“We define sustainability as combining our business activities with our sense of economic, environmental and social responsibility. For us, sustainability is an obligation towards the generations of today and tomorrow.”

Dr Henrik Follmann
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You are holding in your hands the 2018 Sustainability Report of the Follmann Chemie Group. We’d like to thank you for your interest in our company.

Sustainability remains a high priority for us. We follow the guidelines of the Chemie³ initiative, a joint initiative of the German chemical industry association VCI, the Mining, Chemical and Energy Industrial Union (IG BCE) and the German Federation of Chemical Employers’ Associations (BAVC). Following our sustainability check in 2017, we continued to pursue the resulting issues with specific projects last year. The main themes were ‘Sustainability in the Supply Chain’ and ‘New Working Environment’.

Our products can only meet sustainability standards if we also apply these standards when selecting our suppliers. Since a large proportion of the raw materials used in the European chemical industry are produced outside of Europe, the challenges for a medium-sized company have grown significantly in recent years. We are meeting this challenge with a Code of Conduct for suppliers drafted in 2018. We have already gained initial experience with it and will extend its application to additional suppliers in the future.

A major project within the framework of our ‘New Working World’ theme was the employee survey conducted last year. We were pleased about the high participation rate, which has led to representative results. Overall, the result shows a high level of satisfaction among our employees. However, areas for further improvement have also emerged and will be tackled step by step. Our commitment to our employees’ further education, training and talent development continues unabated.

The finalisation of the largest investment in the history of the Follmann Chemie Group entered the finishing phase at the end of 2018. After completion of the building and the systems engineering, all forces have focused on commissioning since autumn 2018. Here, the high degree of digitalisation and automation presents us with challenges but, with view to the future, we are making significant improvements in quality consistency and mastery of our broad product range.

By setting up our new construction chemical production, we have also implemented projects boosting the ecological optimisation of processes. Examples include the recycling of process water and the exclusive heating of the new production halls using waste heat from our combined heat and power plants.

For us as an owner-managed medium-sized company in the chemical industry, this investment is a clear commitment to our Minden location and to the region.

Foreword by the management

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For the first time in the recent past, the Follmann Chemie Group strengthened its position by purchasing a company in 2018. With the acquisition of the Sealock Group, based in the United Kingdom, Follmann has expanded its expertise in the field of adhesives for packaging applications. This is an important building block in terms of the economic pillar of sustainability in our group of companies.

Socially, we continue to engage in a variety of ways, including outside our core business, by supporting various social and educational institutions in the region.

Last year, as part of our health management programme, we offered our employees diverse and comprehensive services. Furthermore, the ‘company cycle’ project was introduced, based on an employee suggestion.

We are aware that we can only achieve our goals by working closely with our customers, suppliers, employees and the authorities, and through our willingness to engage in dialogue, in particular with our neighbours. Therefore, we present to you this sustainability report to give you an insight into our activities in 2018.

We look forward to continuing our dialogue with you.

Dr Henrik Follmann
Managing Director

Dr Thomas Damerau
Managing Director
The Follmann Chemie Group is an owner-managed, internationally operating and successful group of companies headquartered in Minden. It comprises the Follmann and Triflex companies. Until 2018, Minden was the only production location for all products. The acquisition of the Sealock Group has added three new, smaller adhesives manufacturing locations to the portfolio, namely Andover (UK), St. Petersburg (Russia) and Warsaw (Poland).

Follmann and Triflex are represented worldwide with numerous foreign companies. Besides Minden, Follmann has its own sites in Russia and China, and Triflex has six European affiliates and numerous sales offices worldwide. Follmann Chemie is also represented in Poland in addition to the Minden headquarters.

The key competences of the Group are the development, manufacture and sales of speciality chemicals for the processing industry (printing inks, adhesives and coatings) as well as waterproofing systems, marking materials and infrastructure for the construction chemistry industry. High innovative strength, excellent product quality as well as customised solutions and services are essential to the company's success. Thanks to a modern organisational structure and efficient processes, it is possible to react quickly and flexibly to customer requirements, and to sense trends and implement them systematically. Today, the company is an important player in the speciality chemicals sector in Europe.

**Tradition, innovation and sustainability** are essential components of its corporate philosophy and decisively shape daily activities.

**Tradition**
Founded in 1977 by Heinrich Follmann and his son, Dr Rainer Follmann, the family-owned company initially focused on the manufacture of construction chemical products. Just a few years later, the portfolio was expanded to include printing and coating materials for different types of end products. By founding the two companies Triflex and Follmann, expertise was bundled and successfully advanced. The many international subsidiaries and sales offices are an impressive reflection of this dynamic. Today, the family business is led in the third generation by Dr Henrik Follmann. Its close ties to the region are reflected not only in the company's support of public and social institutions, but above all in its high number of investments: in the past ten years alone, almost 100 million euros have been spent at the Minden site – a clear signal of confidence in a future in the region.

**Innovation**
For the family company, innovation is an important part of the business philosophy. In collaboration with customers, individual, quality solutions are developed for the construction chemistry and the processing industries. To this end, the Follmann Chemie Group invests large sums in the development of new products and technologies every year.
Comprising more than 10% of all employees, the R&D and New Business Development departments form a significant group within the company. Sophisticated testing facilities and state-of-the-art laboratories underline the importance and value of these departments, in which the company will continue to invest going forward.

**Sustainability**

The requirement of sustainability has always been an essential component of the company philosophy, which form the basis for all entrepreneurial decisions and actions. A particularly successful example from recent years is the construction of a combined heat and power plant, with the help of which the CO₂ emissions at the Minden production site have been significantly reduced on a permanent basis. As a member of the German Chemical Industry Association (VCI), we act responsibly in the spirit of the worldwide initiative Responsible Care. In addition, the Follmann Chemie Group supports the ‘Chemie³’ sustainability initiative of the German Chemical Industry and regularly carries out sustainability checks.

Tradition, innovation and sustainability: these three pillars form the basis for the business goals achieved so far and are at the same time important guard rails and signposts for a successful future.
An important visible indication of our clearly defined processes is the Follmann Chemie Group’s organisational structure, which was changed in 2015 at the Minden location, with the sales and development companies Triflex and Follmann. Over the past two years, we have further developed our organisation – and its structures – at the location. Our main focus is to provide customised, high-quality solutions to our customers with real added value for users. Due to the extensive activities of Follmann Chemie, the subsidiaries Follmann and Triflex can concentrate fully on developing and selling the respective products.

The key player at Follmann Chemie is the Supply Chain Management department, which coordinates all goods movements from the ordering of raw materials to the delivery of the products. Follmann Chemie is also responsible for purchasing and manufactures the products developed by the subsidiaries. The quality – along the whole cycle from the raw materials to the manufactured products – is ensured by the quality control department. The service departments support all processes pertaining to Information Technology (IT), Human Resources, Legal & Quality Management, Technology & Maintenance and Environment & Safety. Finance & Accounting as well as Controlling are also centrally overseen by Follmann Chemie. The newly acquired companies of the Sealock Group are not organised in this way. The three locations in England, Poland and Russia each combine all the functions necessary for the development, manufacture and sale of adhesives.
Production methods

Follmann Chemie operates six different production areas at its Minden site. The production processes can be divided into mixing (homogenising and dispersing) and polymerising. The procedure deployed is batch production.

Mixing

The physical processes used in our production are mixing processes. Our mixing processes can be distinguished between homogenising and dispersing. Both are performed with different stirrers and with different machines. Owing to low shear forces, homogenisation leads to a uniform distribution of the different components in a mixture. Dispersing is the mixing of substances which do not form a chemical bond and dissolve into each other only slightly or not at all. Here, a substance (disperse phase, e.g. pigments) in another substance (dispersion medium, e.g. printing ink resin) is distributed as finely as possible under high shear. The aim is that as many particles of the disperse phase as possible are completely wetted with the dispersant.


Polymerisation

Polymerisation is characterised by chemical transformation generated by the transformation of small molecules (monomers) into macromolecules (polymers). The manufacturing process takes place in closed systems (heatable and coolable) with continuous dosing of the various reaction partners. The chemical reaction is triggered by the supply of heat (via steam) and the addition of catalysts. The reaction heat (exothermic reaction) produced by the triggered reaction is dissipated via the cooling of the reaction vessels. Agitators ensure the necessary distribution and homogenisation.

Products: dispersion adhesives, binders as preliminary products for our printing ink and coating production areas, microencapsulations.
Our sustainability policy

We see sustainability as our duty to the generations of today and tomorrow and have made the idea of sustainability an integral part of our corporate strategy. We associate financial success with an awareness of economic, environmental and social responsibility. We also adhere to the sustainability guidelines of the chemical industry in Germany and follow the Responsible Care guidelines of the German Chemical Industry Association (VCI).

Within our company, we employ an integrated management system according to the applicable ISO standards to ensure we comply with the laws, official regulations and requirements for plant and product safety.
We set ourselves binding targets as part of a continuous improvement process. We check on an annual basis whether we are on course to meet these targets and make adjustments where necessary. We supply the information and resources needed to achieve these targets. It is the duty of each and every member of staff to do his utmost in his area and role to help us implement our sustainability policy.

Economics
As a family-owned SME, the Group pursues a long-term corporate strategy on which all involved can rely. Two fundamental elements of our strategy are to maintain and improve competitiveness and to safeguard jobs. We are a reliable partner to our customers and suppliers.
We invest heavily in research and development, and this creates added value for the economy and society. We promote a long-term approach to success. We are not under any obligation to optimise returns in the short-term.

Environment
Environmental protection is a high priority in our company. Our goal is to improve our in-house environmental protection activities constantly in the interests of achieving environmentally responsible corporate development. We operate a comprehensive in-house environmental management system, which is certified to ISO 14001.

Energy
We use energy responsibly and are increasing our energy efficiency through a process of continuous improvement, with the aid of an energy management system subject to the ISO standard 50001.
We invest in modern and energy-efficient technologies.

Products
With our products, we also support the sustainability goals of our customers and users. When developing products, we take into consideration aspects such as resource-conservation, energy-saving and the reduction of environmental pollution during manufacture and throughout the entire product life cycle.
We are as sparing as possible with raw materials, water and other resources.
Safety
The health and safety of our staff are very important to us. Thus occupational safety forms an integral part of our management system and we place emphasis on a high level of safety in the operation of our plants.
To avoid incidents with a detrimental effect on the environment, we have put in place preventive measures at organisational, personnel and technical levels as part of our internal alarm and hazard prevention plan. Their purpose is to reduce or prevent risks and, in the event of an incident, to effectively limit the impact on humans and the environment.
We set the highest standards for the safety of our products and support our customers and users in the safe and environmentally friendly use of our products. We also inform customers of the risks associated with their use.

Communication
We engender trust in our business activities by communicating openly and respectfully with our customers, staff, shareholders and suppliers as well as with the authorities, our neighbours and the wider public.
We inform all of our staff about sustainability measures and energy-related matters; we motivate them to be responsible at work and we nurture an awareness for the environment, energy and safety.
We publish a sustainability report each year, informing staff, customers, authorities and the general public on the various topics related to the matter.

Social
We value diversity within our staff, and our HR decisions are free from bias or prejudice regarding background, religion, gender, age or disability.
We offer young people a wide variety of training opportunities, with an appropriate scope, to help them take their first step on the career ladder.
We offer our employees development opportunities in the form of general and specific training courses.
We provide various models of working hours where possible in operational terms, and this supports the family commitments of our staff.
Our Code of Conduct is a comprehensive, binding rulebook governing the behaviour of our employees both inside and outside the company.
We see ourselves as part of society and assume the associated responsibilities and obligations. As a medium-sized family business, we focus our social commitment on education and sport in our region. We support kindergartens, schools, colleges and educational institutions through personal commitment, funding and other activities.
Our sustainability commitment

Ecology
Even back in Follmann’s early days, ecological aspects were central to the corporate philosophy. For example, we have developed a number of solvent-free products and have twice received awards for environmental awareness in company management from the ‘Arbeitsgemeinschaft Selbständiger Unternehmer’ (working group of independent entrepreneurs). Furthermore, in 1986 the medium-sized business association ‘future’ was established with Dr Rainier Follmann as one of its co-founders, who went on to introduce environmental management systems in their respective companies long before these could even be certified. At the end of the 1990s, we decided to integrate environmental and health and safety issues in our existing quality management system. In 2014, environmental and health and safety issues were augmented and complemented by the site-based energy management system.

As a member company of the German Chemical Industry Association, we support the initiative for responsible action for a secure future. We are committed to act in line with this global ‘Responsible Care’ initiative, which means taking responsibility for continually improving the protection of the environment and health as well as the safety of employees and the community. We also follow the guidelines of the Chemie³ sustainability initiative, a joint initiative of the German Chemical Industry Association VCI, the Mining, Chemical and Energy Industrial Union (IG BCE) and the German Federation of Chemical Employers’ Associations (BAVC).

Economics
In terms of economics, Follmann has adhered to firm principles from the start, and is committed to combining financial success and environmental and social responsibility. Ever since it was founded in 1977, Follmann has been a family company and intends to remain so. We feel just as responsible for our customers’ success as our own. We make long-term investments at our production site in Minden rather than focusing on maximising short-term profits. We adopted a Code of Conduct in the Follmann Chemie Group to which all managers are bound.

Social responsibility
We have made a clear commitment to the Minden location and are involved in various ways in the region. Over the past years, occupational safety as well as training and development opportunities for all employees in the Group have been continuously systematised, professionally organised and enhanced. In addition to occupational safety, we have established a health management system as part of which we implement a wide range of health-related activities. We offer talks, workshops and courses with external involvement. The Follmann Chemie Group provides training opportunities for an exceptionally large number of young people.

Activities and memberships
Working with organisations: our employees are involved in around 60 working groups, committees and associations. By engaging in these activities, we, as a family-owned medium-sized company, endeavour to influence the conditions in our industry in a responsible fashion.
Responsible Care: an initiative of the chemical industry, which stands for constant improvement of health and environmental protection and corporate safety. We are committed to act in line with this global ‘Responsible Care’ initiative, which means taking responsibility for continually improving the protection of the environment and health as well as the safety of employees and the community.

Chemie³: a sustainability initiative organised by the German chemical industry. We play our part in this initiative and intend to get to grips with sustainability in all its facets on an ongoing basis.

DGNB e.V. – German Sustainable Building Council: we are a member of the DGNB and, with our systems and know-how, we support the council’s goals of sustainable building and operation of the built environment.

future e.V. – Responsible Companies: Dr Rainer Follmann was a co-founder of this society of SMEs in 1986. The founders took the view that financial success and environmental awareness are not contradictory but are in fact closely linked.
Our sustainability management

Internal sustainability working group
In order to continuously accompany the goals and projects from the sustainability check, we have formed an internal sustainability working group with representatives from the three companies Follmann Chemie, Follmann and Triflex: Management, Environment & Safety, Purchasing, Quality Management, Sales, Research & Development, Human Resources, Marketing and Works Council are represented in this body. This group meets twice a year to steer the sustainable development of the group.

Integrated management systems
We are convinced that the successful running of a company is only possible through well-organised processes and thus through well-functioning management systems, and it is a matter of course for us to continuously improve ourselves. Only through sustainable improvement processes can a company continuously ensure an excellent product, project and service quality while the framework conditions are constantly changing. Our quality management has been certified according to ISO 9001 since 1997. Our environmental management system has been certified according to EMAS since 1998, and according to ISO 14001 since 2001. In 2014, our energy management was for the first time certified according to ISO 50001.

EcoVadis sustainability rating
EcoVadis is the provider of the first collaborative platform for supplier evaluation in terms of sustainability aspects. The EcoVadis rating assesses the performance of suppliers with respect to 21 corporate social responsibility (CSR) and sustainability criteria. In 2015, we joined EcoVadis and were awarded ‘Silver’ status. Here, too, we want to continuously improve and work steadily on our sustainability performance.
Our raw material portfolio is very extensive for a medium-sized company and can be divided into over 20 different raw material groups, such as monomers, binders, fillers, waxes, resins and pigments.

In 2017 and 2018, we participated in a pilot project called ‘Sustainability in Supply Chains’, which was initiated as part of the Chemie sustainability initiative of the chemical industry and dealt intensively with environmental protection, occupational safety and social and ethical standards at our suppliers. In addition to the information obtained through the supplier self-assessment and some on-site audits, the sustainability performance of selected suppliers, and in particular of new suppliers, has since been evaluated using the EcoVadis platform solution. Affected suppliers with risk potential are notified of possible dangers and further developed jointly as part of supplier management.

In addition, selected suppliers of raw materials are to confirm compliance with our minimum standards as laid out in our Code of Conduct.

We are fully committed to the observance of human and labour rights and seek to have a positive impact on their enforcement along the whole value chain. We expect our business partners to respect human and labour rights and to ensure occupational health and safety. Child labour and forced labour are not negotiable for us. The previous evaluation of the various assessment showed that neither compliance with human and labour rights (including prohibition of slavery and forced labour) nor other requirements of our Code of Conduct had been violated.

<table>
<thead>
<tr>
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<th>2017</th>
<th>2018</th>
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<tr>
<td>Suppliers evaluated based on environmental criteria and CSR issues</td>
<td>–</td>
<td>40</td>
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<tr>
<td>Share of raw material buyers trained in sustainability issues</td>
<td>–</td>
<td>100 %</td>
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Fiscal year 2018

The 2018 fiscal year was successfully completed with a turnover of 200 million euros and a production volume of 60,000 tonnes.

For the first time in the recent past, the Follmann Chemie Group strengthened its position by purchasing a company in 2018. With the acquisition of the Sealock Group, based in the United Kingdom, the Follmann business unit has expanded its expertise in the field of adhesives for packaging applications. While Minden used to be the sole production site for all activities, the acquisition of the Sealock Group has added three new, significantly smaller adhesive-manufacturing locations to the portfolio, namely Andover (UK), St. Petersburg (Russia) and Warsaw (Poland).

In the future, we will thus be able to serve customers even faster and more flexibly in these important markets. The acquisition also supports the international growth strategy of the Follmann Chemie Group. The Group already generates 50% of its sales outside Germany today. At the same time, we will also draw on Sealock's production expertise to open up new markets for these products in Germany.

The Sealock acquisition has increased the number of employees in the group to a total of 780. With 500 employees, Minden remains the company’s main location. It is also home to the central research and development departments with more than 70 employees. The number of trainees and dual students has also remained high, consisting of 35 members of staff.

A clear commitment to the location of Minden and to the region is the completion of the largest investment in the history of the Follmann Chemie Group: the new building for the manufacture of construction chemical products for our Triflex division. After completion of the buildings and the systems engineering in the middle of 2018, all forces have focused on commissioning since autumn of the same year. The high degree of digitisation and automation here requires a sure instinct. In the future, however, this will lead to significant improvements in quality consistency and mastery of the variety of products. In the future, all raw materials will be weighed exactly, for example. Until now, we have had to rely on the weight information provided on the supplier’s packaging for some raw materials. A clear product structure also helps to simplify processes and avoid mistakes.

For the upcoming 2019 season, the preparatory work will be completed to an extent that allows us to fully rely on the new production. With this investment, we are taking a big step towards digitising our processes.

Another project in the Triflex division was successfully completed last year: after several years of preliminary work, in May 2018 Triflex was able to commission ‘Warehouse-South’ near Stuttgart as the first German warehouse location outside Minden, which supplies directly to customers. The project brings a significant competitive advantage to the distribution of Triflex products, as customers in southern Germany can now place their order later in the day and still have it delivered safely the next day.

Under the heading ‘Electronic Business Solutions’, Triflex is working on a further project to make the interface to the customer more efficient and better with the help of digitisation.
Ensuring a reliable, sustainable and competitive supply of raw materials continues to be a major challenge, especially for us as a medium-sized group of companies. Europe is increasingly developing as an import market for chemical raw materials, especially from Asia. This requires the Follmann Chemie Group to engage in direct purchasing activities in countries such as China or India in order to be able to assess the security and sustainability of supply first-hand and not rely on intermediaries.

### Group data

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<th>1977 Follmann 1984 Triflex</th>
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<tr>
<td><strong>Established</strong></td>
<td></td>
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<tr>
<td><strong>Group founded</strong></td>
<td>2015</td>
</tr>
<tr>
<td><strong>Production locations</strong></td>
<td>Minden (D) Andover (UK) St. Petersburg (RU)</td>
</tr>
<tr>
<td><strong>Turnover</strong></td>
<td>Euro 200 million</td>
</tr>
<tr>
<td><strong>Employees in total</strong></td>
<td>780</td>
</tr>
<tr>
<td><strong>Employees at the Minden site</strong></td>
<td>500</td>
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<tr>
<td><strong>Employees in R&amp;D</strong></td>
<td>70</td>
</tr>
<tr>
<td><strong>Trainees and dual students</strong></td>
<td>35</td>
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</tbody>
</table>
Our product solutions

The Follmann product range comprises printing inks, adhesives and microcapsules as well as coating systems for the decorative and functional design of surfaces in various applications. We support our customers from the initial product request to the finished end product. Individual solutions are our speciality!

Print and packaging

Printing inks and coatings for the printing and packaging industry
With our water-based printing inks for flexographic and gravure printing, we not only offer brilliant colour shades, but also an environmentally friendly and low-consumption alternative to solvent-based inks. Our watercolours are used, for example, in table decoration products such as napkins, tablecloths and placemats, or in flexible film and paper packaging in the food and non-food sector. Scented coatings that can be printed on flyers, postcards, magazine pages or packaging round out our portfolio.

Design and function

Decorative and functional coatings for a variety of applications
This business unit focuses on decorative and functional solutions as well as premium finishing products. Its broad product offering includes printing inks and coatings for the wallpaper and woodworking industries, plastisols and polymer dispersions for engineering textiles, and water-based dye-receiving layers for digital print media.

Industrial bonding

Powerful adhesives for a variety of adhesive applications
An adhesive bond should be reliable and last even in extreme conditions. Follmann has been developing and producing quality high-performance dispersion, hot-melt and pressure-sensitive adhesives for industrial use for many years. Our adhesives are used in the packaging industry, in the cardboard and corrugated board industry, in end-of-line packaging, in bookbinding, for transport and shipping packaging, but also in textiles applications, labels and in speciality segments such as the mattress industry.

Wood and furniture

Stuck on sticking
Whether for solid wood bonding, full-surface and assembly bonding, hot and cold laminating, veneering, edge gluing and pre-coating, panel and profile wrapping as well as a whole host of other wood bonding processes, in this Business Unit we sell high-performance hot-melt and dispersion adhesives for the wood and furniture industries.

Specialities

Microencapsulation: small capsules – big effect.
Innovation, precision and experience are the foundations of microencapsulation – our high-tech speciality. The packaging of liquid and solid substances in microcapsules is the perfect way to selectively release or sustainably protect content. Enjoy long-lasting freshness for clothing thanks to microencapsulated scents in detergents, or a more efficient use of pesticides through microencapsulation. Follmann encloses a variety of ingredients in microscopic capsules that can be opened under exactly defined conditions. We not only refine detergents, care products and cosmetics in this way but also add functional value to a wide variety of speciality chemicals such as paints, lubricants and adhesives.
Our system solutions

As a leading European specialist in waterproofing and coatings, we have learned one thing in the last 40 years: having an excellent product is not enough to solve problems permanently. As a family business, we pursue a very different approach: we always solve problems together. From consultation and execution of the projects through qualified processing to excellent products and services, we work closely with our specialised craftsmen, planners, architects and the housing industry to devise a suitable solution for each task.

Flat roofs and flashings
Triflex supplies systems with long-lasting protection for simple, detailed and complex roof structures. Whether new constructions or renovations, green roofs or individual surfaces: Triflex offers you an optimal, individual and sustainable solution for every requirement. The fleece reinforcement, combined with the elastic material, ensures a seamless and jointless seal.

Balconies, patios and walkways
Exposed areas, such as balconies, rooftop terraces, loggias and walkways, are continuously exposed to the elements and mechanical stress. Here, moisture penetration, concrete spalling and corrosion can damage the reinforcement and endanger the building fabric. Triflex systems permanently protect against moisture and dampness and offer durable solutions that allow for predictable planning and thus ensure high reliability.

Multi-storey and underground car parks
Multi-storey car parks are exposed to mechanical and chemical stresses throughout the year. Rain and condensation water, road salt and fuels additionally attack the already contaminated surfaces. Triflex systems permanently seal multi-storey and underground car parks and meet the highest standards of safety, cleanliness and cost-effectiveness. Thanks to the fast-curing liquid plastic, all surfaces, ramps and details can be driven on again very quickly.

Infrastructure
Triflex develops innovative system solutions for a variety of applications. These include maintaining and operating traffic areas as well as protecting joints, wind turbines and silo systems, and spaces for liquid manure, slurry and seeping juices. Thanks to the Triflex systems, these areas are permanently sealed and can be used and reused after just a short time.

Markings for roads, bike paths, halls and car parks
Increasing traffic, weather conditions and mechanical stress on motorways, roads and bike paths also place high demands on the marking systems. Triflex systems are not only durable and quick to process, they also provide orientation at any time of day or night and in any weather, ensuring maximum safety.
Product responsibility

Focus on product safety
As a company in the chemical industry, we have a high responsibility for the safety of our customers and the users of our products. Product safety is therefore an extremely important issue for us. We are constantly working to improve our products and to minimise the use of hazardous substances. For example, we are committed to avoiding toxic and carcinogenic substances when developing new products. Owing to our raw material qualification process, we only use raw materials that meet our criteria for the respective application. As a general rule, we do not use any raw materials without testing and approval.

Water-based inks for sustainable and flexible printing
With water-based Follmann printing ink systems, we offer premium products which have been specially developed for flexographic and gravure printing on pre-treated plastic films, such as PE, PP, PET, PA and OPP. Because these inks contain water rather than organic solvents, they are significantly lower in emissions and more environmentally friendly than traditional, conventionally used solvent systems.

PVC-free wallpaper coatings
We have developed PVC-free coatings for the production of wallpaper, which can be printed with water-based inks. The wallpaper produced in this way have a similar look and feel as vinyl wallpapers.

Circular economy
Our hot-melt adhesives for the packaging and bookbinding industry are very easy to separate in the recycling process. Thus, they do not interfere with the reprocessing of paper packaging and printed matter.

Reducing the amount of active ingredients through microencapsulation
The encapsulation of fragrances enables targeted release in the scenting of printed products and gives laundry a prolonged freshness effect. Thanks to the patented Follmann technology, our microcapsules are extremely stable, meaning that the contents do not leak out too soon or by accident. As a result, the use of active ingredients and fragrances can be reduced to a minimum.

Low-emission adhesives
With our dispersion and hot-melt adhesives, we make an important contribution to natural living. Our adhesives are proven to be low in emissions and comply with the most stringent European standards.
Triflex – stable and durable
Triflex systems made of liquid plastic permanently protect the building fabric from dampness and moisture. The high-quality solutions significantly extend the renovation intervals and thus make a decisive contribution to preserving value.

Liquid plastics are single- or multi-component materials, which are applied on-site in a liquid and seamless manner and produced by a chemical crosslinking reaction or by physical drying. Safe surface and detail sealing is no problem with Triflex system solutions – regardless of whether for new buildings or refurbishments. Liquid plastics from Triflex can be processed well and ensure long-term protection from a single source.

Triflex waterproofing solutions are certified in the highest performance categories and have proven themselves in extensive tests and many years of practical use. According to ETAG 005, the expected duration of use for the seal is 25 years. Constant internal and external quality controls as well as the further development and optimisation of the products are a matter of course for us.

Triflex marking materials are characterised by high mechanical strength, long service life and dirt resistance. Production according to the standards defined by DIN ISO 9001 guarantees a constant quality. More than 100 colours are available for designs in halls, multi-storey car parks and areas, where they ensure the best possible orientation and long-term safety. In addition, they clearly structure parking spaces, walking paths and driving routes.
Emissions

Our production operations produce emissions of dust and volatile organic compounds (VOCs) into the air. Volatile organic compounds are created through the use of carbon-based raw materials in our production processes. To minimise VOC emissions and odours, the exhaust air from construction chemicals production and microencapsulation is routed via a regenerative thermal oxidiser (RTO) for the treatment of exhaust air. Building the RTO enabled us to reduce our VOC emissions by more than 80% (40 t). VOC emissions from the other areas correlate, on the one hand, with the production volume (longer emission times) yet, on the other hand, also depend on the type of products produced. The emissions vary depending on the VOC content of the raw materials used. In 2018, we have seen a decline in VOC emissions. In 2018, we made all the technical and regulatory preparations required to connect the exhaust air of the polymerisation plants for the production of our dispersion adhesives to our existing RTO, thereby further reducing VOC emissions. Dust emissions arise out of the use of powdered raw materials such as pigments and fillers in our production areas. In all production areas in which we use powdery raw materials, we have installed powerful dust filter systems. As a result, our emitted dust levels are very low and amount to around 100 kilograms per year.

In our energy station and in the operation of our RTO, CO₂ emissions are generated directly through the burning of fossil fuels (natural gas) at the site and indirectly through the purchase of electricity, the generation of which also produced CO₂. Our energy station consists of two combined heat and power plants for generating our own electricity, two steam generators and one refrigeration plant. The increase in CO₂ emissions in 2018 is the result of the construction of our new production plant for construction chemical products and the increase in full-time hours of our combined heat and power plant.

### Emissions [t]

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile organic compounds</td>
<td>4.5</td>
<td>6.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Dust emissions</td>
<td>0.094</td>
<td>0.100</td>
<td>0.096</td>
</tr>
</tbody>
</table>

### CO₂ emissions

#### From primary energy sources (scope 1) [t]

<table>
<thead>
<tr>
<th>Source</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>3,957</td>
<td>4,318</td>
<td>4,454</td>
</tr>
<tr>
<td>Diesel / heating oil</td>
<td>65</td>
<td>64</td>
<td>63</td>
</tr>
<tr>
<td>LPG</td>
<td>143</td>
<td>155</td>
<td>146</td>
</tr>
</tbody>
</table>

#### From secondary energy sources (scope 2) [t]

<table>
<thead>
<tr>
<th>Source</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>2,591</td>
<td>2,454</td>
<td>2,466</td>
</tr>
<tr>
<td>Total</td>
<td>6,756</td>
<td>6,991</td>
<td>7,220</td>
</tr>
</tbody>
</table>

Our water consumption at the Minden site is mainly met by the Minden municipal water supply network. Water is used as a raw material in products, for cleaning purposes in the plant, as a coolant, as boiler feed water for steam generation and for sanitary facilities (toilets, showers, kitchens). Since 2015 we have also used well water to operate the cooling system in our energy station. In 2018, we increased the share of well water in our total water consumption from 2% to 6%. Compared to the previous year, our fresh water consumption dropped by about 5% in 2018. We aim to minimise the use of fresh water for processes, including steam generation, cooling and cleaning operations, to as low an amount as possible. In 2018, we successfully reduced our process water volume compared to previous years. This is due to the significant reduction in the use of fresh water for cooling purposes. Of the total amount of cooling water in 2018, approximately 80% was provided by well water. Furthermore, we had introduced more control measures for the steam plant, so that the plant ran consistently without any disruption in the past year and no increased water volumes were incurred.

Our volumes of waste water, which we introduce into the city sewer system, correlate with our use of water. The waste water is made up of operational waste water, which is mainly produced by cleaning processes in production and during treatment tank and container cleaning, sanitary sewage from toilets, showers and kitchens as well as waste water from the steam plant. The operational waste water passes through a separate sewer system to our in-house waste water treatment plant. There it is pre-cleaned by means of precipitation and flocculation, and we introduce it as an ‘indirect discharge’ into the municipal sewage system for onward transport to the Minden municipal waste water treatment plant.

Our indirect discharge approval specifies limit values for certain hazardous substances for the operational waste water introduced into the municipal sewage, which we monitor on a regular basis. According to all these monitoring activities, we comfortably met the limit values for all parameters during the reporting period.

<table>
<thead>
<tr>
<th>Water volumes [m³]</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water purchasing</td>
<td>35,259</td>
<td>39,554</td>
<td>37,758</td>
</tr>
<tr>
<td>Well water</td>
<td>721</td>
<td>859</td>
<td>2,245</td>
</tr>
<tr>
<td>Process water</td>
<td>22,359</td>
<td>28,281</td>
<td>21,068</td>
</tr>
<tr>
<td>of which cooling water</td>
<td>4,665</td>
<td>4,995</td>
<td>2,821</td>
</tr>
<tr>
<td>Proportion of fresh water in the cooling water</td>
<td>85%</td>
<td>82%</td>
<td>20%</td>
</tr>
</tbody>
</table>
Waste

Reflecting our product diversity, our Minden location produces roughly 50 different waste fractions, which are separately collected and disposed of. We regularly review the disposal options, giving preference to recycling, and especially reprocessing, where economically feasible.

After reducing our waste volume by 11% in 2017 compared to the previous year, we achieved a further reduction of 1% in 2018. The amounts of hot-melt adhesive waste generated when starting up the plants could be reduced by 65% through optimised plant operation. On the other hand, the sewage sludge volume from the in-house waste water treatment plant increased by 11%, as the plant could pre-clean 17% more water than in the previous year owing to our purchase of a new chamber filter press in 2018. For the other waste shares, there have been no significant changes between 2017 and 2018. Accordingly, our waste volumes are almost as high as in the previous year.

In accordance with European waste management regulations, waste is generally classified according to whether it contains a certain proportion of hazardous substances.

But because we cannot avoid using hazardous substances in our production processes, the generation of waste classified as hazardous is unavoidable. Through our development processes, we ensure at an early stage that the use of hazardous substances in our production remains as low as possible, and we thus keep the proportion of hazardous waste at a low level. The proportion of hazardous waste has remained approximately the same in the past two years, around 40%.

In the reporting year 2018, we were able to maintain our recycling rate of 69% at the same high level as in the previous year (2017: 70%). In contrast to the previous year, the amount of waste for disposal increased slightly (3%). This is due to extensive cleaning of storage tanks and swap bodies.

<table>
<thead>
<tr>
<th>Waste volumes [t]</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total waste</td>
<td>2,570</td>
<td>2,290</td>
<td>2,270</td>
</tr>
<tr>
<td>Waste for recycling</td>
<td>1,663</td>
<td>1,603</td>
<td>1,560</td>
</tr>
<tr>
<td>Waste for disposal</td>
<td>907</td>
<td>687</td>
<td>710</td>
</tr>
</tbody>
</table>

| Hazardous waste [%] | 38 | 42 | 43 |

| Recycling rate [%] | Waste for recycling | 65 | 70 | 69 |
Energy

The energies we use on site are natural gas, electricity, diesel and LPG. Natural gas is used to operate our energy station, for heating and for auxiliary firing of the thermal exhaust air cleaning plant (RTO). The energy station, which went into operation in 2015, consists of two combined heat and power plants (CHP) with steam boiler systems and a refrigeration system. The goal of this system is to cover our basic steam, electricity, heat and refrigeration requirements at our site in the most resource-effective way possible. Diesel is needed for the emergency generators and for internal swap body transporters. Fuel oil is used for the operation of the high-pressure cleaning devices and liquid gas is used as fuel for the forklift trucks. 48% of the electricity we used in 2018 came from our own heat-regulated combined heat and power plants in the energy station (2017: 46%). In the reporting year, we achieved our goal of increasing the full utilisation hours for the combined heat and power plant by 10% and could thus also increase our own power generation.

Our energy requirements are rising steadily as we continue to grow. We have decided to evaluate our energy consumption based on the level of carbon dioxide emissions caused by the combustion of fossil fuels on site and by the production of the electricity which we procure externally.

In 2018, we have made a major change by constructing and gradually commissioning our new construction chemical production facility, which has fundamentally changed our energy requirements. That is why our performance indicator is no longer comparable to previous years. However, we are abiding by our key performance indicator and will be redefining the starting point after a full productive year of chemical construction.

<table>
<thead>
<tr>
<th>Energy sources</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas [GWh]</td>
<td>19.6</td>
<td>21.4</td>
<td>22.5</td>
</tr>
<tr>
<td>Diesel / heating oil [GWh]</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>LPG [GWh]</td>
<td>0.6</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Electricity [GWh]</td>
<td>4.9</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Total [GWh]</td>
<td>25.3</td>
<td>26.9</td>
<td>27.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tonne of CO₂ produced per tonne of product [t/t]</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>0.124</td>
</tr>
</tbody>
</table>
Milestones

Ever since company was first established, ecological goals and innovations have been an integral part of the corporate philosophy. The following chronological presentation provides an overview of many different activities of the company.

1981
Development of water-based foam printing inks for textured wallpapers

1984
Development of solvent-free tissue printing inks

1985
Elimination of use of chlorinated hydrocarbons

1986
Founding member of the “Förderkreis Umwelt future e.V.” environmental association

1988
Establishment of the “Environment & Safety” department and appointment of the first Environmental Protection Officer

1990
Introduction of solvent-free printing inks in the European wallpaper industry

1991
Founding of the industry and commerce environmental initiative in the Minden-Lübbecke district

1992
Development of the world’s first chlorine-free plastisol for wallpaper coating

1994
Implementation of a new concept to increase sales in reusable containers

1997
Set-up of an environmental management system pursuant to DIN EN ISO 14001 and integration into the existing quality management system

1998
Recycling instead of disposal of PVC waste paste and films

1998/99
Award for environmental awareness in company management from the “Arbeitsgemeinschaft Selbständiger Unternehmer” (working group of independent entrepreneurs)

2000
Development of VOC-free printing inks for tissue printing
2002
Recycling of more than 50% of all waste

2003
Development of a new reaction process for adhesives in order to minimise the residual monomer content

2004
Participation in a research project of the German Federal Environmental Foundation (DBU) for the development of VOC-free film printing inks for flexible packaging (2004-2006)

2006
Sound insulation: installation of a housing for an extraction fan and the corresponding dust extraction system as well as a sound insulation pipe

2007
Installation of a new dust extraction system to reduce dust emissions from construction chemicals production and WBC production (reduction of dust emissions from 4 tonnes to 150 kg per year)

2008
Installation of an exhaust air cleaning plant (RTO) to reduce emissions of volatile organic compounds (VOC) by 20 tonnes per year

2009
Installation of caustic treatment to eliminate the use of organic solvents for container cleaning and significantly reduce the emissions of volatile organic compounds (VOC)

2010
Minimisation of VOC emissions by more than 10 tonnes per year through decommissioning of solvent containers

2011
Development and market launch of water-based inks for flexible packaging (e.g. carrier bags and plastic films)

2013
Introduction of an energy management system according to ISO 50001

2014
Installation and commissioning of an energy station comprising a combined heat and power plant with a steam boiler and refrigerating plant.

2016
Housing and sound insulation of our water chillers in the polymerisation system in order to minimise ambient noise emissions

2017
Implementation of various noise control measures in hot-melt adhesive production to reduce the noise level below that for noise zones

2018
Exclusive heating and cooling of the new production facility for construction chemicals by our energy station
Occupational Safety

Occupational safety and the safe use of our products are top priorities for us. This is reflected in numerous measures and projects across the entire Group and the involvement of many employees.

Occupational safety has been integrated into our management system for more than 20 years. It is professionally organised and an integral part of our everyday activities. This was impressively confirmed by our employee survey in 2018. Based on the question of whether occupational health and safety is addressed sufficiently in the company, it was determined that these aspects of our corporate philosophy are rated very positively in all departments of the Group. The result ranks among the top 5 questions with the most positive results, with an approval rate of 87%.

We appointed three specialists for occupational safety from the fields of Technology, Production and Environment & Safety. In addition to these three specialists, we currently also have 14 safety officers and a large number of first-aiders and fire safety assistants. These officers undergo continuous further training after completion of their initial training. The various aspects of occupational safety and hazard prevention are also taught and retaught in regular internal and external training courses; tailored to the requirements of the specific employee’s job. In 2018, we conducted skin protection training for more than 200 employees from production, logistics, application engineering and research & development. In addition to providing information on the structure of the skin, possible harmful influences and their prevention, the benefits of skin protection products and their correct use were explained through various exercises.

We have anchored preventive safety measures in our management system at the organisational, personnel and technical levels. If an incident occurs, these safety measures are effective in limiting the impact on people and the environment. These are laid down in our corporate alarm and security plan, annual training in which is compulsory for all employees. In the past year, we have already largely switched our internal training courses to an electronic training system in order to be able to assign the numerous (legally required) instructions to individual workplaces and activities. Depending on their workload, employees can choose the time for their training sessions independently. Through clear training documents, regular comprehension checks and a feedback tool for the employees to training document authors, this system continuously improves the transfer of knowledge.
Work accidents

We have been systematically recording work accidents for almost 30 years, and now that occupational safety has been incorporated into our management system, a thorough analysis of each accident is conducted. We record both notifiable (to the German employer’s liability insurance association) and non-notifiable accidents. For every accident, an accident report is generated on our intranet, which serves as the basis for accident analysis and processing. The results of the accident analysis and any necessary countermeasures taken are documented there.

The number of recorded work accidents has increased by 15% in 2018. The number of reportable accidents has also increased by one case. Therefore, the number of reportable accidents per 1,000 employees has also risen compared to the previous year, but is still below the 2016 rate. Despite the increased accident rates, the number of days lost has fallen by 35% compared to the previous year. Most work accidents (55%) fell under the category ‘bruising, contusion, compression’ in 2018. Three of these accidents were more severe and accounted for 60% of all days off. The majority of the remaining ‘bruising, contusion, compression’ accidents resulted in only minimal downtime.

After a severe chemical accident (despite the employee wearing the full personal protective equipment) occurred in capsule production in 2017, in 2018 we had only three mild chemical accidents that did not result in any consequential damage or treatment. After testing in capsule technology production, additional measures have been introduced for all areas in which employees handle corrosive liquids. New transport containers (closed cans) and pumps for corrosive liquids were procured.

<table>
<thead>
<tr>
<th>Work accidents</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorded work accidents</td>
<td>19</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Reportable work accidents</td>
<td>14</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Quota of recorded accidents per 1,000 employees</td>
<td>40</td>
<td>40</td>
<td>46</td>
</tr>
<tr>
<td>Quota of reportable accidents per 1,000 employees</td>
<td>30</td>
<td>24</td>
<td>26</td>
</tr>
</tbody>
</table>
Employees

By the end of 2018, the number of employees of the Follmann Chemie Group had risen to more than 780, and of these more than 500 work at our site in Minden. This growth has led to changes concerning the location, the working environment and the way of collaborating. As a company, we want and must accompany these changes properly and implement and shape them together with our employees.

Employee survey
The opinion of our employees was especially important to us in 2018. The first employee survey of the Follmann Chemie Group was a complete success with a participation rate of 80%. For the Follmann Chemie Group, the individual companies and individual teams, strengths and fields of action were identified that will be worked on in the coming years.

Employee development – Talent development programme
Our talent management is an effective instrument for systematically identifying and promoting previously ‘undiscovered employee strengths’ and for retaining high-performing employees in the long term at the Follmann Chemie Group. Over the course of three years, we would like to further develop the talents in a targeted and individual manner in order to build up the company’s knowledge and to promote their entry into new fields of activity and/or career advancement.

Innovation needs competence
Today’s working world is undergoing constant change, which presents new challenges for everyone. Lifelong learning is very important here, and we offer our employees a variety of in-house training courses in addition to external subject-specific advanced training courses. Our annual range of courses includes product training, foreign languages, MS Office, methodological competence as well as personal and social skills.

New Work
Behind this idea lie new concepts and paths for the working world of the future, which has to adapt to changing values – driven by digitisation and globalisation. Traditional concepts concerning time, space and organisation of work and work environments need to be re-thought and revised. The New Work project group will work intensively on this issue over the next few years to ensure that the Follmann Chemie Group will continue to be an attractive employer, both for existing and future employees. The ‘idea boxes’ are a new platform that can be filled with ideas, feedback, wishes and suggestions. Five idea boxes have been installed throughout the company premises. More than 200 suggestions have already been submitted, which are prioritised and then processed and evaluated.
Education

The Follmann Chemie Group provides training opportunities for an exceptionally large number of young people. Today, we offer apprenticeships in six different specialisations. In addition to the original recognised trades of industrial clerks, chemical laboratory technicians and chemists, it has also been possible for some time to complete various dual-degree programmes, including in the areas of business informatics and mechatronics. At present, 30 young people are completing their training at our company. We subsequently hire almost 100% of them. To accompany the training, we offer a variety of courses especially tailored to our trainees. These include instruction in MS Office, presentation techniques and communication. We also organise various team-building excursions for our trainees every year. Our 2018 training trip took the trainees to two locations, one of them being DASA, where they were given insights into work and occupational safety, including in the laboratory. The second stop was a Teekanne company factory tour, followed by a round of laser tag.

Upon successful completion of each training, the Follmann Chemie Group always organises a joint closing dinner.

Training Day – Hands-on work experience
Every year we invite pupils from near and far to our Training Day. The training area, which showcases all our apprenticeships, offers a variety of stations for visitors to try out and marvel at different occupations. In 2018, about 80 students and parents experienced what the future workday in a chemical company might look like.

Job application training and vocational information days: every year we offer job application training at the Freiherr-vom-Stein Technical College to support young people in their career choice. We also participated in the career information days at the Petershagen Grammar School, Herder Grammar School and Bessel Grammar School in Minden.
Health management

Our health is our most important asset, and for this reason, in 2018, we partially changed and expanded the health services of the Follmann Chemie Group. It is not only important to us that our employees watch their health at work, but also in their spare time; that is why we want to expand the possibilities available to them – in constant collaboration with our employees and in consideration of their wishes and ideas.

Company cycle leasing

In 2018, we gave our employees the option to lease a company cycle for the first time. This enables our employees to use the company cycle both on the way to work and privately, to actively engage in activities and at the same time to travel in an environmentally friendly way.

**IN 2018, WE OFFERED THE FOLLOWING SERVICES:**

<table>
<thead>
<tr>
<th>Health Day</th>
<th>Health programme</th>
</tr>
</thead>
</table>
| *This year’s Health Day shared the motto of the employee survey: ‘Machen Sie mit – Gestalten Sie mit’ (Participate and co-create).* The following services were available: | *Company massage*  
*Flu shot*  
*Free beverages (water, tea, coffee)*  
*Fresh apples every week for all employees*  
*After-work cooking*  
*Free external courses:*  
  - *Aqua power*  
  - *Progressive muscle relaxation*  
  - *Stretch & relax*  
For the first time, we also offered outdoor activities: |  
*Back health course for forklift drivers and desk workers*  
*Archery*  
*Go-kart track*  
*Company cycle trial runs*  

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In addition to the clear commitment to the Minden region and the expansion of the local site, we are involved in the Minden community in various ways. Amongst other things we assist local schools, the parent and child centre at the Johannes Wesling hospital and the child protection association in Minden-Bad Oeynhausen. Local sports clubs are also sponsored and the regional activities of our staff are actively encouraged and supported.

We give young people the opportunity to do internships, to write BA and MA theses and do vocational training whilst studying. For years now, we have participated in the ‘vocational exploration day’ scheme to give children and teenagers a taster of career opportunities at the company.

We encourage communication with our neighbours, interested citizens and politicians by inviting them to various events held in our company.

Examples of our social commitment in the region

- Every year, we support the work of the Rehburg-Loccum workshops for the blind by purchasing large quantities of brooms and hand brushes for our product sets.
- Financial support of the Minden Museum
- Financial support of the Weserlieder Kultur e.V.
- Sports club sponsorships: Support of 1.VC Minden and SV Kreuzkrug-Hudebock e.V. with functional sports clothing
- Participation in a rowing cup and in various company and charity runs
- Support of GWD Minden
- Annual foundation of a prize to recognise students with an excellent performance at the Minden Bessel Grammar School
- Sponsor of the OWL Study Fund
- Support of the parent-child ward of the Johannes Wesling Clinic Minden

‘Social commitment has been a firm component of our corporate culture for many years.’

(De Henrik Follmann)
## Overarching sustainability goals

As part of our sustainability management, we set quantitative targets in the areas of safety, environmental and health protection by means of key figures and their target values.

<table>
<thead>
<tr>
<th>Overall Target</th>
<th>Indicator and Target</th>
<th>2018 result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Raw materials</strong></td>
<td><strong>Proportion of toxic substances purchased</strong></td>
<td></td>
</tr>
<tr>
<td>We aim to avoid as far as possible the use of raw materials classified as toxic or CMR.</td>
<td>[Volume of ‘toxic/cmr’ raw materials purchased] / [Total volume of raw materials purchased]</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td><strong>Water consumption</strong></td>
<td><strong>Water indicator</strong></td>
<td></td>
</tr>
<tr>
<td>We aim to minimise the use of fresh water for production as far as possible.</td>
<td>[Fresh water consumption for processes (m³) / Production volume (t)]</td>
<td>≤ 0.32 m³/t</td>
</tr>
</tbody>
</table>

### Raw materials

Our development departments ensure as part of our management system that particularly hazardous substances are only used in exceptional cases. We ensure that hazardous substances are handled safely and responsibly within our group of companies. We have set ourselves the goal of avoiding the use of acutely toxic substances and substances with CMR properties (i.e. carcinogenic, mutagenic or toxic for reproduction) as far as possible. In doing so, we wish to minimise handling of these substances by our employees and by our customers.

### Water consumption

We narrowly missed the target for our water indicator in 2018, although we were able to reduce our process water volume by more than 25% compared to the previous year by reducing the use of fresh water for cooling purposes and in the energy station. In order to reduce the amount of fresh water for cooling purposes, we have increasingly used well water in addition to reducing evaporative cooling systems in the polymerisation. We had introduced more control measures for the energy station, so that the plant ran consistently without any disruption in the past year.
Overall Target | Indicator and Target | 2018 result
--- | --- | ---
**Amount of waste**
We aim to keep the volume of waste produced to a minimum on a permanent basis. | Waste indicator
[Total waste (t) / production volume (t)] ≤ 0.035 | Narrowly missed

**Waste treatment**
We aim to keep the volume of waste produced to a minimum. | Disposal ratio
[Waste disposal volume / Total waste volume] < 40% | Comfortably achieved

**Amount of waste**
In the past year, we were able to reduce our waste volume slightly compared to the previous year. However, we narrowly missed our target for the waste indicator due to the lower production volume. For most other waste shares, there have been no significant changes in volume. Melt adhesive waste, however, could be reduced by more than half through optimised plant operation. On the other hand, the amount of sewage sludge from our in-house wastewater treatment plant has increased, because the plant was operated with two chamber filter presses throughout the year and thus significantly more water could be cleaned than in the previous year.

**Waste treatment**
Over 50 different types of waste are produced by our company. We regularly review how they are disposed of and give priority to recycling. Approximately 70% of our waste was recycled or incinerated to produce energy in 2018. As in the previous year, the disposal ratio was thus well below our target, which means we have once again achieved our goal here.
Completed Projects: Safety, Health, Environment and Energy Management 2018

In our programmes for safety measures, health and environmental protection and energy, projects are documented and tracked for greater optimisation potential. These are the results of some projects undertaken in 2018:

<table>
<thead>
<tr>
<th>Initiated by</th>
<th>Department</th>
<th>Measure, Goal and Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupational Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection</td>
<td>Waste water pretreatment plant</td>
<td>Optimisation of the dust extraction for applying the lime milk in the waste water pre-treatment plant in order to minimise the dust load.</td>
</tr>
<tr>
<td>Accident analysis</td>
<td>Production areas</td>
<td>After testing in capsule technology production, procurement of new transport containers (closed cans) and pumps for all areas where employees handle corrosive liquids.</td>
</tr>
<tr>
<td>Hot-melt adhesives team</td>
<td>Production of hot-melt adhesives</td>
<td>Implementation of noise abatement measures in the hot-melt adhesives production, which has made it possible to ensure that this department is no longer a noise zone.</td>
</tr>
<tr>
<td>Inspection</td>
<td>Company-wide</td>
<td>Procurement of a new personal emergency signal system for individual workplaces to keep our employees safe when they work alone.</td>
</tr>
<tr>
<td><strong>Emission control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment &amp; Safety</td>
<td>Production Polymerisation</td>
<td>Technical and licensing preparation of the connection of the exhaust air of the adhesive reactors in the polymerisation plant to our existing waste gas purification plant (RTO).</td>
</tr>
</tbody>
</table>
### Water Conservation

| Technology | Production Polymerisation | Reorganisation of cooling in polymerisation production: decommissioning of the cooling towers and exclusive use of the closed cooling circuit. As a result, the amount of fresh water used for cooling purposes is greatly reduced. |
| Technology | Production Construction chemicals | Reduction of the consumption of process water in the new construction chemical production by recirculating condensate water to the steam generators. |

### Waste

| Logistics | Production Polymerisation and plastisols | Reduction of disposable containers for internal use: by filling various products directly into the sales containers and avoiding intermediate fillings in IBCs, their disposal is avoided. |
| Employees | Production of hot-melt adhesives | Reduction of the lead time before the start of the granulation of the hot-melt adhesives and the return of the starting granules in the production cycle of the respective products. As a result, the start-up losses to be disposed of are greatly reduced. |

### Energy

| Employees | Production of hot-melt adhesives | Optimisation of the cooling control in the production of hot-melt adhesives to reduce the power requirement by adjusting the flow temperature to the respective manufactured products. |
| Technology | Production Construction chemicals | Return of the condensate water from steam-heated tanks to the construction chemical production: by returning the warm condensate water for steam generation, the energy consumption in the steam system is reduced. |
| Employees | Administration | Conversion of lighting in the administration building from fluorescent tubes to LED to save electricity. |
Planned Projects:
Safety, Health, Environment and Energy Management 2019

Various health, safety, environmental and energy management measures and projects have also been included in our measure programmes for the current year 2019. Some of the projects from various areas of the firm which we aim to realise this year are listed below:

<table>
<thead>
<tr>
<th>Initiated by</th>
<th>Department</th>
<th>Action and objective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupational Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection</td>
<td>Production</td>
<td>Assembly of lifting aids for the addition of raw materials and for the ergonomic handling of containers.</td>
</tr>
<tr>
<td></td>
<td>Printing inks</td>
<td></td>
</tr>
<tr>
<td>Inspection</td>
<td>Quality control</td>
<td>Optimisation of the extraction during the production of test samples via hot-air oven to minimise warm vapours in the laboratory air.</td>
</tr>
<tr>
<td>Management team</td>
<td>Company-wide</td>
<td>Introduction of an electronic training system for assigning workplace-specific and job-specific (legally required) training courses with regular comprehension checks and a feedback tool.</td>
</tr>
<tr>
<td>Technology</td>
<td>Company-wide</td>
<td>Procurement of a sound level meter for control measurements and orienting measurements of the noise level in all operating areas.</td>
</tr>
<tr>
<td><strong>Water Conservation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>Company-wide</td>
<td>Partial renovation of the underground sewer system based on the digital inventory.</td>
</tr>
</tbody>
</table>

Our objectives
### Operational safety

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Plant safety</td>
<td>Creation of a turnstile to ensure access restriction for unauthorised persons on the premises.</td>
</tr>
</tbody>
</table>

### Waste

| Production     | Operations                                  | Further reduction of the use of disposable containers for internal use and intermediate filling to reduce container disposal volumes. |

### Emission control

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Company-wide</th>
<th>Creation of a noise forecast for the site based on new noise measurements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment &amp; Safety</td>
<td>Production</td>
<td>Polymerisation</td>
</tr>
</tbody>
</table>

### Energy

<table>
<thead>
<tr>
<th>Technology</th>
<th>Company-wide</th>
<th>Procurement of a measuring device to check the functioning of the condensate drainage within the steam network.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy team</td>
<td>Company-wide</td>
<td>Installation of an automatic, higher-level regulation of the compressed air systems to reduce power consumption and maintenance intervals.</td>
</tr>
</tbody>
</table>
Glossary

**CHP**
A combined heat and power plant (CHP) is a modular system for generating electrical energy and heat. We use a gas-powered internal combustion engine as drive for the power generator.

**BU**
Business unit Follmann GmbH & Co. KG Vertrieb is divided into four strategic business units: Print & Packaging, Interior Decoration, Functional Solutions & New Business and Wood & Furniture.

**Chemie³**
Chemie³ is an industry initiative of the German chemical industry association VCI, the Mining, Chemical and Energy Industrial Union (IG BCE) and the German Federation of Chemical Employers’ Associations (BAVC) and is committed to sustainable development in the chemical industry.

**CO₂**
Carbon dioxide: a colour-, odour- and tasteless gas. Caused by the combustion of carbonaceous substances and considered to be a contributory cause of the greenhouse effect.

**DGNB e.V.**
The German Sustainable Building Council (DGNB e.V.) is a non-profit and non-governmental organisation whose mission is to develop and promote ways and solutions for the sustainable planning, construction and use of structures.

**Ecovadis**
EcoVadis operates the first collaborative platform that enables companies to measure the sustainability performance of their suppliers. EcoVadis has set itself the goal of improving environmental and social practices through the consistent use of global supply chains.

**EMAS**

**Emissions**
Solid, liquid or gaseous substances as well as noise, heat and radiation released into the environment.

**End-of-line packaging**
Packaging process at the end of the production process.

**ETAG 005**
European Technical Approval Guidelines 005 Liquid-applied roof waterproofing.

**Food applications**
Applications in the food industry.
**ISO**
The International Organization for Standardization – ISO for short (from Greek: isos) – is the international association of standardisation organisations and develops international standards.

**PE, PP, PET, PA, OPP, PVC**
Materials for plastic films: polyethylene, polypropylene, polyethylene terephthalate, polyamide, oriented polypropylene, polyvinyl chloride

**Sustainability**
The idea originally came from forestry: in order to implement sustainable action, only so much should be cut down in a forest as can regrow in the foreseeable future. Today, it is considered a development that ensures that future generations will not be worse off than those currently living. At the centre of sustainability are ecological, economic and social aspects.

**Non-food applications**
Application in areas without contact with food

**RTO**
Regenerative thermal oxidation, an emission control process. Is preferably used to reduce hydrocarbon emissions, whereby natural gas must be added to the exhaust gas.

In regenerative afterburning, the treated exhaust gas transfers its heat to a regenerator, which in turn warms up the untreated exhaust gas, reducing the energy requirement for combustion.

**Stakeholders**
Groups or individuals who are significantly affected by the company’s activities, products and/or services or who, in turn, can significantly influence the company’s business.

<table>
<thead>
<tr>
<th>Internal stakeholders:</th>
<th>Examples of external stakeholders:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Employees</td>
<td>• Customers</td>
</tr>
<tr>
<td>• Works council</td>
<td>• Suppliers</td>
</tr>
<tr>
<td>• Management</td>
<td>• Neighbours/public</td>
</tr>
<tr>
<td></td>
<td>• Politicians/authorities</td>
</tr>
<tr>
<td></td>
<td>• Competitors</td>
</tr>
</tbody>
</table>

**RC – Responsible Care**
Responsible Care is an initiative of the chemical industry with the objective to strive for a constant improvement of the companies in the areas of environment, health and safety irrespective of legal requirements and to make this progress public on a regular basis.

**VOC**
Volatile Organic Compound

**WBC-PR**
Water Based Compounds production
Reports and publications notwithstanding, nothing beats a face-to-face conversation. We therefore welcome dialogue with staff, neighbours, authorities, professional and environmental associations, schools, journalists and politicians and other interest groups.

If you have any questions or would like to talk to us for any other reason, then we look forward to hearing from you!

Your contact person:
Julia Szinzcsak
Head of Environment & Safety

Follmann Chemie GmbH
Heinrich-Follmann-Strasse 1
32423 Minden, Germany
Germany

Phone: +49 (0)571 9339-176
Fax: +49 (0)571 9339-8176
Email: Julia.Szinzcsak@follmann-chemie.de
Internet: www.follmann-chemie.de