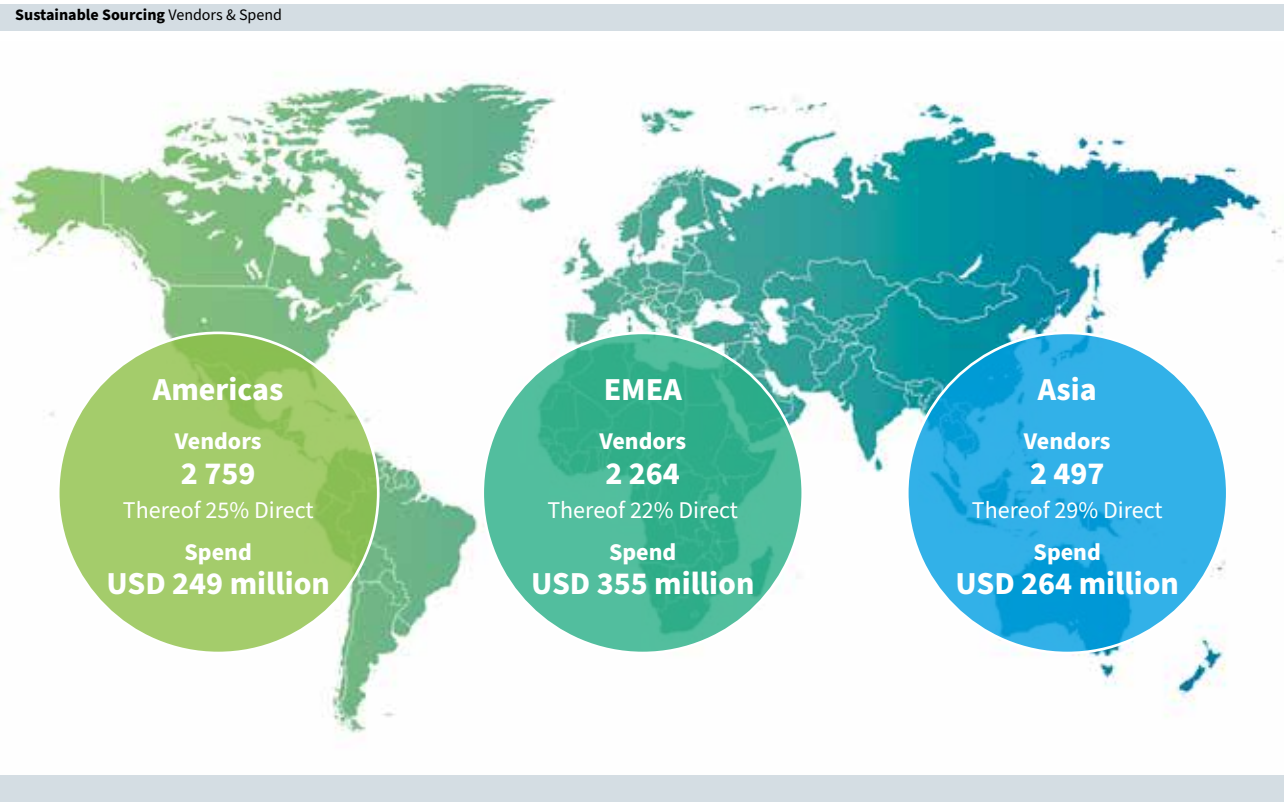


# SUSTAINABLE SOURCING

For Archroma, sustainable sourcing is critical as our vendor network has a significant influence on our production and our resultant systems sold to our customers. Not only in terms of the raw material conformance to specification (quality), but also product hazardous chemical contamination that directly affects the safety of our products and the environmental pollution in production and when in use.

Our aim is to establish mutually beneficial relationships with our third party suppliers and contractors in order to support our objectives of internal safety, health, environment and quality standards, which incorporates corporate social responsibility and Responsible Care®. We require our suppliers and service providers to adopt standards comparable to Archroma's policies. Our vendors shall also bind their own suppliers to a similar level of compliance.

A vendor's sustainability performance affects our own overall sustainability profile as well as our brand image in the industry and therefore vendor management, including sustainability criteria, is essential. As a specialty chemical manufacturer, we have extensive knowledge and experience in purchasing, handling and inventory control for chemical raw materials.



**Andreas Wester, Chief Procurement Officer**  
*By measuring and monitoring our suppliers, we are able to support only those companies that have invested in a responsible manner in their organization, their employees and their products and technologies. This is how we can positively influence our upstream industries, only creating demand for sustainable suppliers.*

Procurement within Archroma is a complex operation that encompasses integrated strategies to deliver optimized value for both direct and indirect purchasing needs of the organization. Due to the nature of specialty chemical manufacture and multiple manufacturing sites located across multiple regions and continents, raw material vendors are very diverse in nature and location. Archroma sources over 7 200 raw materials for our direct purchasing needs from more than 1 600 vendors. This requires dedicated processes to ensure the on time, and in full, delivery of quality compliant raw materials at optimized cost. In order to do this, we manage procurement within the three pillars of cost, quality and supply security.

Ownership of procurement is by the Chief Procurement Officer, who reports to the Senior Vice President of Operations. The procurement operation is staffed with a team of 66 employees who are located within the regions, half of which are located in the Asian region, a third in EMEA and the remainder in the Americas.

## Cost

Procurement decisions are based upon the total cost of ownership principles, taking into consideration not only the direct costs but also incorporating the indirect costs such as handling, inventory management, quality assurance, administration and payment. This is monitored using our SAP enterprise resource planning system.

Our annual procurement spend in FY2019 was USD 868 m, 41% of which in EMEA, 30% in Asia and the remainder in the Americas.

## Quality

Within procurement, quality is managed within four areas: Conformance to specification, the indirect benefits from the use of our products in subsequent manufacturing, internal handling of raw materials and finally the environmental impacts, both in terms of direct impact on our own manufacturing, and indirect for our customers' manufacturing. In chemical manufacturing, clear specifications are essential - not only to specify the intended raw material required, but also to ensure that hazardous chemical contaminants are specified out of the raw material. Our extensive in-house chemical knowledge allows us to determine these specifications, within the technical grades necessary for the industries that we serve. To monitor compliance to specifications we administer a number of standard operating procedures, dependent upon the vendor's historical performance and risk profile. These measures can include pre-shipment sample analysis, application trials and normal inbound quality control checks.

Archroma has a process in place to evaluate raw material composition and their compliance to local regulations and the Archroma raw material eco-toxicological specifications. If the raw material is found to be deficient to the standard, the raw material product and/or supplier will be discontinued.

## Supply security

Many of the required raw materials can only be manufactured using hazardous substances and methods that pose a high risk for human and environmental health. Welcome advances in regional and local environmental protection have increased scrutiny at some vendors, resulting in manufacturer closures and consequently supply shortages. To avoid supply interruptions, we closely monitor our vendors to give early warnings in the case of a potential raw material shortage. To limit our exposure we have created teams of global category procurement managers to monitor and ensure supply and to work closely with our internal product management, innovation and manufacturing teams to secure supply and develop alternative strategies for single sourced raw materials. Projects are in place to identify replacement substances for raw materials that are, for example, no longer available, require a higher specification, or to offer more economic alternatives. In addition to this, mechanisms are in place to ensure that the products specific to our system packages can be manufactured and are aligned to the business needs. However, for some highly specific raw materials we currently have only one approved vendor. We source more than 50% of direct and indirect goods and materials from suppliers located in the same country as the respective Archroma manufacturing plant. This mitigates risk in the supply chain, for example lead-times and also supports the local industry.

Due to the nature of the specialty chemicals that we manufacture, a significant part of our feedstocks are sourced from within India and China. Due to this high regional exposure, dedicated sourcing teams have been set up in Thane, India, and Tianjin, China, respectively. This increases the diligence in those markets to supplement the Global Procurement Category Managers.

Vendor selection and management at Archroma is a systematic approach based upon compliance to our Suppliers Code of Conduct (<https://www.archroma.com/compliance>).

The historical and anticipated performance, the experience as a vendor and the financial stability of the vendor are regularly assessed to determine compliance to the Supplier Code of Conduct. In addition, all vendors are monitored on a monthly basis using “on time in full” metrics for supply performance measurement. Vendor risk assessment may introduce additional measurement criteria to mitigate supply risk, such as the vendor safety infrastructure and dangerous goods managing capabilities.

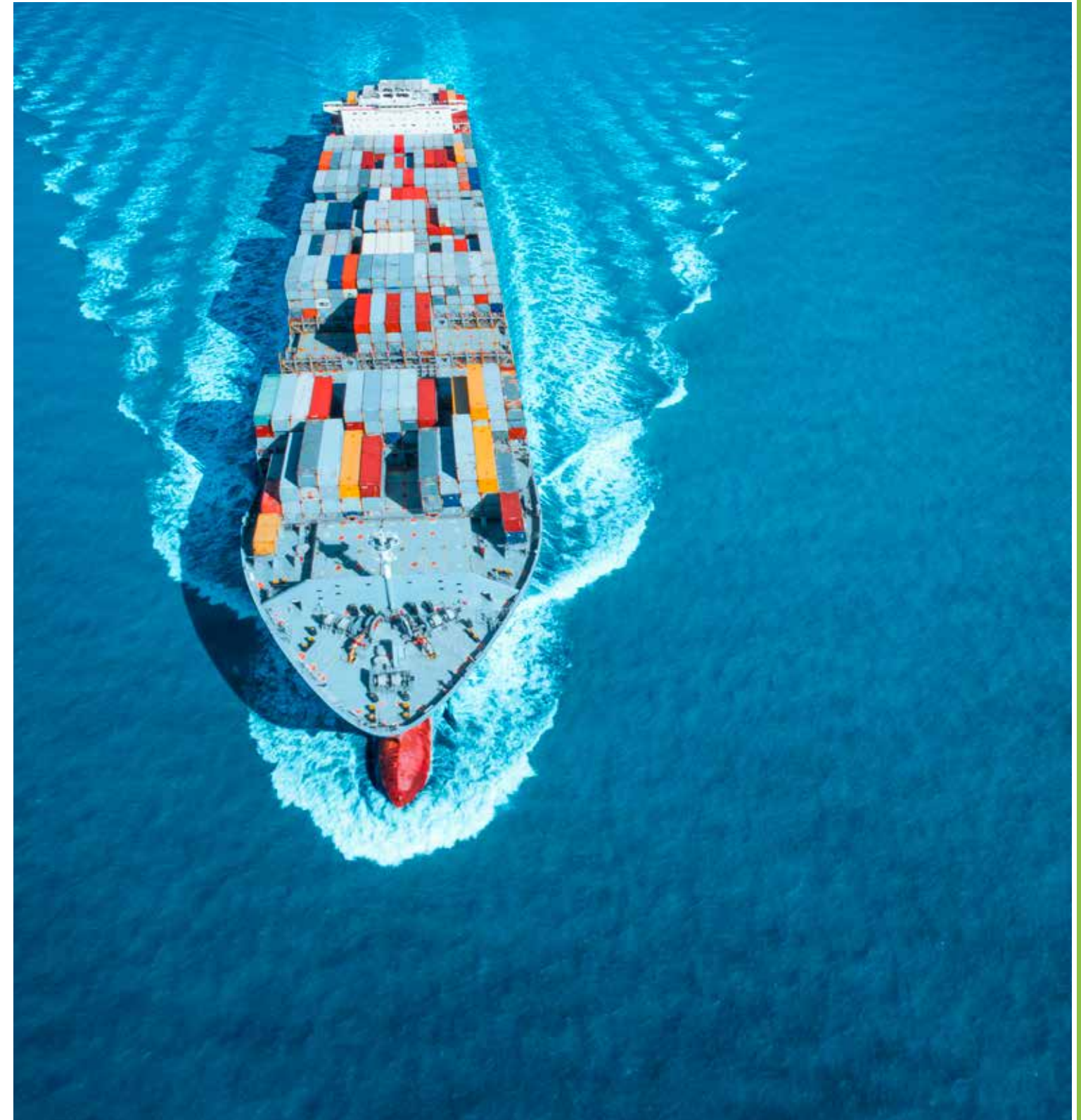
Archroma communicates to, and expects its vendors to share its commitment towards ethical business practices, human rights and labor standards, anti-corruption and not to allow modern slavery and child labor. All suppliers have been screened qualitatively and excluded from business relation in case of obvious non-compliance.

Furthermore, Archroma requests all material suppliers to present valid certification from EcoVadis, the partner of choice of the “Together for Sustainability” initiative. The EcoVadis methodology follows recognized international sustainability standards.

Having started the roll-out of EcoVadis in FY2018, Archroma has already achieved a coverage of 40% of its material spend with valid EcoVadis certificates during the reported period. The Archroma procurement team works closely with all suppliers to onboard to EcoVadis, and to achieve continuous improvement.

In addition, the Archroma procurement team goes beyond EcoVadis certification by performing its own research, market intelligence and supplier audits, in order to derive the Archroma Sustainable Sourcing Rating as risk assessment for each supplier.

**Vendors with insufficient audit results are approached for corrective action.**







# CLIMATE CHANGE

Greenhouse gas (GHG) emission management is included in our overall environmental management process. Results per production site are consolidated into tons of carbon dioxide equivalent (tCO<sub>2</sub>e) in both absolute amounts and in terms of intensity (emission per unit of production). Monthly data is gathered centrally from our production sites and forms the basis for monitoring against, and if necessary corrective actions for, the annual targets. Conversion and emission factors used for the report were in consultation with the Greenhouse Gas Protocol developed by World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). As the GHG emissions are directly related to energy consumption, operative targets are expressed in energy intensity (GJ/t produced). Further details can be found in this report under “Resource Efficiency”.



**Danielle Blomert, Vice President, Strategic Initiatives & Sustainability**  
*Sustainability has been at the core of what we do since Archroma’s inception. Our approach is to embed it within in our organization and our mindset, rather than to make “sustainability” additive to what we do. In this way we see positive behavioral change happening daily, and how we think changes how we act. The results? I think we are making significant progress in inviting our industry partners to join the Archroma Way to a Sustainable World, because it’s our nature.*

For this reporting period we have not considered non-production sites (offices, off-site warehousing etc.). We will be initiating measure to include these metrics in future reports, although our expectation is that the overall impact on our total emissions will be relatively low.

Scope 1 and scope 2 GHG emissions for FY2019 amounted to 88 985 tCO<sub>2</sub>e. This represents a 4.2% decrease compared to FY2018 (99 576 tCO<sub>2</sub>e).

Scope 1 emissions amount to 41 602 tCO<sub>2</sub>e, representing 46.7% of the total scope 1 & scope 2 emissions. Of this amount, 38 268 tCO<sub>2</sub>e (92%) is derived from the combustion of natural gas, the remainder consisting of diesel and heating oil. None of the Archroma sites use coal as a fuel for on-site generation of energy.

Scope 2 emissions amount to 47 383 tCO<sub>2</sub>e, representing 53.3% of the total scope 1 & 2 emissions. Of this amount, 38 753 tCO<sub>2</sub>e (81.8%) is derived from purchased electricity, the remainder 8 630 tCO<sub>2</sub>e from purchased steam.

Our target is to achieve carbon neutrality for scope 1 and scope 2 emissions in 2023, defining intermediate annual targets to reduce emission levels, with the objective to off-set the remaining absolute GHG emissions.

Scope 3 emissions have not been calculated or estimated for the reporting period, due to the complexity of raw material supply distributed between global and local vendors to the sites and the distribution to the industries which we serve. This will be an area of focus for the future and positively impact the results.

For the required fossil fuel based emission factors, we have used the 2019 Defra Greenhouse Gas Emission Factors, developed by the UK Department for Business, Energy & Industrial Strategy and the UK Department for Environment, Food and Rural Affairs. Electricity emissions factors have been determined from the data supplied by the respective energy provider.





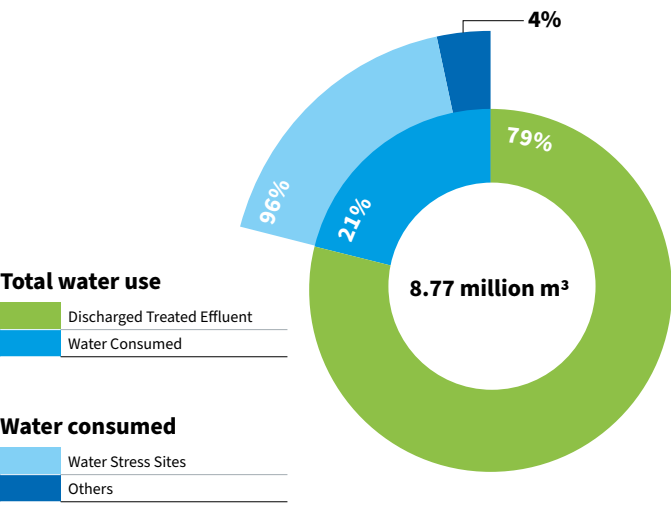
# WASTEWATER & WASTE

Water discharge into open watercourses is an important topic regarding environmental pollution. It is a basic requirement that manufacturing industry should discharge the water back into the ecosystem without additional pollution load. How efficiently we manage and treat our effluent is of concern to all stakeholders, especially regarding hazardous waste – and as such this is reported under a separate topic “Waste”. Any significant spills would also be reported under this topic.

We also have an opportunity to report on the positive influence of our technology systems on downstream customers’ wastewater discharge.

All production plants have, or have access to, wastewater treatment facilities that use physical and biochemical treatment processes. All discharged treated wastewater is in compliance with the relevant standard limits and mass loading requirements as stipulated by local environmental authorities.

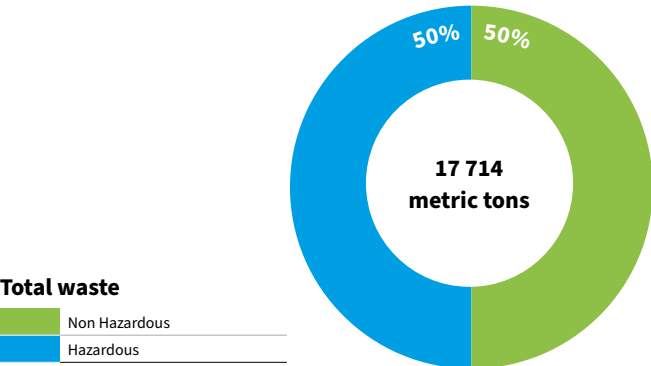
During the reporting period, Archroma discharged a total of 6.88 million m3 of water. 83% of this was discharged to surface water after suitable treatment to ensure conformity to the local requirements. The remainder is discharged to third party effluent treatment sites for further processing before being discharged to surface water. The total discharge represents 78% of total water withdrawn for operations.



There were no incidents of significant spills in the reporting period. There were no cases of any water bodies/habitats significantly affected by water discharges and/or runoff in the reporting period.

Solid/semi-solid waste generation - including any waste generated from off-specification production - and disposal is an ongoing topic of concern. Hazardous substances classification and management of adequate disposal routes is of critical concern.

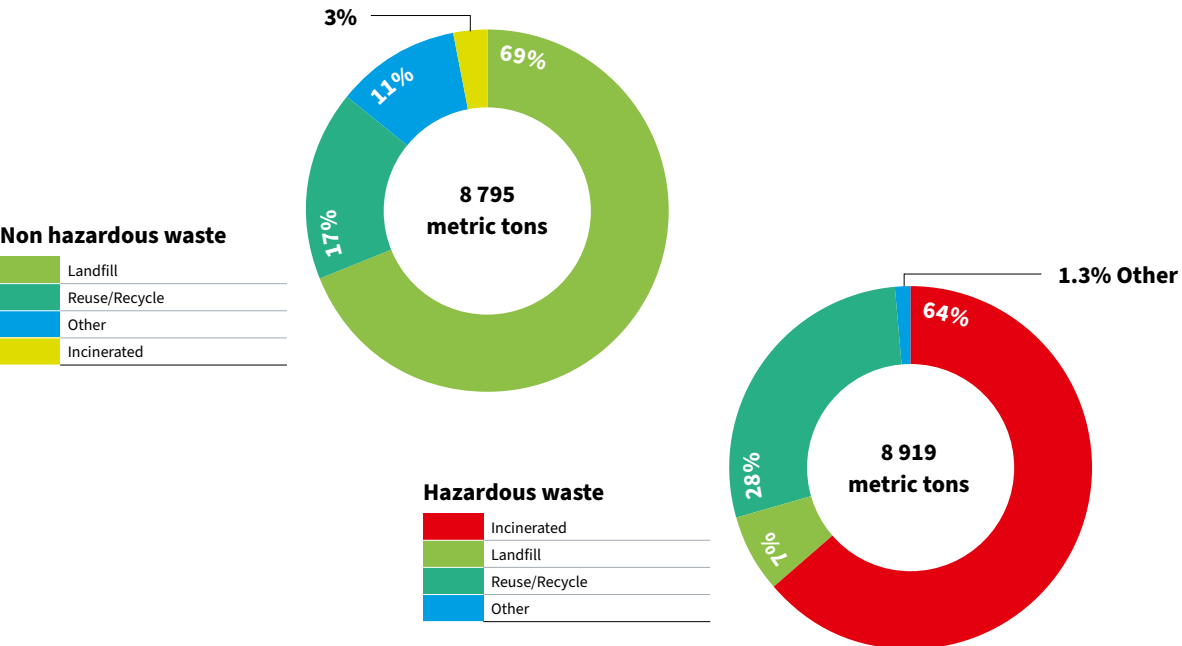
Waste management forms a part of the overall Archroma Environmental Safety Management process. The majority of waste is generated as a result of the intrinsic chemical manufacturing processes and their specific process yields, raw material packaging materials and residues from on-site effluent treatment plants. Wherever possible waste is analyzed whether it can be recovered and/or reused and recycled. The hazardous classification of waste, and resultant disposal methods, is made according to the specific national regulations governing the production site. There was no significant transboundary transport of hazardous waste.



The total waste generated during FY2019 was 17 714 metric tons, of which 50% (8 919 metric tons) was classified as hazardous.

Of the total waste 37% (6 463 metric tons) was disposed by incineration, 43% (7 736 metric tons) was disposed to landfill, and 20% (3 515 metric tons) reused, recovered or recycled.

Of the hazardous waste, 64% (5 722 metric tons) was disposed by incineration. An amount of hazardous waste, 7% (621 metric tons) was disposed in appropriately licensed landfill sites.







# BIODIVERSITY

The potential impact of our activities on biodiversity in our various locations is important to us and other stakeholders such as NGOs. None of our production sites are within biodiversity areas, as identified by the World Database of Key Biodiversity Areas (<http://www.keybiodiversityareas.org/home>).

However we are sensitive to biodiversity and as such we know that 5 Archroma sites are within a 10 kilometer proximity to biodiversity sites:

| Production Site             | Key Biodiversity Area      |
|-----------------------------|----------------------------|
| La Motte, France            | Forêt de Compiègne         |
| El Prat de Llobregat, Spain | Llobregat Delta            |
| Ameriya, Egypt              | Wadi El Natrun             |
| Roha, India                 | Phansad Wildlife Sanctuary |
| Bangpoo, Thailand           | Inner Gulf of Thailand     |

In the reporting period there were no incidents or activities at our sites that could pose a threat to any endangered species, and therefore no additional prevention or remediation activities have been initiated. In the interim we are extra vigilant to ensure that no such incidents or activities occur at our any of our sites.

## Specific projects completed in FY2019



**Rongwen Wang**  
Head of Operations,  
Tianjin, China

In FY2019, we commissioned two projects at our Tianjin site.

In the first one, we looked to reduce the impact of our sludge incineration. Our advanced wastewater treatment system ensures that our treated effluent is discharged well within the local wastewater standards. However, this process produces a large amount of “bio sludge” which has a moisture content of up to 60%.

The sludge is sent for local incineration in order to ensure any potentially harmful substances are destroyed. However, this requires high energy consumption due to the moisture content, and we looked to see if this energy could be reduced, as well as the associated carbon emissions. This resulted in the installation of a sludge drier in FY2019, which reduces the moisture content down to 30%, meaning that less energy is required for incineration.

In the second project, we invested in process control redundancy, in addition to our current Process Control System (PCS), which controls all aspects of plant operation, from raw material input, chemical synthesis to finished product packaging. In order to do this, we have installed an isolated secondary system, the Safe Instrument System (SIS). This is to ensure that in the event of an “emergency response” affecting the PCS, the secondary system can kick in to ensure that critical operations remain in control and we can maintain all safety protocols. Safety first is our top priority and a philosophy in our operations.



**Francisco Rossi**  
Head of Operations,  
Resende, Brazil

In the search to improve our safety performance at our site, we identified that we could augment the existing programs with elements built around general safety behavior, with a focus on assuring the safety culture of our local team towards ZERO accidents.

We designed and ran “SafeStart” a program with concepts that can be applied at the workplace, at home and when travelling.

The fundamental principle of SafeStart is that individual safety awareness in the most efficient way to change our daily behavior and prevent accidents in our Archroma family, whether at home or at work. This program is being implemented in all sites in Brazil.”



**Suriya Vithayatsomphon**  
Head of Operations  
Bangpoo, Thailand

“In Bangpoo, Thailand, we decided to replace our old centrifugal fire pump with a new vertical turbine fire pump, to enhance fire protection performance and prevent adverse environmental impacts. The new vertical turbine fire pump does not need priming and can be adaptable to underground storage tank in accordance with the National Fire Protection Agency 20 standard. Start-up is instantaneous and requires no supervision. It also allows more precise control and low maintenance.”

# IMPACT STUDY: APPRETAN® NTR

As explained earlier in this report, our purpose and core values, “The Archroma Way to a Sustainable World”, are based on 3 pillars: Safety, efficiency and enhanced value.

In particular, we design our innovations in line with this philosophy. A good illustration of this is Appretan® NTR, a coating binder range based on renewable natural ingredients for applications such as tea bags, coffee filters or capsules.

About one third of Appretan® NTR’s active content is based on a polysaccharide from renewable raw materials, allowing a reduction in the use of fossil fuel-based resources without compromising performance.

Appretan® NTR complies with the stringent BfR XXXVI/1 food contact regulation standard, whilst providing excellent mechanical properties even in boiling water.

**‘SAFE’ WITH:**  
Appretan® NTR



SAFE

\* None of the component being used in the manufacturing process contains formaldehyde, however trace impurities of formaldehyde cannot be excluded.





## INTRODUCING NATURE-BASED POLYMERS FOR FOOD CONTACT

Consumers aspire to goods that bring them function, beauty ... and meaning – goods that are made in a more sustainable and responsible way. When it comes to products that contain food, we all want that extra level of protection that will keep us and our loved ones safe.

With that in mind, Archroma developed **Appretan® NTR**, a break-through coating binder range based on renewable natural ingredients for applications such as tea bags, coffee filters or capsules.

About one third of **Appretan® NTR**'s active content is based on a polysaccharide from renewable raw materials, allowing a reduction in the use of fossil fuel based resources without compromising performance.



**Appretan® NTR** complies with the stringent BfR XXXVI/1 food contact regulation standard, whilst providing excellent mechanical properties as such and in boiling water.

- Acrylic copolymer containing 1/3 of renewable raw materials
- Hydrophobic and high film formation
- Formaldehyde free\*
- Non-biocidal
- APEO free



\* None of the component being used in the manufacturing process contains formaldehyde, however trace impurities of formaldehyde cannot be excluded.

5 /

## HARNESSING THE POWER OF NATURE INTO YOUR APPLICATION

The use of bio-based raw materials brings into the **Appretan® NTR** polymers a constellation of reactive groups that can build, when combined with suitable crosslinkers, strong dimensional networks, providing to the system a “thermoset like” property.


That can be required in highly demanding applications where mechanical properties at high temperature are state of the art (PES spunbond for roofing, abrasive material...)

## CROSSLINKING SOLUTIONS FOR THE PERFECT COMBINATION

Build-up the desired aqueous bio-based polymer with high crosslinking capability with **Appretan® NTR range liq** by creating external crosslinking with:

- **Cartaretin® F liq**, formaldehyde free\* for higher strength and BfR XXXVI/1 standard compliant
- **Arkophob® DAN New liq**, formaldehyde free\* with low unblocking temperature and enhanced formulations compatibility and stability
- **Arkophob® XLR liq** and **Luprintol® Fixing Agent NF liq**, formaldehyde free\* with high reactivity and low cure profile
- **Appretan® PCA liq**, formaldehyde free\* providing strong tridimensional network by esterification
- **Cassurit® LFC liq**, low formaldehyde (non H350 classified) and food contact compliant

The use of selected polymer dispersions, crosslinkers, and additives in a perfectly balanced recipe, adapted to the customer materials and requirements will be the key to success.



\* None of the component being used in the manufacturing process contains formaldehyde, however trace impurities of formaldehyde cannot be excluded.

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# IMPACT STUDY: BRIGHT N' SAFE

“The Archroma Way to a Sustainable World” is also our guiding principle for creating solution systems.

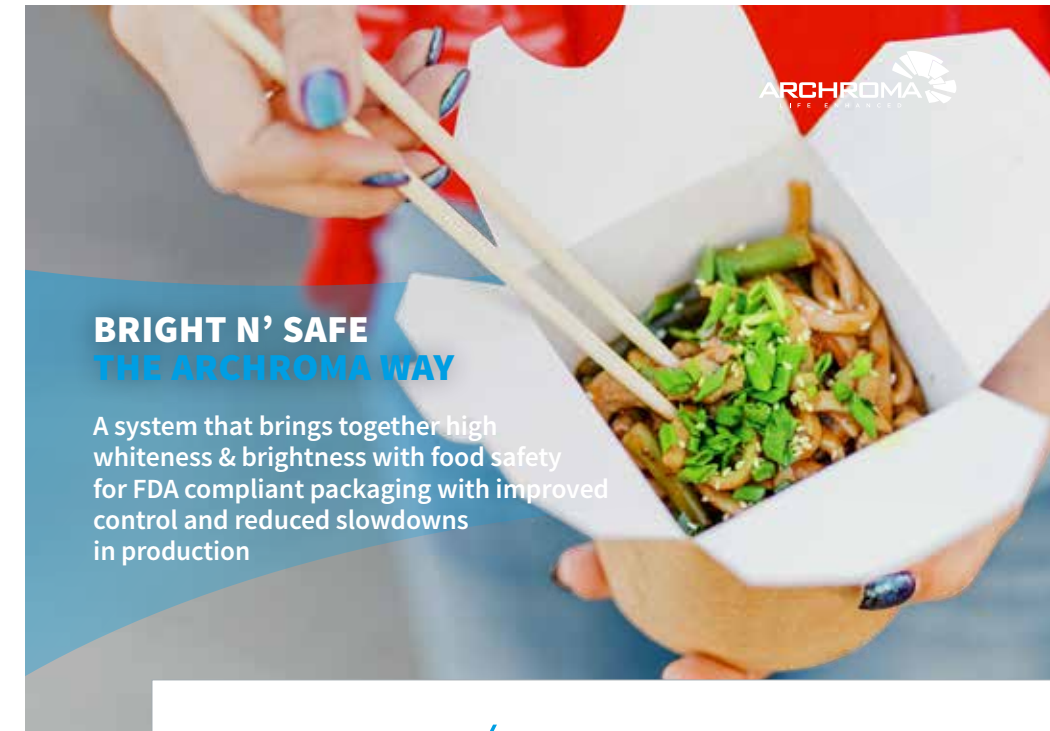
A good illustration of this, when it comes to the SAFE pillar of The Archroma Way, is BRIGHT N' SAFE, a system developed to bring together high whiteness and brightness with food safety required for FDA compliant packaging.

The system is based on another innovation launched by Archroma in FY2019: Leucophor® AFCN, an FDA-approved OBA aimed for food contact packaging and paper.

## ‘SAFE’ WITH: BRIGHT N’ SAFE System



SAFE



## BRIGHT N’ SAFE THE ARCHROMA WAY

A system that brings together high whiteness & brightness with food safety for FDA compliant packaging with improved control and reduced slowdowns in production

## BRIGHT N’ SAFE / Main benefits in a nutshell

- BfR and FDA food contact compliant
- REACH registered
- Products used in line with Nordic Swan & EU-Flower requirements
- Improved production efficiency
- Less waste/broke due to increased process control giving cost savings
- Highly concentrated products allowing less transport and reduced ecological footprint
- The combination of disulphonated and tetrasulphonated optical brighteners allows the highest possible level of whiteness & brightness with FDA approval

‘SAFE’ WITH:  
Archroma’s  
BRIGHT  
N’ SAFE  
System



SAFE

‘EFFICIENT’ WITH:  
Archroma’s BRIGHT N’ SAFE System  
compared to benchmark  
classical pigment printing package



EFFICIENT

‘ENHANCED’ WITH:  
Archroma’s BRIGHT N’ SAFE System



ENHANCED

## BRIGHT N’ SAFE / A system that brings together high whiteness & brightness with food safety for FDA compliant packaging with improved control and reduced slowdowns in production

**Leucophor® AFCN liq**  
FDA approved disulphonated  
optical brightener

- Highest whiteness with FDA food contact approval
- High strength product

**Leucophor® UO/UKO liq**  
Tetrasulphonated optical  
brightener

- FDA approved
- Universal application



**Cartaren® & Cartasol®**  
Tinting colorants

- Shade control with blue & violet
- For high performance Cartaren® is recommended
- For cost-controlled whiteness Cartasol® is recommended





# THE **ARCHROMA** WAY TO A **SUSTAINABLE** WORLD

IT'S OUR NATURE TO RETHINK SUSTAINABLE MANUFACTURING.



## 2023 TARGETS EFFICIENT

### Resource efficiency

#### Only using what we must

- -15% Energy per metric ton (mt) produced
- -10% Water per metric ton (mt) produced
- -25% Solid waste per metric ton (mt) produced

### Customer resource optimization

#### Making our industry sustainable

- 35% Sales from "Sustainable Collections"

# EFFICIENT

INNOVATING PRODUCTION PROCESSES THAT  
MINIMIZE RESOURCE USE AND MAXIMIZE  
PRODUCTIVITY, BOTH IN OUR  
MANUFACTURING, AS WELL AS IN THE  
VALUE CHAINS IN WHICH WE OPERATE.





# RESOURCE EFFICIENCY

In order to distinguish between our own footprint responsibility and our influence on the value chain, the topic of resource efficiency has been split into internal and external – see “Resource optimization” below. Water discharge is dealt with under a separate topic due to its importance to environmental pollution. External influence can only be an estimation based on sales data and relative performance of our systems vs. an industry “standard”.

**Overall production in FY2019 decreased by 6.8% to 446 000 metric tons (mt) in comparison to the previous reporting period.**



# ENERGY

**Andreas Wickli, Senior Vice President, Operations**

*Increasing the efficiency of our own production has a positive impact on not only our economic sustainability, but also our environmental sustainability. Withdrawing less water from our environment and putting it back in a clean and sanitary condition is one of our prime responsibilities. Buying electricity from renewable sources is another good way to reduce our CO2 footprint but also to make our own produced products more sustainable.*

Energy is required for the production and running infrastructure. The sources of energy are derived from the combustion of fossil fuels to generate heat, and electricity to run the manufacturing equipment and associated services, such as IT infrastructure and cooling apparatus.

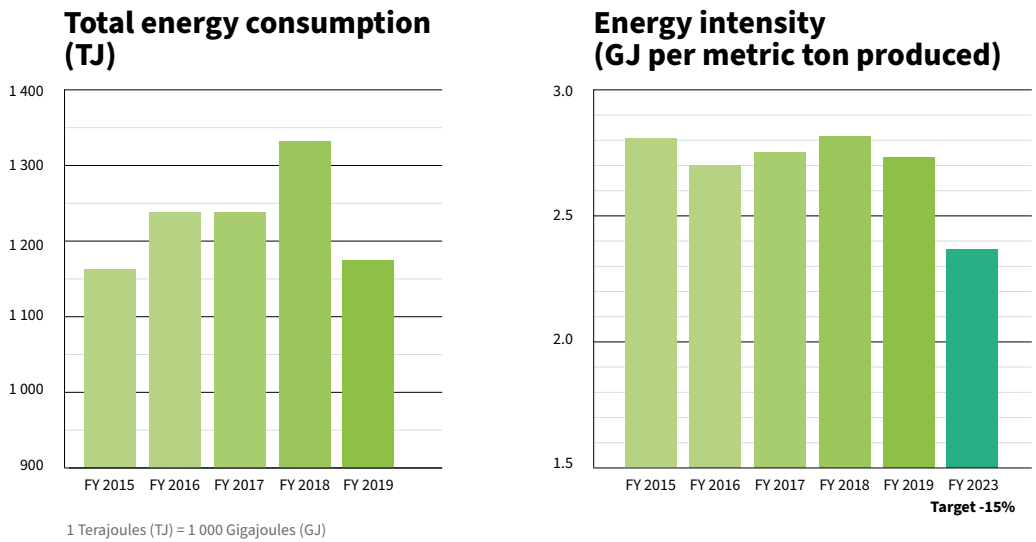
The main fossil fuels are natural gas, diesel and heating oils, none of the production sites use coal as an energy source. Electricity and, in some cases, steam is purchased from third parties.

In order to calculate the quantity of energy consumed in our production processes, amounts of fuel, electricity and steam are converted into gigajoules of energy using conversion factors available in the GHG protocol, as previously described in this report.

Energy efficiencies are closely monitored within the Environmental Management process, with annual targets set according to forecasted production plans. Individual production processes are analyzed, with respect to their energy requirements, and resultant process improvements devised in order to reduce the energy intensity, with associated annual targets which may be site and/or product specific.

The total amount of energy consumed by Archroma for FY2019 was 1 146 TJ, which represents a 15% decrease in comparison to FY2018. This equates to an average of 2.56 GJ per tonne of production, a 9% decrease over the previous reporting period.

**Our medium term target for 2023 will be to reduce energy intensity to 2.39 GJ per ton of production.**



# WATER

As mentioned previously, water is a critical resource for Archroma during chemical manufacture. It is primarily used as a processing aid in cooling, cleaning and air scrubbing/washing, and as a raw material in the production of commercial liquid based formulations, such as liquid dyes, optical brightening agents and polymeric dispersions, and also evaporated in the production of dry formulations.

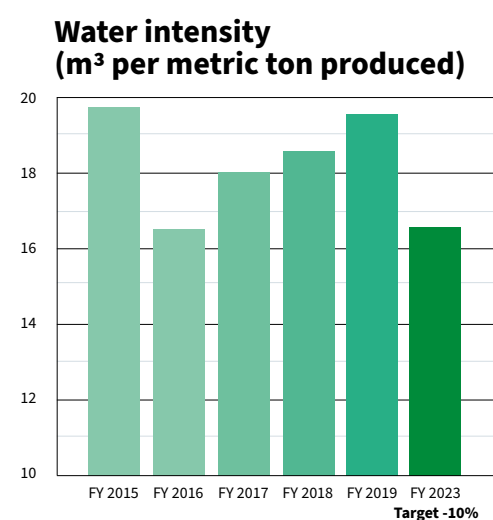
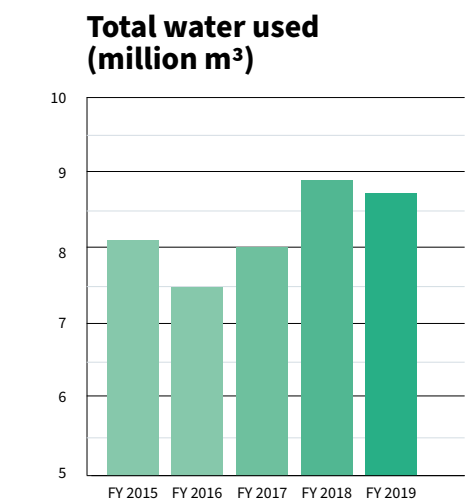
Water use is closely monitored within the Environmental Management process.

From a total withdrawal perspective, the water intensity use during the reporting period equates to an average of 19.63 m³ per ton of production. This represents a 6.4% increase over the previous reporting period.

Our medium term target for 2023 is to reduce the water intensity to 16.6 m³ per ton of production. In those sites where the water intensity is high, water-cooling, where the water is withdrawn, used and discharged back into water courses unaltered, is used. These sites are not located in water stressed areas.

From a water consumption perspective, that is water predominantly being used as a raw material, the intensity is 4.22 m³ per ton of production. This figure will vary dependent upon the types of products being produced whether liquids or dry formulations.

**Our medium term target for 2023 will be to reduce water intensity to 16.6 m³ per ton of production.**



“IF YOU THINK YOU CAN DO A THING OR THINK YOU CAN’T DO A THING, YOU’RE RIGHT. – HENRY FORD”

**Sandro Santos acts as something of a guiding light at Archroma. Having worked at the company for 18 years, he has experienced it all – the challenging times and changes, and has learned what it takes to keep a team going.**

Santos currently holds the position of Project Manager for the company’s Operational Excellence at the site of Resende, near Rio de Janeiro, Brazil, where he also supports with the chemical plant production. He began his journey with the company as Process Engineer for the Rioquima site, where he eventually became Head of Operations. There he gained expertise in sulfur dye production and developed his leadership skills, forming a strong bond with his team and superiors.

Some time after Clariant became Archroma, Santos faced his biggest challenge when the Rioquima site was transferred to Resende. After leading a devoted, hard-working team of 50 employees, it was difficult for him to leave a site to which he had grown extremely attached. With the support of his family, managers and colleagues, he successfully moved on from the experience, which helped him to grow personally and professionally. In his new

role at the Resende site, he has the opportunity to work with different teams with a variety of skills, allowing him to expand his knowledge and further improve his ability to cooperate.

Santos loves to travel, which also contributes to his ability to understand people of different cultures and backgrounds – a key asset at a global company like Archroma. And like a true team player, he’s a huge soccer fan who enjoys kicking the ball around with his colleagues.

Nothing exemplifies Santos’ persevering spirit more than his favorite quote from Henry Ford: “If you think you can do a thing or think you can’t do a thing, you’re right.”

As Sandro puts it: “Being a leader means being able to be your own driving force, and this sentence by Henry Ford has been a great inspiration for me to do so, especially in Archroma where challenging the status quo is part of the company’s very DNA”.



SANDRO SANTOS



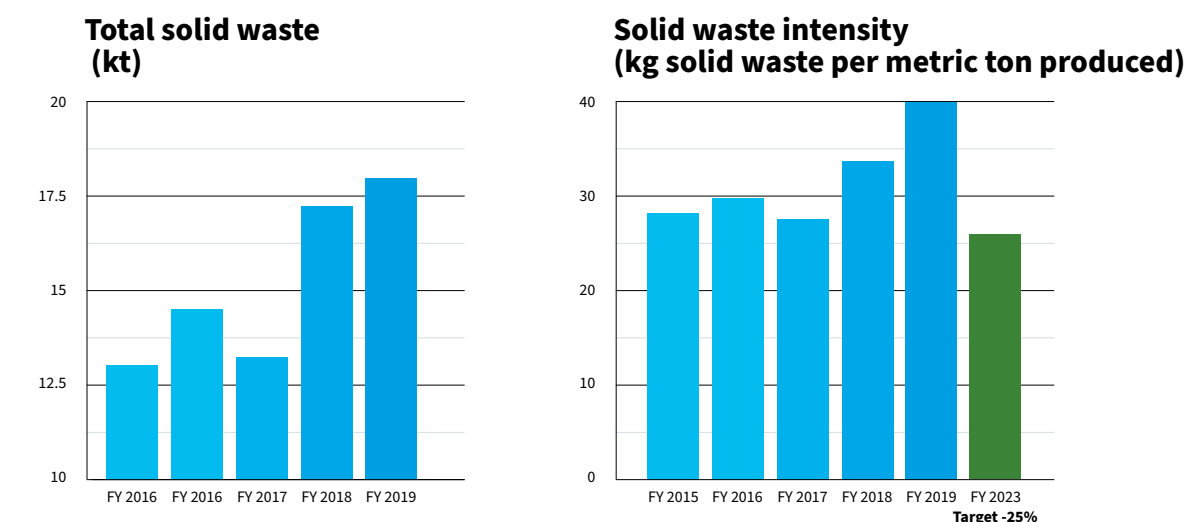
# WASTE

Waste generated during chemical manufacture is directly related to the type of chemical synthesis employed. The more reactive the chemical process, the higher the chemical yields tend to be and the lower the generated resultant waste. Wherever possible waste is avoided, recovered and reused as a function of improving process efficiencies. However, in some instances, waste, both hazardous and non-hazardous, is generated which cannot be recovered and reused and has to be disposed of in a suitable manner, as has been reported previously.

By using the “atom economy” within the 12 "Principles of Green Chemistry" (see page 32), processes are being continually optimized to reduce waste and increase yields. This is normally achieved by modifying production processes to the best available chemical manufacturing, often these improvements are as a result of internal projects driven from our chemical process technology centers of excellence.

Our total solid waste generated in FY2019 was 17.7 Ktons. This represents an intensity of 40 kg per ton of production.

**Our medium term target for 2023 is to reduce the waste intensity to 28 kg per ton of production.**



“THERE ARE NO LIMITS TO WHAT YOU CAN ACCOMPLISH, EXCEPT THE LIMITS YOU PLACE ON YOUR OWN THINKING.”

**For the decade that Arshad Mehmood has been at Archroma, he has been a poster child for the idea that passion begets success.**

Arshad says he is proud to have joined Clariant in 2009, and his enthusiasm for his work has propelled him forward both personally and professionally as the company has evolved into Archroma. He began as Chemicals Production Manager at the Jamshoro site in Pakistan, and has since moved up the career ladder to become the country’s Head of Business Development and Head of Product Stewardship.

Arshad has cherished the opportunity to work with different teams of varying skillsets throughout his time at Archroma, and he enjoys expanding his knowledge at every step. He is always eager to tackle new responsibilities. Challenges, says Arshad, are just a means to further polish and develop one’s skills, and he has always found them to be one of the most compelling facets of his job.

It’s no surprise that Arshad lives by the optimistic and forward-thinking words of Brian Tracy mentioned here above.

Luckily, Archroma is the type of place that encourages exactly this type of limitless inspiration.

What Arshad appreciates most about Archroma is that it has a culture built on efficiency that nevertheless values each individual as a prized member of the team. He especially likes the fact that Archroma recognizes achievements, no matter how significant, and motivates its employees to take advantage of every new opportunity for self-growth.



ARSHAD MEHMOOD



# RESOURCE OPTIMIZATION DOWN THE VALUE CHAIN

At Archroma, our efforts to reduce resource requirements and reduce both our direct and indirect impacts start with our innovation process, focused on identifying problems to solve and opportunities to support our mission to make the industries that we serve more sustainable. This is more than an altruistic effort to save the planet, it is a material issue to sustain our business. If we are not continually working to reduce our indirect impacts and help our downstream stakeholders conserve valuable resources, our business opportunities will vanish along with the clean water and inexpensive energy necessary to support our industry. These efforts require a management approach to innovation that places value on improving indirect impacts, minimizing or eliminating toxicity, and improving resource efficiency through effective collaboration and stakeholder engagement.



## Marcos Furrer, Chief Marketing Officer & Head of Innovation

*With the climate crisis being all over the news, we are focusing to help our entire value chain meet these challenges; our system solutions focus on reducing water, energy, time and also the overall total production cost. We have redirected our innovation, not only to focus on these reductions but also to address additional industry needs, for example towards renewable raw materials. In addition we continue to minimize restricted substances in our products, and ensure transparency, so that our customers can choose with confidence, knowing that the final consumer is safe.*

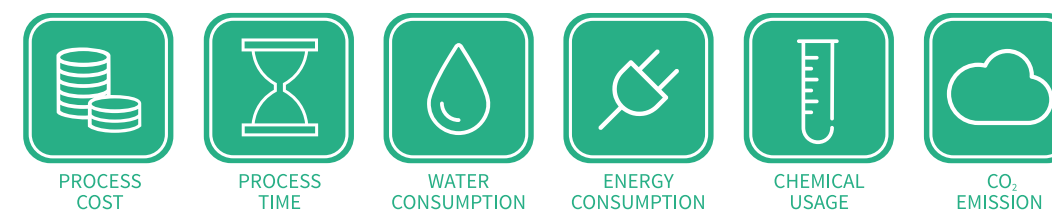
As we have previously reported, our primary focus is on safety. Our second focus for our innovation efforts is on efficiency, “It’s our nature to rethink sustainable manufacturing”. The industries we serve rely on huge amounts of clean fresh water and energy to make their products. As these valuable resources become scarce and more expensive, we must help our customers find ways to reduce water and energy consumption, and to improve the quality of their effluents and emissions. For water, this is truly considering all of our interactions with water as a shared resource, and helping our industry ensure that we can maintain and grow our level of production to meet the needs of the growing population.

Through chemical innovation, we are able to identify marginal gains that add up to significant resource savings for our downstream customers. As these gains become more difficult to realize in a single product, we are finding ways to innovate by combining efficient products into systems, which become even more effective for resource reduction when they are used together. In some cases, this system approach is also enabling a reduction in the need for commodity chemicals like salt and caustic soda and this is greatly improving the quality of the effluents that are discharged by our customers.

Archroma has created the award-winning ONE WAY Process Simulator to quantify these reductions in impacts. It can be used in a mill to define the processes they use by capturing very detailed information about their production capabilities and their costs for key resource inputs. We can then calculate the potential savings by converting to a more efficient chemical product or system and a more efficient process of applying it. ONE WAY is designed to report both the total resource savings in liters of water or joules of energy, and can also calculate critical business metrics like savings in cost, chemical use, and production time. The ONE WAY tool has been an innovation in its own right, but has also helped us to measure and quantify the indirect impacts of our innovation efforts and to communicate these to our customers and other stakeholders.

Due to the broad nature of our product range and customer base, it may be difficult to calculate all of our indirect impacts, but the ONE WAY tool allows us to quantify what is possible with a specific technology, and then to estimate the overall impact of that technology based on how much we have sold. In the future, this methodology could be used to set targets and expectations for our overall indirect impacts and resource savings.

The results made with the ONE WAY Process Simulator are clearly communicated in the form of a ONE WAY Score Card as illustrated below:



**As demonstrated by ONE WAY**

The ONE WAY Process Simulator has been available to textile manufacturers since 2012, and is currently under development for our customers in the packaging & paper industry.



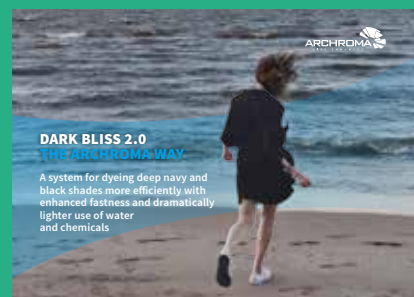


# IMPACT STUDY: COTTON KNIT SYSTEM SUITE

As explained earlier in this report, our purpose and core values, “The Archroma Way to a Sustainable World”, are based on 3 pillars: Safety, efficiency and enhanced value.

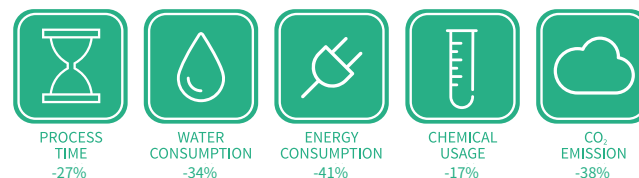
When it comes to the EFFICIENT pillar, we strive to create savings that will benefit both the planet, through the realized resource savings, and our customers, through the cost optimization derived from these savings.

A good illustration of this is our suite of systems specifically designed for the EFFICIENT production of cotton knits. With these systems, producers are able to significantly save time, water, energy and reduce the CO<sub>2</sub> impact. The three systems in the suite are aimed at medium to deep shades (DEEP DIVE); blacks and navies (DARK BLISS) and white knitted cotton fabrics (WHITE WATER).

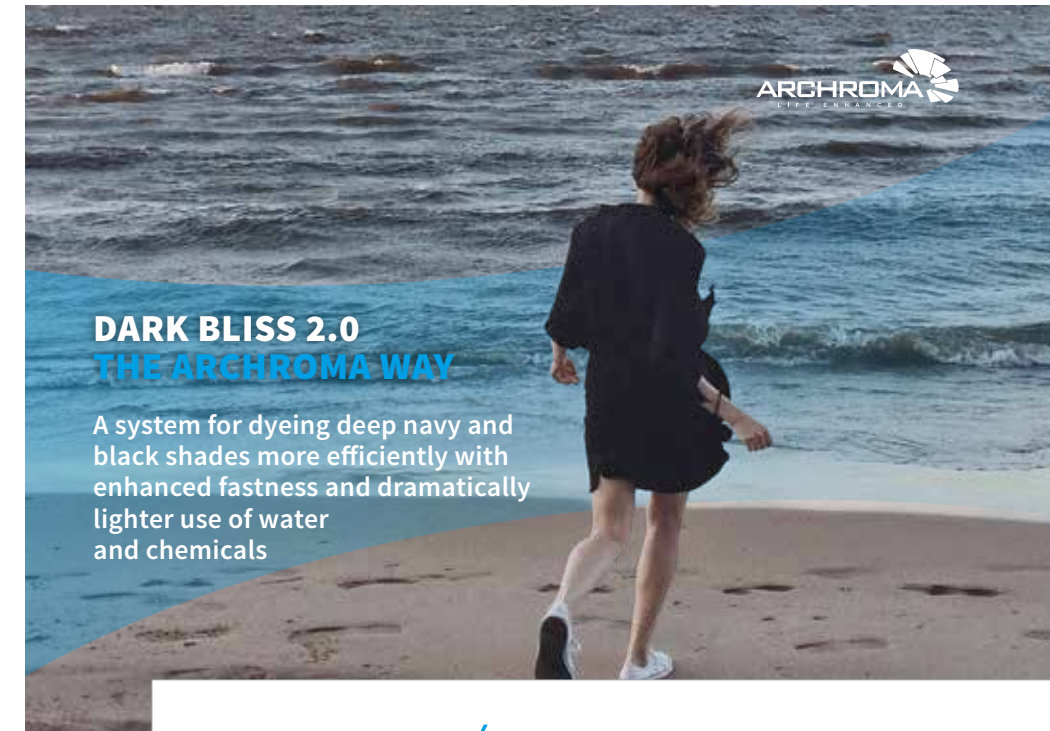


If we dive deeper in one of the three systems, DARK BLISS for instance, we can see the substantial savings created in time, water, and energy – leading to a significant reduction in CO<sub>2</sub> emission:

**‘EFFICIENT’ WITH:**  
DARK BLISS  
2.0 System



DARK BLISS 2.0, compared to benchmark exhaust process for 100% CO substrates at LR 6.1



## DARK BLISS 2.0 / Main benefits in a nutshell

- Safe products from a reliable global partner who applies international safety standards
- Increases profitability through lower processing and operating costs
- Differentiation with improved resource utilization for brands that demand and drive sustainable production
- A short and robust system approach:
  - Right first time productivity
  - Less pilling due to reduced mechanical abrasion
  - Less water & energy consumption
  - Dry and wet rubbing fastness improvement
  - Shorter production process allows for 290 additional batches/year

**‘SAFE’ WITH:**  
Archroma’s DARK BLISS 2.0



SAFE

**‘EFFICIENT’ WITH:**  
Archroma’s DARK BLISS 2.0, compared to benchmark exhaust process for 100% CO substrates at LR 6.1



CASE STUDY: Chinese customer, Jet dyeing machine, 100% cotton knit, LR 6.1

## DARK BLISS 2.0 / A system for dyeing deep navy and black shades more efficiently with enhanced fastness and dramatically lighter use of water and chemicals

### Kieralon® UH liq

#### Neutral scouring of cotton

- Excellent emulsifying power
- Prevents impurities from redepositing, on the substrate, avoiding spots and stains
- High wetting power enables rapid penetration of greige goods

### Optifix® RUB New liq & Siligen® SIH-S New liq

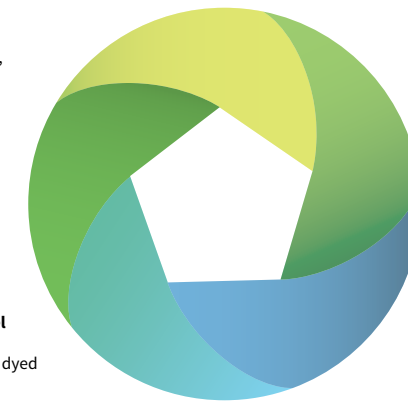
#### Finishing for rub fastness improver and elegant hand feel

- Improves the dry and wet rub fastness properties of reactive dyed substrates, especially in deep shades
- Excellent hydrophilicity - soft handle

### Drimaren® Ultimate HD p & Cyclanon® XC-W New liq

#### Coloration reactive system

- Powerful build-up for deep shades
- Less dyes and chemicals required to achieve the desired shade
- Highly compatible to improve right-first-time
- Reduced coloristic cost - optimized recipe and dyeing procedure
- Fast and efficient removal of hydrolyzed dye
- Less washing baths
- Optimum fastness



# IMPACT STUDY: HOLD TIGHT

Another good illustration of how we create savings that benefit both the planet and our customers, is HOLD TIGHT, a system for improved fiber retention and bonding, to create paper that performs cycle after cycle while conserving our forests.

The HOLD TIGHT system will allow reduced water and energy consumption due to a higher retention of fiber and filler, as well as the possibility to use higher amounts of recycled fiber with similar strength in the production.

This means that a higher percentage of recycled material can be used instead of virgin fiber.

**'EFFICIENT' WITH:**  
HOLD TIGHT  
System



EFFICIENT

The ONE WAY Process Simulator is currently under development for our customers in the packaging & paper industry.



## HOLD TIGHT THE ARCHROMA WAY

A system for improved fiber retention and bonding to create paper that performs cycle after cycle – and to conserve our forests

### HOLD TIGHT / Main benefits in a nutshell

- Safe products from a reliable global partner who applies international safety standards
- High standards in environmental safety with EU Ecolabel and Blue Angel certificates
- Compliant to BfR food contact regulations and certified as being kosher and halal
- Reduced ingredients and complexity by removing the need for cationic starch and fixatives
- Reduced water & energy consumption due to a higher retention of fiber and filler
- Increased profitability through higher amounts of recycled fiber with similar strength

**'SAFE' WITH:**



SAFE

**'EFFICIENT' WITH:**



EFFICIENT

### HOLD TIGHT / A system for improved fiber retention and bonding to create paper that performs cycle after cycle – and to conserve our forests

#### Cartastrength® DST.03

##### Dry strength agent

- Replaces both starch and fixative
- Bonds with fibers to increase dry strength at values close to virgin fibers
- Allows energy and water savings

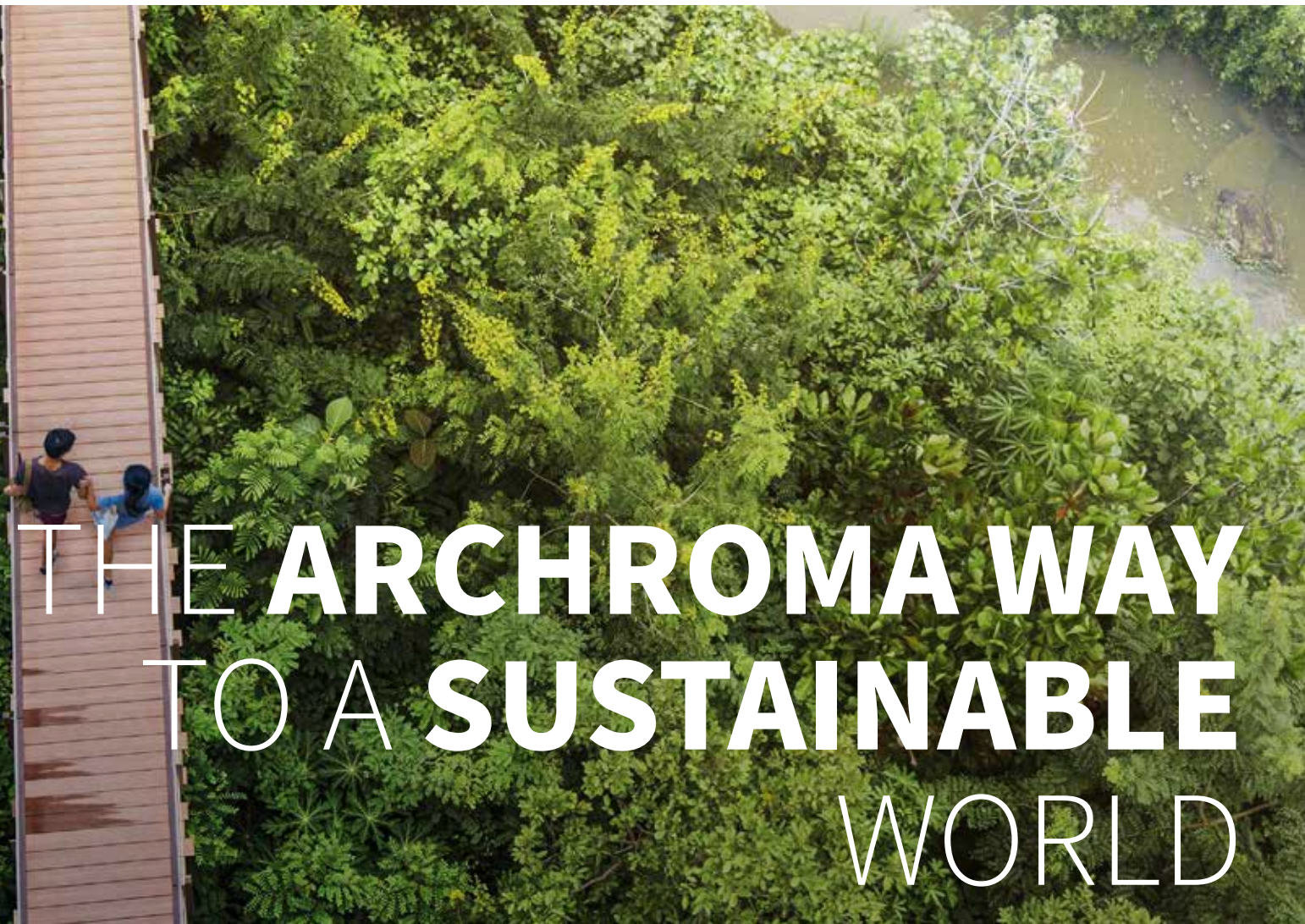
#### Cartastrength® ABL

##### Retention & dry strength booster

- Ensures fiber-to-fiber bonding and acts as bridge between fillers and fibers
- Enhances pulp retention and overall yield during production







# THE ARCHROMA WAY TO A SUSTAINABLE WORLD

IT'S OUR NATURE TO ADD ANOTHER LEVEL OF VALUE.

## 2023 TARGETS ENHANCED

### Diversity

#### More perspectives, more solutions

- 40% woman in management
- Maintain multicultural demographics

### Talent management

#### Investing in our family

- 90% employees attend Archroma academy modules

### Fair labor practice

#### A deeply satisfying job

- Less absenteeism
- Fewer voluntary resignations

# ENHANCED

ENHANCING ORGANIZATIONS IS CRITICAL.  
FOR ARCHROMA THIS MEANS INCREASING  
COMPETENCE LEVELS WITHIN OUR ORGANIZATION.  
FOR OUR STAKEHOLDERS, THIS MEANS DEVELOPING  
PROPOSITIONS WHICH GIVE ADDITIONAL VALUE TO  
ACHIEVE THEIR GOALS, FOR A LIFE ENHANCED.





# FAIR LABOR PRACTICE

## At Archroma, people are the core of our business.

We operate with the core belief that only by aligning personal and business goals can we achieve sustainable growth. This in turn helps us drive our core purpose of continuously challenging the status quo in the deep belief that we can make our industry sustainable.

Archroma fully supports and complies with the 1989 United Nations Convention of the Rights of the Child and the 1998 International Labor Organization Declaration on Fundamental Principles and Rights at Work. Archroma does not undertake any business with a company that uses forced or child labor.

Archroma recognizes the dignity, privacy and personal rights of all individuals; working together with various ethnic backgrounds, cultures, religions, ages, disabilities, races, sexual identity, worldview and gender. Archroma does not tolerate discrimination against anyone based on these characteristics or any other comparable offensive behavior. These principles extend to all employment decisions including recruiting, training, evaluation, promotion and reward.

Archroma also recognizes the freedom of association, and the right to collective representation and bargaining. Archroma operates in many countries worldwide and, as such, has an extremely diverse workforce.

Archroma does not tolerate any acts of harassment or bullying, whether done by an employee or non-employee, in any form, including physical actions, verbal or written remarks or visual depictions, or any unwelcoming behavior that has the purpose or effect of creating an intimidating, hostile or offensive work environment.

Our contracts of employment clearly state the terms and conditions of employment including remuneration and amount of paid leave. Company benefits, performance measurement processes, grievance and disciplinary procedures are communicated to each employee.

We ensure that our notice periods are in line with country legislative requirements/procedure for significant operational changes.

We actively work with our employee representative bodies in different sites to drive healthy employee- employer relations. Our employee representative bodies work very closely with the management teams to ensure that our workforce understands our culture and is engaged in productive work. We also discuss and sign collective bargaining agreements, where applicable, that help the employee representative bodies bring forward issues which are relevant and can be addressed in a systematic and a structured manner.

All changes to bargaining agreements, where applicable, are compliant with the local requirements related to notice periods for changes, consultation and fair negotiation employment practices.

Based on our current labor policies, type of operations and people working with us, Archroma does not foresee a high risk with respect to human rights violation.



**Simon Clementson, Senior Vice President, Human Resources**  
*We have a social contract with all of our direct and indirect partners and also with our colleagues, our Archroma family. Sustainability is a frequently used word and often seen as an imposition on an organization, taking second place to economic considerations. In Archroma, it's embedded in the way that we think throughout our company – and that is what makes the difference for us.*

Since its inception in October 2013, Archroma has set itself high labor practice standards throughout the entire employment cycle, from hire to exit.

## Archroma operates along three guiding principles

1. Global standards aiming for the same treatment for all employees wherever they are located.
2. Compliance with global and local regulations and best practice.
3. Compliant, open and transparent relations management with employee representative bodies.

To ensure that these guiding principles are enforced at all times, Archroma currently has:

- A Senior Vice President for Human Resources, responsible for setting direction in line with company strategy and ensuring fair HR and labor practice globally;
- Global policies and processes reinforced when adequate or required by local policies and processes;
- Approval processes to ensure appropriate level of control, up to the Leadership Team and Board of Directors, for hiring, developing, and exiting of employees, as well as compensation and benefits;
- Control and monitoring tools such as reports, analytical data, targets and benchmarks;
- Human Resource (HR) managers dedicated to each country who are accountable to ensure fair treatment at all stages of the employment cycle, compliance to local rules and regulations, as well as consistency of practice within and between the global and country framework;
- A global HR management system where the personnel and remuneration information related to Archroma employees is securely stored and accessible to monitor and control fairness across the organization.

Archroma employees are encouraged to raise questions and issues or signal a breach or incident that relates to their working conditions and treatment, and they are free to choose the way they feel the most comfortable to do so, either via the line manager, HR country managers or the works council, union or employee representatives of the country of location of the employees, or via the Compliance Officer who can be contacted anonymously and in a confidential manner for any inquiries required by the employee.

This right is guaranteed and protected by the Archroma Code of Conduct and Whistleblowing Policy, and all the above-mentioned communication channels are regularly used.

In particular, as a multinational company with 51 locations worldwide, Archroma is strongly attached to diversity as one of its core values, and the Archroma Code of Conduct clearly sets the expected compliance in this area.



Compensation and benefits

Archroma commits to provide competitive and fair compensation that includes all pay and benefits, providing a “Total Compensation” package consistent with the varied practices in different regions of the world. The employee package typically includes base pay and, as appropriate, variable pay. In order to support the group’s growth goals, the variable pay plans will make clear distinctions between high and low performance, resulting in different levels of pay-out.

All of our compensation and benefits for permanent and temporary employees are in line with local legislation.

Our family support policies include maternity and paternity benefits and provide additional leave over and above the stipulated leave entitlement by local law to ensure that employees can focus on their children and not have to make sacrifices between the needs of the workplace and home.

Archroma has two variable pay plans in place: The Archroma Group Incentive Plan (AGIP) for non-sales employees and the Archroma Sales Incentive Plan (ASIP) for the sales force. Targets are established and communicated at the beginning of each fiscal year.

In the FY2019, the bonus payout for AGIP has been established at a rate of 50% of target.

We globally use survey data from Mercer and Aon Hewitt to ensure that we have competitive market data for building salary market ranges. Our usage of this data helps us have checks and balances in place to ensure that we always stay above minimum local wage and in most cases are competitive in our compensation and benefits.

| Average           | Gender |       |       |
|-------------------|--------|-------|-------|
|                   | Female | Male  | Total |
| Compa-Ratio       |        |       |       |
| Senior Executive  | N/A    | N/A   | N/A   |
| Senior Management | 90.0   | 84.9  | 85.8  |
| Middle Management | 102.3  | 109.9 | 108.3 |
| Junior Management | 102.6  | 110.0 | 107.3 |
| No Management     | 103.2  | 123.5 | 120.8 |
| Total             | 102.6  | 117.3 | 114.2 |

“WE ALL KNOW WHERE WE ARE AND WHERE WE WILL GO – IT’S VERY HELPFUL TO UNITE OUR TEAM TO FOCUS ON THE RIGHT DIRECTION.”

Kai Wei Zhang has been inspired by the Six Sigma methodology throughout his career and personal life, and relishes hitting ambitious targets.

Having joined Clariant in 2006, Kai Wei Zhang was already an engaged figure in the Tianjin chemicals plant at the time of the shift to Archroma in 2013. Since the company became Archroma, his position has evolved so that he is now the site's safety, environment and health officer.

As a Black Belt, it's Kai Wei's job to apply Six Sigma methods to the work at the plant. "The Six Sigma methodology and skills training in leadership greatly helped my career and my personal life," he says. At work, his role as Black Belt has given him the chance to collaborate with colleagues from across the organization: "I have gained a better understanding and overview of the whole process in our site."

He had to put that understanding to use in 2017 when his plant acquired chemicals business from BASF. The demanded output suddenly increased by 50%. The plant needed to increase both equipment and labor utilization in order to meet

its targets, but it managed with colleagues to deliver on time and in full. "We all believe that excellent teamwork is the critical element for success," Kai Wei says.

That's still true today, even as new working methods are brought in. "In our ACTS-inspired<sup>1</sup> organization," Kai Wei says, "group targets and performances are cascaded to each colleague in the office and the plant. We all know where we are and where we will go – it's very helpful to unite our team to focus on the right direction."

Kai Wei is also passionate about basketball, and he relishes both leading a team and hitting his targets – both on the court and at work. He describes Archroma's targets for safety, profitability and sustainability as "very ambitious," which makes them a perfect fit for him.

Learn more about Archroma's ACTS culture here: <https://www.archroma.com/our-culture>



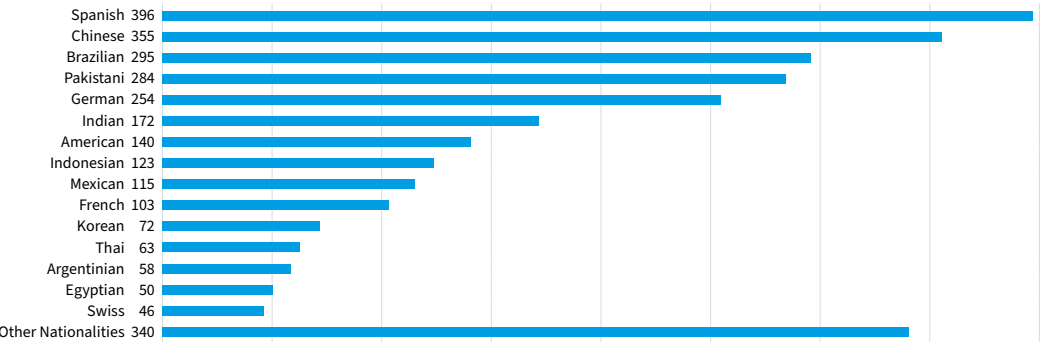


# DIVERSITY

Archroma recognizes the dignity, privacy and personal rights of all individuals, working together with various ethnic backgrounds, cultures, religions, ages, disabilities, races, sexual identity, worldview and gender. Archroma does not tolerate discrimination against anyone based on these characteristics or any other comparable offensive behavior.

Archroma values diverse and talented colleagues and supports them so that they can contribute to their full potential. We enjoy diverse nationalities and cultures. There are 57 nationalities working in Archroma which is representative of our geographical reach.

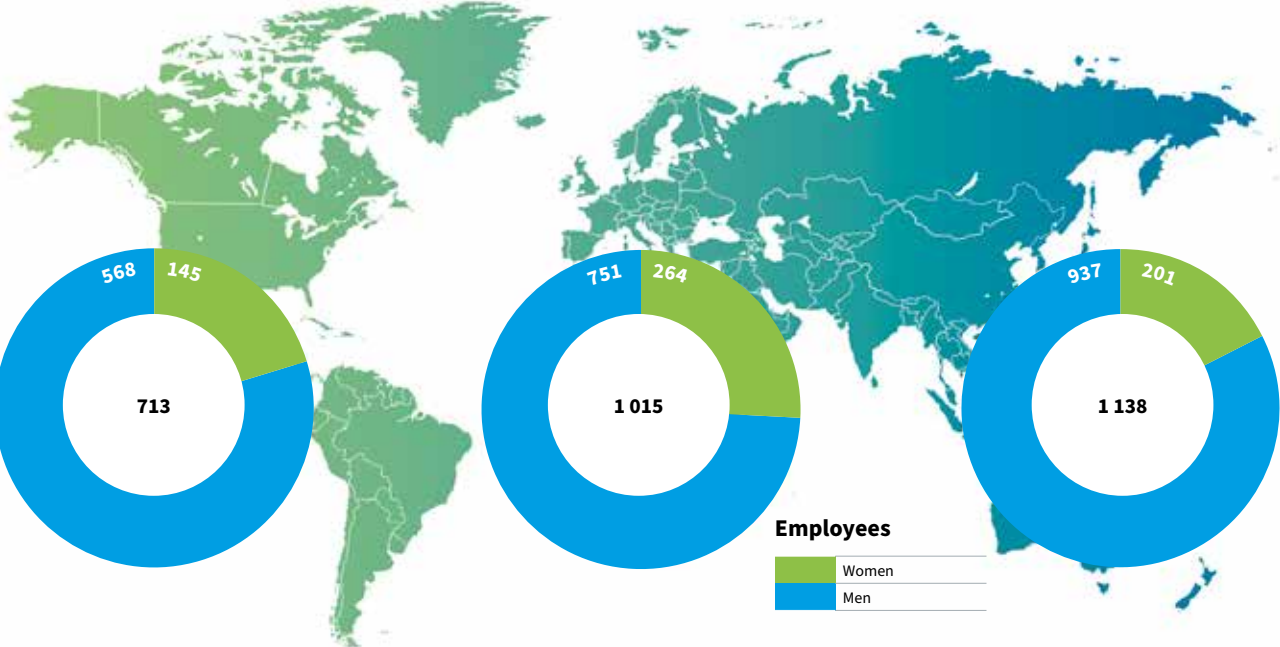
## Number of diverse nationalities September 30, 2019



Nationality diversity in line with geographic spread. There are employees of 57 nationalities working in Archroma. We have increased nationalities by one in 2019.

We have 2 866 employees working across 3 geographical regions, actively engaged and driving our business forward. 21% of the workforce comprises women and this number changes marginally from region to region. This overall ratio has slightly decreased in comparison to the previous reporting period.

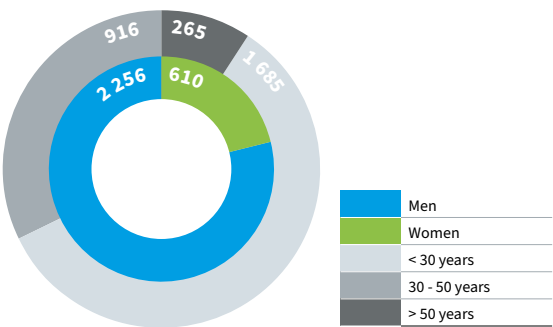
## Diversity/Employee profile by region



We have a good representation of women at all levels of the workforce including the Leadership Team roles.

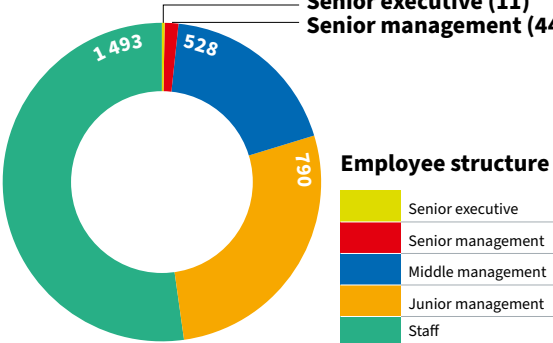
Women leaders also play a very critical role for us in the management of Archroma and represent 30% of the total management category. The ambitious target for FY2023 is to increase this to 40% of the total complement of management employees.

## Employee profile

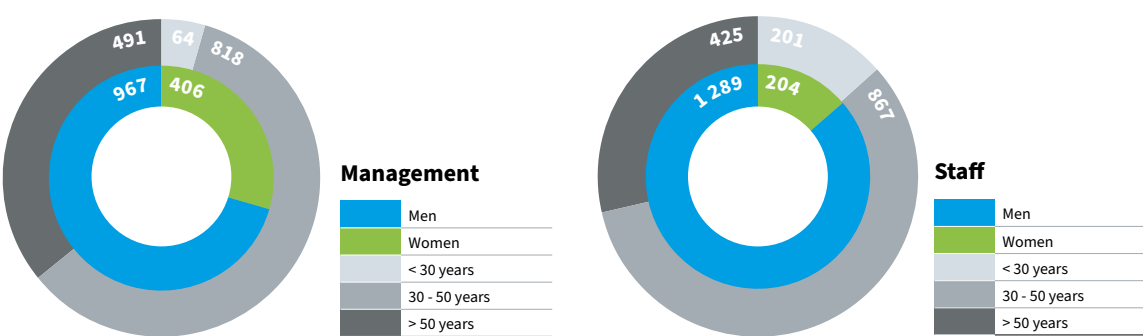


25% of governance bodies are comprised of women.  
69% of governance bodies are over 50 years old.

## Employee structure



## Employee tier profile





# OUR CORE VALUES



## Muriel Werlé, Head of Communications & Culture

*The employees of Archroma are also parents, children, brothers and sisters, and consumers. That's why we all bring sustainability in our work ethics and culture. Because we want to go home every day, knowing that we contribute to delivering a sustainable future for our loved ones.*

Archroma has implemented 4 cultural pillars, collectively known as the “ACTS”, that guide the organization to foster trust and sustainable relationships with all our stakeholders. These pillars are:

### ACCOUNTABILITY FOR PERFORMANCE

Working with clear, defined targets – aligned to the overall business strategy of Archroma but broken down to the area of responsibility of individual employees.

### CUSTOMER & MARKET FOCUS

Growing through customer and market focus – based on quality, cost, delivery, availability, service and innovation.

### TEAMWORK & COLLABORATION

Engaging through collaboration – as one team, one company, one agenda, one focus.

### SPEED & SIMPLICITY

Winning through speed and simplicity – with the right mindset, organizational design, decision processes and our work efficiency.



ACCOUNTABILITY  
FOR PERFORMANCE



CUSTOMER &  
MARKET FOCUS



TEAMWORK &  
COLLABORATION



SPEED &  
SIMPLICITY

Archroma continually reinforces these work culture pillars within the organization. Each aspect of the culture pillars is integrated within each employees’ job specification and form a part of the annual performance appraisal. The ACTS culture pillars are the foundation for Archroma’s policies.

All employees are trained to the ACTS culture and Code of Conduct as part of the Archroma onboarding process for all new employees. Annual appraisals are providing a feedback on coherence and adherence to Archroma’s cultural values.

“SOMETIMES, IT’S GOOD TO TAKE A STEP BACK. LIFE IS VERY SIMPLE, BUT WE INSIST ON MAKING IT DIFFICULT!”

**It’s a story of nurturing one other, of growing together. When Maria first joined our team, she was clearly up for a challenge. Little did she know that she was about to embark on such an adventure – one that would see her grow alongside Archroma.**

At Archroma, Maria is Head of Finance & Controlling Europe, Middle East & Africa.

Maria joined Clariant in 2005 as a treasury department intern and became an analyst soon after in 2006. She was later introduced to financial controlling and bookkeeping from 2010 – 11. This experience proved useful in 2013, when Archroma was formed and Maria faced a new challenge as the then company’s Head of Finance in Venezuela.

As the only member of the branch’s finance department at the time, Maria had to quickly hone her leadership skills and knowledge of taxes and accounting, and was soon managing finances in the Mexico office as well. There, she had the demanding task of restructuring the finance department, all while navigating the differences between Venezuelan and Mexican culture.

Maria feels Archroma’s size allows it to be particularly dynamic. Teams can think together easily, make decisions quickly and work efficiently to achieve fast results. She also appreciates that the CEO, CFO and others higher up in the organization are accessible and open to sharing knowledge, solving problems and supporting the company’s projects.

Maria is inspired by the Archroma’s culture of Accountability, the company’s team spirit and the potential to succeed professionally through hard work and personal merit. She loves how everyone at the company works together – sharing goals and supporting one another across the world.

When she’s not at the office, Maria loves to cook and surprise friends and family with her secret recipes. She finds cooking clears her mind, giving her a fresh look at any work problems she needs to solve. Sometimes, it’s good to take a step back – as she says, “Life is very simple, but we insist on making it difficult!”



MARIA DASILVA



# TALENT MANAGEMENT

The Archroma talent management philosophy is based upon the guiding principle to attract, manage and develop talents, fit to Archroma’s culture and capable of fulfilling the company’s goals and objectives in the most effective and efficient manner

There are three aspects to talent management at Archroma: talent acquisition, performance monitoring and talent development.

## Talent acquisition

This tends to be generated through the organization based upon the current and future business needs. The total number of Archroma employees decreased by 108 from 2 943 in FY2018 to 2 834 in FY2019, as a result of retirement, voluntary resignations and terminations.

We hired a total of 224 employees in FY2019, 56% of which were under 35 years old, and 29% were female. Of these new employees 83 % were employed with permanent contracts. Overall 98% of all employees are employed with permanent contracts.

## Performance monitoring

This has two components; the tangible or “what” component, describing a specific desired result, and the behavioral component used to achieve the results, based on our ACTS culture pillars and leadership. Performance management is run on an annual cycle. Employees are initially rated by their managers and this is then followed by a company-wide calibration process. This is then reviewed both at a local level by local leadership and also at a global level by the Archroma Leadership Team. A final presentation to the Board of Directors allows input regarding future direction and focus for Archroma management. This is then cascaded throughout the organization in order to ensure consistency.

## Performance reviews data

| 2019              | Female      |              |               | Male        |              |               | Total Review |
|-------------------|-------------|--------------|---------------|-------------|--------------|---------------|--------------|
|                   | With Review | W/out Review | % with Review | With Review | W/out Review | % with Review |              |
| Senior Executive* |             | 2            | 0%            | 6           | 3            | 67%           | 11           |
| Senior Management | 5           | 2            | 71%           | 24          | 13           | 65%           | 44           |
| Middle Management | 86          | 25           | 77%           | 304         | 113          | 73%           | 528          |
| Junior Management | 214         | 72           | 75%           | 341         | 163          | 68%           | 790          |
| No Management     | 97          | 107          | 48%           | 191         | 1 098        | 15%           | 1 493        |
| Total             | 402         | 208          | 66%           | 866         | 1 390        | 38%           | 2 866        |
| Total %           | 66%         | 34%          | 100%          | 38%         | 62%          | 100%          | 100%         |

\* All senior executives employed for the complete fiscal year have had performance reviews.

As part of our culture, we believe that feedback is essential to drive alignment and motivation within our organization. Goals setting at all levels of the organization is driven by the annual operating plan, and the goals setting process is a combination of what needs to be achieved and the behavior in how we achieve the results as guided by the ACTS cultural pillars.

## Talent development

Our development process addresses four aspects:

1. Skills
2. Capability
3. Leadership
4. Mindset

**Skills** requirements are assessed at the country level, where the performance management process identifies skills gaps for individuals. Specific local programs are initiated to provide the training required to bridge the skills gap, these can be for individual employees or groups. These training initiatives tend to be organized locally and managed by the local leadership.

**Capability** covers those organizational skills that are required in order to fulfil the organization future objectives. They are much broader in scope and address such aspects as periodic Code of Conduct training or those programs run under the Archroma Academy, focused on improving functional efficiency, for example for procurement, operational or commercial excellence, such as negotiation skills or value-based selling skills.

Both of these requirements tend to be linked. If we identify that a large number of individuals requires the same or similar skills improvements, then we address it under organizational capability, rather than individual skills, and organize the training scope accordingly.

**Leadership** is considered as a key capability for the organization. Assessment of the organization’s current leadership skills level and delivery of improvement training is done by the Human Resources (HR) team. In FY2019, we implemented a new leadership model and detailed associated behaviors. This resulted in individual assessment and coaching program for our 112 leaders for future personal development.

We promote an “outward” **Mindset** in our organization. In the reported year, we continued to focus specifically on the C of the ACTS: Customer & Market Focus, and we implemented additional commercial training for product managers and sales managers with the objective to increase commercial competence to support our commercial strategy. Sessions were held in all regions.

**The Archroma Leadership Team is deeply involved in all four aspects with input from the Board of Directors.**



Archroma recognizes that employee development and training is an integral part of the organization's strategic intent so that all employees are performing their individual jobs effectively and prepare for future challenges to ensure that the organization meets its purpose sustainably.

Archroma has a published training policy, signed by the Chief Executive Officer. The policy is designed to support and help Archroma employees and their line managers develop themselves and their teams. It is a joint responsibility in development and training by individual employees, supervisors/management and Archroma, and is integrated within each employee's job specification and forms a part of the annual performance appraisal. Archroma provides company-wide training programs for nominated employees in line with their job, function and needs.

The company invests in these programs at all four levels including by partnering with specialist training and technology companies for design support. As our business in the manufacture, sales and marketing of specialty chemicals tends to be a capital, rather than labor, intensive business, specific training for the organization on human rights is not foreseen. However, due to the nature of our business and the markets in which we operate, training based on the Archroma Code of Conduct is done on an annual basis for all employees.

In FY2019 we did not comprehensively capture the total amount of training time per employee, gender or employee category. However, in FY2019 a total of 3 284 hours training were organized for a total of 814 employees for "MAKEXPERT" by the Archroma Academy.

In the reporting period, we introduced a systematic training module within our "myHR" online platform, one year earlier than planned. The effectiveness of the program is measured by the direct effect on the business performance. This is done at both functional and individual level for the specific programs and the areas of business impacted. The long-term target is to ensure that 90% of all employees attend an Archroma Academy module by the end of FY2023.

The talent management process is managed by the global HR management team supporting the Archroma Leadership Team members in their respective area of responsibility.

Archroma runs a number of outreach education programs with textile universities and institutions, such as the University of Karachi and Textile Institutes like SMA Rizwi in Pakistan (we train an average of 100 students annually), the Fashion Institute of Technology in New York and the House of Denim in Amsterdam. We also support the annual International Design Competition of the Society of Dyers and Colorists. We support these programs by, for example, donating financial contributions and/or tools or access to our facilities for on-site training.

Archroma also offers slots in several countries to universities for students' looking for practical experience and training as part of their curriculum.

The company also has an internal job posting program to allow internal mobility and career development, as well as community support via internal and external referrals.

"WHATEVER YOUR JOB IS, DO IT WITH PASSION, WHICH, TOGETHER WITH DISCIPLINE, WILL TAKE YOU TO SUCCESS."

**Moving across the Atlantic hasn't stopped Johanna Diaz from appreciating her Head of Product Stewardship role for the USA and Canada.**

Johanna Diaz has relocated twice to work for Archroma. First, in 2014 – just after she finished university – she moved from Asturias in northern Spain across the country to Barcelona. She spent several years there, moving into product stewardship and taking on a busy global role. In 2018, she got the chance to become Head of Product Stewardship for the USA and Canada, which saw her move all the way to Charlotte, North Carolina. She took the challenge on, she says, with no hesitation – just as she did when she moved to Barcelona.

Moving to a new country is never easy, and moving across continents is even less so. Johanna had a whole different culture to get to know in the US. But by embracing the opportunity, she's found great success – just like with her work.

"Leading the Product Stewardship department in the USA and Canada is not a piece of cake," explains Johanna. She has had plenty of new challenges to tackle, especially concerning the high level of chemical regulation in those countries. "I had to start from scratch," she explains – but she wasn't doing it alone. She appreciates all the "extraordinary people" she works with. "It gives me great pride to be a member of the Archroma team."

As for life in the USA, that's taken a decidedly positive turn. Johanna has found her soulmate in her new home country – "Another thing to thank Archroma for!" she says.



JOHANNA DIAZ

## LOCAL COMMUNITIES

As a good corporate citizen, Archroma is proud to be creating jobs, protecting the environment and developing local communities. We get involved with our local communities to support and foster education, health, and in the creation of general social upliftment programs.

All Archroma sites are actively engaging and assessing the needs of their communities at a local level. Based on the needs that the local management teams are aware of and engaging with the stakeholders. Community representatives are consulted and programs that would benefit the communities run as needed.

**These are just a few examples of some of the initiatives that we have been involved in.**



We renewed our cooperation with WWF-Pakistan.



Our team in Seoul, South Korea, cleaned the land around their facility.



Our team in Resende, Brazil, collected old batteries and electronic waste.



Our team in Espoo, Finland, donated money to protect 100 m<sup>2</sup> of forest.



Our team in Korschenbroich, Germany, supported our Earth Day initiative by building an insect hotel.



We agreed to a cooperation with the National Textile University Faisalabad in Pakistan.



Our team in Martin, USA, cleaned the woods surrounding our production site.



Our team in Tokyo, Japan, collected old clothes from fashion stores for recycling.



Some of our colleagues from Archroma Korea were featured in a local TV show for donating a part of their salary to charity.



We sent three delegates to the 2019 One Young Summit in London.





# INDIRECT IMPACTS

In addition to “Safe” and “Efficient”, Archroma’s third area of focus for innovation is on “Enhanced” performance, because: “It’s in our nature to add another level of value”. Our innovative products become innovative products for our customers, and then again for their customers. The water repellent jacket purchased by a consumer is made of water repellent fabric marketed by a mill and that includes a water repellent finish made by Archroma. In addition to resource savings, our innovations have the important indirect impact of increasing the value of products throughout the supply chain. This enables our customers and then their customers to realize greater revenues, profits, and consumer loyalty. In many cases, these higher value products are more durable and more appreciated by their owners so have a longer lifecycle than less expensive options. The longer lifecycle means that these enhanced products are also more sustainable than commodity products, and so innovation for increased performance is also a significant contributor to reducing overall lifecycle impacts.

**The Archroma systems that deliver enhanced value to our customers are defined and communicated as the “Enhanced Collection”.**

## THE ARCHROMA WAY TO A SUSTAINABLE WORLD / Safe + Enhanced = The Enhanced Collection



**SAFE – IT’S OUR NATURE TO PROTECT**  
A solid core: Our deeply rooted goal to protect people and our planet.  
Safe to use, safe to release and also safe to wear.

**ENHANCED - IT’S OUR NATURE TO ADD ANOTHER LEVEL OF VALUE**  
Innovation is critical. With it, we create additional effects, functionalities and aesthetics and sustainable differentiation to bring additional value, helping consumers to achieve their goals, for a life enhanced.

# IMPACT STUDY: POWER COTTON

As explained earlier in this report, our purpose and core values, “The Archroma Way to a Sustainable World”, are based on 3 pillars: Safety, efficiency and enhanced value.

A good illustration of how we incorporate the “Enhanced” pillar is POWER COTTON, a system developed to maintain the soft comfort of a cotton knitted article but with more than 5 times greater abrasion resistance, making it stronger and last longer.

**‘ENHANCED’ WITH:**  
POWER COTTON  
System



FRIC-  
TION  
PROTECTION



TOUCH / SOFT

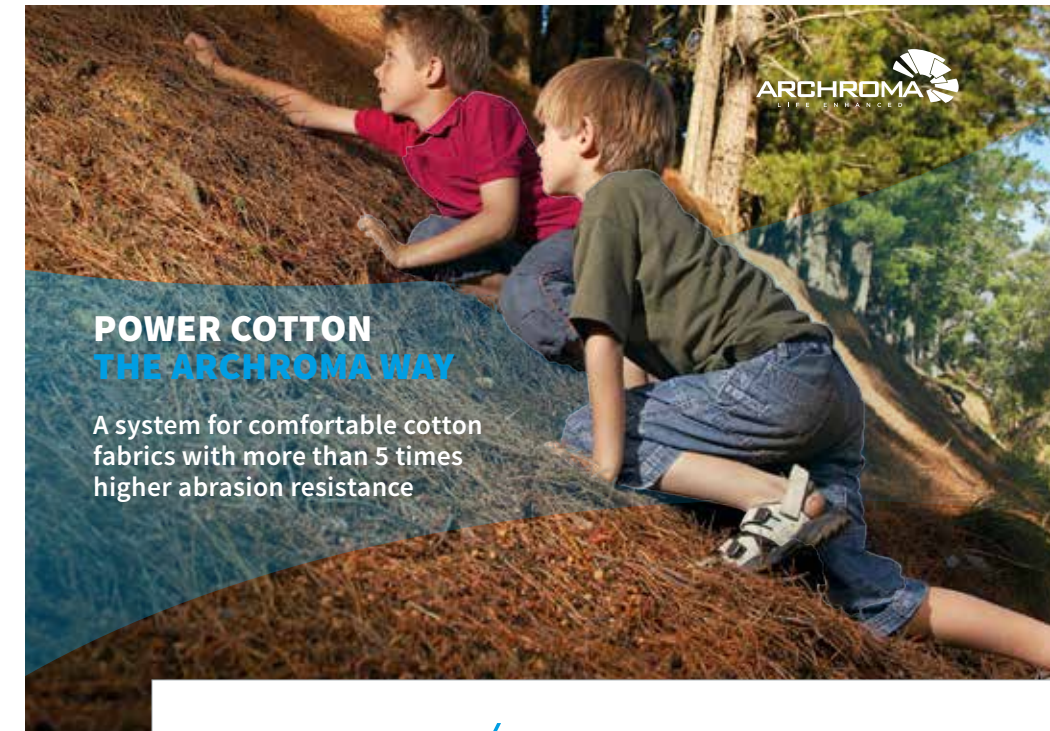


DURABILITY  
/ STAY NEW



PREMIUM  
QUALITY

ENHANCED



## POWER COTTON THE ARCHROMA WAY

A system for comfortable cotton fabrics with more than 5 times higher abrasion resistance

### POWER COTTON / Main benefits in a nutshell

- Safe products from a reliable global partner who applies international safety standards
- No use of crosslinker containing butanone-oxime, which is becoming more restricted
- Enhances dramatically the fabric quality in terms of abrasion resistance
- Imparts a wash-durable softness to the fabric
- Creates opportunities for the mills to supply larger brands and enter new market segments thanks to:
  - No yellowing
  - No color change
  - Products with higher stability
  - Better performance in various test methods
  - Better reproducibility

**‘SAFE’ WITH:**  
POWER COTTON finish system



ETHICAL  
COMPLIANCE

MANMADE  
APPROVED

SAFE

**‘ENHANCED’ WITH:**  
POWER COTTON finish system



FRIC-  
TION  
PROTECTION

TOUCH / SOFT

DURABILITY  
/ STAY NEW

PREMIUM  
QUALITY

ENHANCED

### POWER COTTON / A system for comfortable cotton fabrics with more than 5 times higher abrasion resistance

**Ceralube® PHD liq c**  
Special high density  
polyethylene to improve

- Tear strength
- Abrasion resistance

**Solusoft® NMW liq c**

- Non-yellowing
- Non-ionic silicone micro-emulsion
- Elegant softness



**Arkophob® DAN New liq**  
External crosslinker

- Formaldehyde-free\*
- Organotin-free\*
- High stability
- No influence on degree of whiteness

\* Below limits of detection according to industry standard test methods. Not intentionally added



# IMPACT STUDY: PRINT IT BRITE

The Archroma Way is also our guiding principle for creating solution systems.

A good illustration of this, when it comes to the ENHANCED pillar of The Archroma Way, is PRINT IT BRITE, a system that makes paper whiter & brighter, and prints sharper & more vibrant.

**‘ENHANCED’ WITH:**  
PRINT IT BRITE  
system



PREMIUM  
QUALITY



PRINTING  
QUALITY



BRIGHTNESS



WHITENESS

ENHANCED



## PRINT IT BRITE THE ARCHROMA WAY

A system that makes our paper whiter  
& brighter, our prints sharper &  
more vibrant and the production  
more efficient

### PRINT IT BRITE / Main benefits in a nutshell

- Safe products from a reliable global partner who applies international safety standards
- Compliant with BfR, Nordic Swan, EU Flower & REACH
- Optimized and efficient process due to less out-of-specification paper
- Reduced chemical usage
- Allows combining high paper whiteness & brightness with sharp & vibrant prints
- Ideal for the production of high-quality paper grades

**‘SAFE’ WITH:**  
Archroma’s  
PRINT IT  
BRITE  
system



SAFE

**‘EFFICIENT’ WITH:**  
Archroma’s PRINT  
IT BRITE system



EFFICIENT

**‘ENHANCED’ WITH:**  
Archroma’s PRINT  
IT BRITE system



ENHANCED

### PRINT IT BRITE / A system that makes our paper whiter & brighter, our prints sharper & more vibrant and the production more efficient

**Leucophor® VPI liq**  
Urea-free hexasulphonated  
optical brightener

- Registered under REACH, TSCA and DSL
- Highest levels of whiteness and brightness in ColorLok™ papers reachable

**Leucophor® ACK & ACW liq**  
Urea-free wet end disulphonated  
optical brightener

- Leucophor® ACK
- Leucophor® ACW



**Cartaren®**  
Shading pigments for increased  
whiteness

Excellent light fastness  
Bright shade

- Cartaren® Violet CB 500 pa
- Cartaren® Blue C-BR 500

# APPENDIX



# GRI CONTENT INDEX

| GRI STANDARD                | PRIMARY OWNER / DISCLOSURE  |                              |
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| Management Approach<br>2016               | 103-2 The management approach and its components  | 24, 28-29   |
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| <b>GRI 403:</b>                           | 403-1 Management approach disclosures - Occupational Health & Safety management systems   | 26-29   |
| Occupational Health<br>and Safety<br>2018 | 403-2 Management approach disclosures - Hazard identification, risk assessment, and incident investigation  | 28, 42  |
|   | 403-3 Management approach disclosures - Occupational health services  | 28-29   |
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| Management Approach<br>2016               | 103-2 The management approach and its components  | 13  |
|   | 103-3 Evaluation of the management approach   | 18  |
| <b>GRI 418:</b>                           | 201-1 Direct economic value generated and distributed   | * See note below 201-2  |
| Customer Privacy<br>2016                  |   | Finanacial implications and other risks and opportunities due to climate change |
|   | 201-2 Finanacial implications and other risks and opportunities due to climate change   | * See note below 201-3  |
|   |   | Defined benefit plan obligations and other retirement plans                     |
|   | 201-3 Defined benefit plan obligations and other retirement plans   | * See note below  |
|   |   | 201-4 Financial assistance received from government                             |
|   | 201-4 Financial assistance received from government   | * See note below  |

\* As Archroma is a privately owned company these disclosures are omitted for confidentiality reasons

\*\* Archroma has not sought for external assurance of this report. This will be reassessed in future as the report evolves and as more disclosures become available. We are confident that our internal processes and documentation will provide sufficient oversight regarding the accuracy of the enclosed information in the report.

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| MATERIAL TOPICS                 |  |                |
|---------------------------------|--|----------------|
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| <b>GRI 306:</b>                 | 306-3 Significant spills   | 33, 50         |
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|-----------------------------------|--|---------------|
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| ARCHROMA TOTAL         | FY2015    | FY2016    | FY2017    | FY2018    | FY2019    |
|------------------------|-----------|-----------|-----------|-----------|-----------|
| Site Production (mt)   | 414 164   | 457 251   | 447 842   | 478 612   | 446 468   |
| C0_e Emissions (mt)    | 99 833    | 93 356    | 94 804    | 99 576    | 88 985    |
| Energy (GJ)            | 1 166 108 | 1 230 455 | 1 225 293 | 1 344 960 | 1 146 080 |
| Water (m³)             | 8 154 981 | 7 522 151 | 8 075 005 | 8 828 644 | 8 765 957 |
| Water Consumption (m³) |           |           |           | 2 088 995 | 1 882 569 |
| Solid Waste (mt)       | 12 598    | 14 516    | 12 844    | 17 475    | 17 714    |

| RESOURCE USED PER METRIC TON PRODUCED | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | TARGET FY2023 |
|---------------------------------------|--------|--------|--------|--------|--------|---------------|
| C0_e                                  | 0.241  | 0.204  | 0.212  | 0.208  | 0.199  |               |
| Energy                                | 2.82   | 2.69   | 2.74   | 2.81   | 2.567  | -15%          |
| Water                                 | 19.69  | 16.45  | 18.03  | 18.45  | 19.63  | -10%          |
| Water Consumed                        |        |        |        | 4.36   | 4.22   |               |
| Solid Waste                           | 0.030  | 0.032  | 0.029  | 0.037  | 0.04   | -25%          |

1 Terajoules (TJ) = 1 000 Gigajoules (GJ)

Diversity – page 78-79

| 2019         |          |      |       |        |      |       |        |      |       |             |
|--------------|----------|------|-------|--------|------|-------|--------|------|-------|-------------|
|              | Americas |      | Total | Asia   |      | Total | EMEA   |      | Total | Grand Total |
|              | Female   | Male |       | Female | Male |       | Female | Male |       |             |
| less than 30 | 30       | 68   | 98    | 29     | 61   | 90    | 24     | 53   | 77    | 265         |
| 30-50        | 82       | 306  | 388   | 153    | 606  | 759   | 159    | 379  | 538   | 1 685       |
| over 50      | 33       | 194  | 227   | 19     | 270  | 289   | 81     | 319  | 400   | 916         |
| Grand Total  | 145      | 568  | 713   | 201    | 937  | 1 138 | 264    | 751  | 1 015 | 2 866       |

| Employees                | Gender |      | Age Group    |       |         |
|--------------------------|--------|------|--------------|-------|---------|
|                          | Female | Male | less than 30 | 30-50 | over 50 |
| Archroma Leadership Team | 31%    | 69%  | 0%           | 13%   | 88%     |

Gender profile – page 78-79

| 2019                  |        |       |       |
|-----------------------|--------|-------|-------|
| Gender Profile FY2019 | Female | Male  | Total |
| Senior Executive      | 2      | 9     | 11    |
| Senior Management     | 7      | 37    | 44    |
| Middle Management     | 111    | 417   | 528   |
| Junior Management     | 286    | 504   | 790   |
| No Management         | 204    | 1289  | 1493  |
| Total                 | 610    | 2 256 | 2 866 |

| 2019                  |        |       |              |       |         |       |
|-----------------------|--------|-------|--------------|-------|---------|-------|
| Gender Profile FY2019 | Female | Male  | less than 30 | 30-50 | over 50 | Total |
| Senior Executive      | 0.2%   | 0.4%  | 0.0%         | 0.2%  | 0.9%    | 0.4%  |
| Senior Management     | 0.9%   | 1.5%  | 0.0%         | 1.2%  | 2.2%    | 1.4%  |
| Middle Management     | 17.7%  | 19.2% | 0.4%         | 18.7% | 25.1%   | 18.9% |
| Junior Management     | 48.3 % | 22.9% | 24.0%        | 30.1% | 26.4%   | 28.4% |
| No Management         | 31.4%  | 53.2% | 73.1%        | 48.1% | 41.6%   | 48.4% |
| Without Category      | 1.5%   | 2.7%  | 2.5%         | 1.8%  | 3.9%    | 2.5%  |

Age Profile by Employee Tier – page 79

| Age Profile FY2019    |              |       |         |             |
|-----------------------|--------------|-------|---------|-------------|
| Gender Profile FY2019 | less than 30 | 30-50 | over 50 | Grand Total |
| Senior Executive      |              | 4     | 7       | 11          |
| Senior Management     |              | 24    | 20      | 44          |
| Middle Management     | 7            | 298   | 223     | 528         |
| Junior Management     | 57           | 492   | 241     | 790         |
| No Management         | 201          | 867   | 425     | 1 493       |
| Total                 | 265          | 1 685 | 916     | 2 866       |





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