



Sustainability Report

Bruchsaler Farbenfabrik GmbH & Co. KG 2022

Foreword by the management

Bruchsaler Farbenfabrik would like to present the first sustainability report in the company's history for the 2021 financial year. This should not only make transparent for our customers and suppliers what we do for environmentally friendly and sustainable production, but also be an incentive for us to constantly reduce the footprint of our products. Above all, we will concentrate on becoming more energy-efficient, want to generate part of our electricity ourselves and are increasingly looking at where our raw materials come from and under what conditions they are processed.

With this in mind, we will always optimize ourselves, just as we have always done in recent years. The biggest change was certainly the switch from lead-based pigments to lead-free alternatives. These are now fully established in the European and North American markets. But other countries are also following suit. We no longer sell pigments containing lead.

Our production and our actions will always consume energy. Nevertheless, we want to look for ways to avoid them or, if this is not possible, to compensate for them. We look forward to walking this path together with you in the years to come.

Bruchsaler Farbenfabrik is a company with a long tradition in the manufacture of inorganic pigments. We have been active in this field for over 125 years. Today's product range is wider than ever. The focus is on the production of bismuth vanadate as a yellow pigment. This replaces lead chromate, which is environmentally harmful during production and has long been considered the standard for inorganic yellow pigments. Bruchsaler Farbenfabrik offers hybrid pigments and pigment mixtures based on this bismuth vanadate.

In addition to the sale of pure bismuth vanadate pigment, we adjust any color for our customers, but usually according to RAL or other standardized colors. Our laboratory has a very long and rich experience with this, which our customers appreciate. For our company, particularly good customer service is the focus of everything we do.

We are always working to make our production more efficient and to improve it. As a result, we have already and will continue to save valuable energy. On the other hand, we strive to improve our products ourselves in order to be able to offer our customers the best possible quality.

Responsibility for our Company

Our product range

The Bruchsaler Farbenfabrik was originally a wholesale company for painting supplies, but soon began to produce color pigments itself. Business developed well and production was moved to the current location in Bruchsal. The Bruchsaler Farbenfabrik was soon the leader in the field of lead such as chrome yellow, molybdate red and orange. These not unproblematic pigments were successively replaced by bismuth vanadate in the European Union in the course of the revision of the chemicals regulation by Bruchsaler Farbenfabrik. Bismuth Vanadate or Pigment Yellow 184 is a non-toxic yellow pigment which, with its bright hue, is the best substitute for inorganic yellow pigments containing lead. It is manufactured in different grades of quality that differ slightly in tint. Depending on the requirement, Bruchsaler Farbenfabrik offers green-tinged or red-tinged variants. Bismuth vanadate is very stable, has very good opacity and a very high brilliance.

The quality of our products is constantly checked, also during the manufacturing process. Our quality management is certified according to ISO 9001 and is confirmed in an annual audit. The number of manufacturers of bismuth vanadate worldwide is small, they are very large companies or rather medium-sized companies like ours. Our products have the best properties and are absolutely comparable to those of our competitors. This high quality is also confirmed by our customers who buy from us from almost 100 countries.

We intend to further increase the already very high quality of our products through suitable measures. We will announce step by step what these look like in detail over the next few years.

Our three product lines include

BRUFASOL® AL: pure bismuth vanadates

BRUFATEC®: Red and orange hybrid pigments based on bismuth vanadate. The pigments behave like a monopigment and are a coloristic substitute for cadmium red and cadmium orange.

BRUFABLEND®: Dry pigment blends in any RAL, Pantone or custom shade. For practically every type chrome yellow, molybdate orange and molybdate red available on the market, we have a lead-free counterpart in our standard range.

Brufablend® standard grades are available in four different grades:

- BRUFABLEND® L Series, for indoor applications.
- BRUFABLEND® E-Series, based on bismuth vanadate. Universally applicable in indoor and outdoor applications.
- BRUFABLEND® ES series, based on bismuth vanadate. For outdoor applications that require the highest level of fastness.
- BRUFABLEND® H series, based on bismuth vanadate. For applications that require the highest temperature resistance.

Some of our products are currently sold by our partners. This model has proven itself for decades, as we can respond particularly well to local peculiarities and wishes and benefit from the regional knowledge of the market. In the area of Germany and Europe, we take over the support of the customers partly directly, partly together with our sales partners.

Bruchsaler Farbenfabrik is a member of the following associations and interest groups:

- Eurocolor, European umbrella organization for the pigment, filler and colorant industry.
- VdMI, Association of the Mineral Paint Industry e.V.
- CPMA, American Association of Pigment Manufacturers.
- VCI, Association of the Chemical Industry e.V.

We feel committed to our location and our regional connection and therefore want to invest further in order to make our work more efficient, energy-saving and environmentally friendly.

Our code of conduct, which we have lived for a long time and have also written down, is the model for our actions. In it we express our decisive action against corruption, unfair competition and compliance with moral and ethical standards.

Economic data at a glance

	Trend	reporting year 2021	reporting year 2020	reporting year 2019
Sales (€)	 ↑	12.359.679	8.435.310	11.148.995
Investments (€)	 ↑	246.984	41.697	105.583

Due to the pandemic year, sales in 2020 fell significantly, and less was invested in new or existing systems. We only see this as a short-term limitation of our business success, the year 2021 was the most successful in the company's history so far.

Our customers and partners

Bruchsaler Farbenfabrik is a medium-sized German company and sees itself at the center of society as a responsible employer and manufacturer in the chemical industry. Personal contact with our customers is particularly important to us.

We are directly accessible to our customers and believe that this is the key to our success. Regular visits, even if this has been less possible in recent years, are very important to us and our customers. The individual support, especially from our laboratory, is particularly

appreciated by our customers. We not only sell pigments, but also understand the products and the special features through years of business friendship with the users of our pigments. This leads to a shared added value. This is one of the reasons why we see ourselves as particularly competitive.

Our products are constantly being further developed. This usually happens together with customers and in small steps. We also support customer projects with our knowledge and sample material.

Bruchsaler Farbenfabrik as an employer

In our company we promote respectful and cooperative partnership, diversity and tolerance. We believe that such cooperation has positive effects on health, satisfaction, ideas and innovations. Equal opportunities and equal treatment are essential for fair, unprejudiced and open interaction. This is how we want to achieve maximum productivity, creativity and business success.

We perceive each of our employees as an individual and respect their respective attitude to life. We do not tolerate discrimination based on ethnic or national origin, gender, religion, ideology, age, disability, sexual orientation, skin color, political opinion, social background or other legally protected characteristics. Our employees are always selected, hired and promoted on the basis of their qualifications and skills and not on the basis of other characteristics.

Responsibility for nature and the environment

Today, the environmentally friendly manufacture of products is an important measure by which it is decided whether a prospect becomes a customer. It is not only major innovations that lead to more sustainability, but every small step counts.

Our corporate principle: We are committed to making our production more environmentally friendly, more efficient and less energy-intensive. We document this continuous progress in a report that is published annually. We will regularly check the environmental compatibility of our products and the manufacturing processes and optimize them if necessary. Our company is ISO9001 certified.

The biggest step for us was the switch from leaded to lead-free pigments. This has now been completed and no lead-based pigments manufactured in-house or obtained from other sources are sold or used in mixtures.

In the last two years, 2020 and 2021, we have converted most of our correspondence with our customers to digital. This saves us and our customers paper. Unless otherwise requested, brochures are initially made available as PDF documents.

Power consumption

The production of bismuth vanadate takes place in aqueous solution, the reaction is energy-intensive. It is no longer possible to energetically improve the chemical reaction itself, but the energy generation, the production facilities, the use of waste heat for preheating or an improvement in the overall balance contribute to a continuous improvement. As a result of such measures, the energy consumption per kilogram of pigment produced has already fallen and will continue to fall as a result of the upcoming measures in 2022 and 2023. Part of the heating oil was replaced by gas. Due to the Ukraine war and the energy crisis, the full switch

to gas will be delayed. In principle, it is possible to heat with hydrogen in the future, and the system is suitable for this.

Energieträger	Trend	reporting year 2021	reporting year 2020	reporting year 2019
Electricity (kWh)	→	1.055.533	781.313	1.069.472
Gas (kWh)	↑	142.600	178	-
Fuel Oil (l)	↓	363.351	460.889	444.486
Share of renewable energy in electricity (%)	→	100	100	100
of which own solar power (%)	→	6,1	8,9	6,5

Since the energy sources are very different and are also produced at different points, we specify a total CO₂ footprint per kilogram of pigment produced. All energy consumed flows into it, both that of production and, for example, for heating the offices and lounges. The electricity consumed is 100% renewable, part of it is generated by solar cells. Electricity consumption is therefore not taken into account in the calculation.

Conversion into CO₂ equivalents

	Trend	reporting year 2021	reporting year 2020	reporting year 2019
CO ₂ kg / kg product	→	1,601	1,585	1,610

CO₂ emissions per kg of product have hardly changed and will continue to fall only slightly.

Mobility: commutes, transport routes and journeys

The company currently owns only one car as a company car (Mercedes-Benz E-Class, 300 de Estate). This is a plug-in hybrid that can drive purely electrically in about 50 km. However, this is only partially sufficient for the daily route. Combined fuel consumption according to WLTP is 1.7-1.3 l/100 km; the power consumption weighted combined: 17.8-16.6 kWh/100 km; the CO₂ emissions weighted combined: 4535g/km (manufacturer's specifications).

Longer distances of more than 3 hours are covered almost exclusively by train, journeys over 800 km by plane. Travel data for the company will be included in the upcoming report and so will the CO₂ emissions of all business trips.

The Bruchsaler Farbenfabrik basically offers support for employees in the use of the ÖNPV. However, the offer is currently not accepted.

Water consumption, sanitation and waste management

The bismuth vanadate is produced in a wet chemical process. The wastewater load consists mainly of the nitrate contained in the reaction. The process water is treated in the company's own sewage treatment plant before it is discharged. The characteristic values of the sewage treatment plant are checked annually. Here, too, the chemical reaction cannot be further optimized in terms of water consumption. The quality of the discharged and treated wastewater is constantly improved, for example by additional precipitation of heavy metals.

Water consumption and sanitation

	Trend	reporting year 2021	Berichtsjahr 2020	Berichtsjahr 2019
Extraction of drinking water (l)	↑	32.603	19.988	28.691
Discharge into sewerage (l)	↑	32.603	19.783	28.408
waste water l /kg product	↑	35,2	28,8	34,0

In addition to wastewater, production produces waste containing bismuth vanadate and other pigments. In addition, there is waste such as paper/cardboard, wood and construction waste. All this waste is disposed of properly.

Waste

Type of Waste	Trend	Reporting year 2021	Reporting year 2020	Reporting year 2019
Waste from production (kg)	↓	21.250	36.680	32.150
Total amount (kg)	→	44.282	55.850	52.870
waste kg/kg product	↓	0,048	0,081	0,063

Purchasing, material procurement and consumption, supply chains

If possible, we try to source our raw materials from the vicinity of our production site. For the important metals, vanadium and bismuth, however, this is only possible to a limited extent. There are not too many manufacturers for the products in the quality we need. That's why we also use products with long transport routes.

Lead or its compounds are no longer used in any of our pigments.

Some of our metals, vanadium, is obtained from scrap and can therefore be considered sustainable in some cases. A recycling of bismuth does not yet exist.

We have not yet explicitly checked the sustainability of our suppliers, but we will want to attach importance to this in the future. This is facilitated by their sustainability reports. As a small medium-sized company, we do not see ourselves as a driver of sustainability among our suppliers, but we will address and question the topic.

Responsibility for our employees

The currently 35 permanent employees of the Bruchsaler Farbenfabrik are organized by a works council. No one is currently being trained, as the Bruchsaler Farbenfabrik is not a training company.

We consider the long to very long period of service with the company as an indicator of a high level of satisfaction with working conditions.

As a medium-sized company, apart from the collective agreements, we have not taken any generally applicable working time models, measures for further training or other agreements. However, we promote individual further training and, where desired and necessary, have made

personal agreements with individual employees possible. This does justice to the size of the company and is accepted and rewarded by the employees.

There is no gender difference between the salaries of women and men in our company. When hiring, qualification with regard to the position is our top priority. A selection according to age, gender, origin or similar aspects does not take place.

Imprint

Bruchsaler Farbenfabrik GmbH & Co. KG

Business owner: Ronald A. Levi

Managing Directors: Andreas W. Dyckerhoff and Ronald A. Levi

Talstraße 37

DE-76646 Bruchsal

Tel. +49-7251-9754-0

Fax +49-7251-15953

info@bruchsaler-farben.de