



BASF
PETRONAS
CHEMICALS

BASF PETRONAS **Chemicals Sdn. Bhd.**

Report 2019





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About this Report

“BASF PETRONAS Chemicals Report 2019 - Including Toray BASF PBT Resin” is published annually as a concise document about the company’s development, progress and performance in regard to economy, ecology, and society. The reporting period for this publication is the financial year 2019. All data in the report are the combined 100% total from BASF PETRONAS Chemicals and 100% from Toray BASF PBT Resins, which is located at the BASF PETRONAS Chemicals site, without BASF Services.



Welcome

Message from the Managing Director

Dear friends and stakeholders,

I am delighted to present BASF PETRONAS Chemicals – Report 2019, which provides an overview of our commitments to all stakeholders: employees, customers, shareholders, authorities, and the community where we operate.

2019 was a challenging year for BASF PETRONAS Chemicals with strong global economic headwinds. The uncertainties in the market environment impacted the company's overall performance. However, we made several significant improvements in facing these difficult times and preparing for the future.

We have continued our "Journey To The Top": our strategic road map to fulfill our vision: to be the most reliable, competitive, and preferred supplier of chemical products, contributing to the success and growth of our customers, stakeholders, and our people. This is further reflected in our people development in line with our "TOP Team" culture.

The protection of people and the environment is our top priority. We strive to provide a safe workplace and minimize the negative impacts on the environment. In 2019, our team achieved zero lost-time injuries and received the Green rating, the highest safety level in the Responsible Care audit. Such achievements are concrete proof of our strong workplace safety and environmental responsibility culture.

In our effort to be the most reliable and competitive industry player in the region, we redefined our Asset and Reliability Management as well as optimized the overall maintenance process, including the management of contractors and spare parts. These initiatives will further enhance and strengthen our technical capabilities onsite.

In 2019, we continued to support the sustainable growth of the local communities where we operate. We focused on our collaboration with various stakeholders for projects that support biodiversity and community development, including employee volunteering activities.

Building on our progress in 2019, with the spirit of TOP Team embraced by our people and continuous support from our stakeholders, we will be able to weather the storm and come out stronger and more resilient in the years to come.

We will strive to improve our overall performance with better reliability and utilization of plant operations, excellent safety performance, and closer collaboration with stakeholders. I offer my warmest thanks for all your support, and I look forward to driving sustainability for future growth.

Best regards,

A handwritten signature in black ink, appearing to read 'Sven Crone', written over a light grey background.

Sven Crone
Managing Director
BASF PETRONAS Chemicals Sdn. Bhd

BASF PETRONAS Chemicals Sdn. Bhd.

At a Glance

BASF PETRONAS Chemicals Sdn Bhd is a Malaysian-based joint venture between BASF and Petroliaam Nasional Berhad (PETRONAS), Malaysia's fully integrated oil and gas multi-national, under its subsidiary PETRONAS Chemicals Group (PCG). Incorporated in 1997, the company operates an integrated petrochemical complex situated at the Gebeng Industrial Zone, Pahang.

The company's share of capital is 60% held by BASF and 40% by PCG, with a total initial investment of about MYR3.4 billion (US\$900 million) in production facilities for acrylic monomers, oxo products and butanediol.

The site operates according to the "Verbund" ("integrated") concept, originating from BASF in Germany, which links multiple manufacturing plants to use products, by-products and energy in the most efficient way. The range of chemicals produced by BASF PETRONAS Chemicals meet the growing demand in various industries including plastics, adhesives, lacquers, dyestuffs, automobile and industrial coatings, paper, diapers, water treatment, textile and leather.

In 2016, the company commissioned a 2-ethylhexanoic acid (2-EHAcid) production plant. 2-EHAcid is a chemical intermediate used as a compound, for example, in the production of synthetic lubricants as well as oil additives. It is also used for functional fluids like automotive coolants, metal salts for paint dryers, plasticizers, stabilizers, catalysts and other applications in various industries including cosmetics.

In 2018, BASF and PETRONAS successfully started up a new world-scale production plant for highly reactive polyisobutene (HR-PIB), which is the first of its kind in South East Asia. HR-PIB is an important intermediate product for the manufacturing of high-performance fuel and lubricant additives, including additives for sludge prevention.

A MYR1.5 billion (approx. US\$500 million) integrated Aroma ingredients complex, established in 2017/2018, includes facilities to produce citral, citronellol and L-menthol. Aroma ingredients are used as flavors and fragrances for the food and beverage, fabric and homecare, and healthcare industries.



Aroma Complex at Kuantan Verbund Site.

BASF PETRONAS Chemicals Sdn. Bhd.

Shareholders



About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 117,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2019. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S.

Further information on BASF is available at www.basf.com.



About PETRONAS Chemicals Group Berhad

PETRONAS Chemicals Group Berhad (PCG) is the leading integrated chemicals producer in Malaysia and one of the largest in South East Asia. It operates a number of world-class production sites, which are fully vertically integrated from feedstock to downstream end-products. With a total combined production capacity of 12.8 million metric tons per annum (mtpa), it is involved primarily in manufacturing, marketing and selling a diversified range of chemical products, including olefins, polymers, fertilisers, methanol and other basic chemicals and derivative products. Listed on Bursa Malaysia and with three decades of experience in the chemicals industry, PCG is established as part of the PETRONAS Group to maximise value from Malaysia's natural gas resources.

PCG is one of the top 10 companies in the FTSE4Good Bursa Malaysia (F4GBM) Index, out of 200 largest companies ranked by market capitalisation. It is committed to ensuring that its business practices are in line with globally recognised standards for Environment, Social & Governance (ESG) practices.

Further information on PCG is available at www.petronaschemicals.com.my.

Members of the Board of Directors



Datuk Md Arif Mahmood

Chairman of the Board of Directors,
BASF PETRONAS Chemicals Sdn Bhd and
Executive Vice President and
Chief Executive Officer of Downstream, PETRONAS
(PETRONAS Group of Companies)



Datuk Sazali bin Hamzah

Managing Director / Chief Executive Officer,
PETRONAS Chemicals Group Berhad
(PETRONAS Group of Companies)



Dr. Andrea Frenzel

President,
BASF Intermediates Business, BASF SE
(BASF)



Dr. Carola Richter

President
South & East Asia, ASEAN and Australia/New Zealand
(BASF)



Dr. Sven Crone

Managing Director,
BASF PETRONAS Chemicals Sdn. Bhd.
(BASF)

Overview

At BASF PETRONAS Chemicals, we have embarked on a new strategic roadmap and culture change aiming at a transformation of the organization. We achieved several key milestones in the environmental protection, health, safety and social areas, even in this adverse environment.

Business development

In the face of a challenging and volatile market environment, BASF PETRONAS Chemicals continues to be a reliable, competitive and preferred supplier of chemical products, contributing to the success and growth of its customers and the society.

We focus on fostering a positive customer experience at every stage of the journey. We strive to improve the end-to-end planning in our business processes. To even better understand our customers' needs, we regularly ask them for feedback on our performance. In 2019, we rolled out the Net Promoter System to establish ongoing, closer dialog with customers and further increase customer satisfaction and loyalty. Thanks to the dedication of our motivated teams, we achieved an average score of +25, which is in a "good" range.

We also demonstrated our commitment to meeting our customers' needs by complying with various management system standards, including:

- ISO 9001:2015 Quality Management System standard;
- ISO 14001:2015 Environment Management System standard;
- OHSAS 18001:2007 Occupational Safety and Health Management System standard;
- Star K Kosher certifications for aroma ingredients and 2-EHAcid products;
- MS 1500 and MS 2200-1 Halal standard;
- FSSC 22000 ver 4.1

Our GC Mark Green Company certificate demonstrates that we succeeded in minimizing our negative impact on the environment.

BASF PETRONAS Chemicals recognizes the importance of quality management and food safety. The company complies with the necessary health and food safety requirements and received HACCP (Hazard Analysis for Critical Control Point), Food GMP (Good Manufacturing Practice) and Skim Pensijilan Makanan Selamat Tanggungjawab Industri / MeSTI Secure Food Certification Scheme (MeSTI) certifications from the Ministry of Health Malaysia for its food grade Aroma products, including Citronellol, L-Menthol, and L-Isopulegol.

Environmental protection, health and safety

At BASF PETRONAS Chemicals, safety is our top priority. In 2019, we implemented several safety initiatives to improve our emergency preparedness. For example, we introduced the e-hazard hunt database to encourage employees to report potential hazards through a user-friendly online system. Moreover, the management team conducted regular plant walkabouts and inspections, which demonstrated the company's commitments to creating a safe workplace for employees. We also continuously strengthen our efforts toward health promotion by organizing various health talk sessions onsite and regular health checks for employees.

In conjunction with BASF Global Safety Days 2019, under the theme of "Safe choices become safe habits", BASF PETRONAS Chemicals conducted a series of games and activities to increase risk awareness among employees and contractors about their daily working environment.

A campaign was also rolled out to prevent slip, trip, fall (STF) injuries on site. The fall prevention program includes six key focus areas: roof safety, ladder safety, safe loading & unloading, housekeeping, scaffolding safety, and safe walking. BASF PETRONAS Chemicals promotes this campaign through the STF Poster Competition and STF awareness briefings to employees.

In 2019, BASF PETRONAS Chemicals received a silver award from the Chemical Industries Council of Malaysia (CICM). This award recognizes the company's ongoing efforts in maintaining high EHS standards through the implementation of the TOP Team concept and the collaboration with Transportation Management, Fire and Security Department to enhance transport safety awareness among logistic service providers. With the successful execution of the Responsible Care codes at our manufacturing sites, we were able to achieve zero lost-time injuries in 2019.



Responsible Care Award by CICM in 2019

Employees and society

Employees forming the “best team” are the foundation of our excellent performance and ensure our long-term success; their skills, commitment, and motivation make BASF PETRONAS Chemicals competitive and fit for the future. This belief is seen in the tangible efforts and resources the company puts into employee development as well as into company sponsored activities to strengthen the team. This is aligned with the vision of harnessing a workforce that is connected, committed and always competent.

The “TOP Team” initiative has achieved several important milestones, including the implementation of training and development workshops, the use of feedback tools to measure TOP Team behaviors, TOP Team ambassadors as change agents to further promote company culture, as well as various engagement sessions.

In 2019, 87 employees received 20 years of service awards. Over 1,700 people, including our employees and their family members, participated in the family days in September and December. We were also awarded gold for the “Employer of Choice - private-sector category” by the Malaysian Institute of Human Resource Management (MIHRM). This award recognizes our continuous efforts in improving the HR strategies aligned to the company goals and supporting the government’s strategic reform initiatives.

With the United Nations Sustainable Development Goals as its guiding principles, we continue our commitment to improving the quality of life within the communities around our sites and the Pahang state. In 2019, BASF PETRONAS Chemicals and Universiti Malaysia Pahang (UMP) signed a Memorandum of Understanding to foster knowledge-sharing in the fields of engineering, technology, and science with the university students. This collaboration also enhances the training and competency of our employees.



Local primary school students attended the BASF PETRONAS Chemicals open day

BASF PETRONAS Chemicals is the main sponsor for the National Chemical Engineering Symposium (NACES) 2019. This national event gathered all chemistry students to exchange information and to promote discussion between students and industry players on topics of the industrial revolution in chemical engineering.

Apart from that, we also supported UMP to co-organize a beach cleaning program with a local school at Pantai Balok, Kuantan. The activities are not limited to litter collection. There was also a sandcastle building competition. This initiative promotes awareness about the importance of safeguarding the environment among students.

In 2019, we continued our annual site visit for various stakeholders, ranging from students to authorities. Through a guided tour around the site, visitors were able to learn about the state-of-the-art production process, high standard of safety and environmental protection measures, as well as our initiatives on sustainability and corporate social responsibility.



Employees celebrating the 2nd anniversary of the TOP Team culture

Key data

		2019	2018
Financial Results			
Sales	million €	725	709
Employees (as of December 31)			
Number of employees		1,017	986
BASF employee age structure			
	%		
Up to and including 25 years		4.2	4.3
Between 26 and 39 years		50.1	52.1
Between 40 and 54 years		41.3	38.9
55 years and older		4.3	4.7
Gender			
Male		83.2	
Female		16.8	
Occupational Safety			
Lost-time injury rate (BASF employees, leased personnel and contractors)	Per 200,000 working hours	0.08	0.10
Fatalities (total)		0	0
Environment			
Emissions to air			
Greenhouse gas emissions	Metric tons of CO ₂ equivalents	761,844	805,609
Air pollutants (without CH ₄)	Metric tons	721.89	789
Water			
Emissions to water: Organic substances (CoD)	Metric tons	187	203
Emissions to water: Nitrogen	Metric tons	1.2	1.3
Emissions to water: Heavy metals	Metric tons	0.32	0.36
Water supply	Million cubic meters	3.9	3.2
Water used for production	Million cubic meters	0.42	0.49
Water used for cooling	Million cubic meters	335	330
Water supply by source			
Surface water	%	0	0
Groundwater	%	0	0
Drinking water	%	100	100
Waste			
Waste (total amount)	Metric tons	12,607	19,399
Recycling and thermal recovery	%	51	40
Disposal of waste			
Incineration	%	25	36
Landfill	%	19	10
Underground Storage	%	0	0
Energy			
Electricity consumption	MWh	434,730	413,002
Steam consumption	Metric tons	2,605,632	2,764,197
Fuel consumption (Central powerplants and boilers)	MWh	1,424,790	1,461,012

Further information

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