

Report 2023/2024

Thinktank and  
competence center  
of the **PLASTICS  
INDUSTRY**

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## **BKV – THINK TANK AND COMPETENCE CENTRE OF THE PLASTICS INDUSTRY**

The BKV compiles data and facts on the topics of resource efficiency and the circular economy of plastics, and makes this information available, without discrimination, to interested market players and users.

### **ENVIRONMENTAL TOPICS**

The BKV offers its expertise on environmental issues with regard to the use and recycling of plastics, irrespective of the particular application.

### **DATA AND FACTS**

The BKV has a broad network of experts, whom it can draw on. The solid data basis is valued by many users and is widely acknowledged.

### **VISIBLE PRODUCT RESPONSIBILITY**

The BKV is thus a visible part of the producer responsibility of the plastics industry. Its shareholders are coming from the sectors of plastics producers, plastics converters and plastics machinery manufacturers.



At a time of pronounced imponderables for industry and society, in combination with unclear framework conditions in terms of economic and environmental policy, the plastics industry stands by its competence centre – the BKV. BKV's data and facts are essential for putting the often ideologically characterised discussions on a solid and objective basis.

The BKV is, for example, an important impulse provider for key topics regarding the sustainability of our industry, above all with respect to the circular economy and environmental aspects. The areas of relevance for this are defined in the purpose of the company's statutes. In the last financial year, at the BKV Symposium, which was held again after a long time, key study results

## MATTHIAS STECHHAN

**LYONDELLBASELL, DIRECTOR POLYOLEFINS SALES EUROPE NORTH,  
CHAIRMAN OF THE BKV ADVISORY BOARD**

from renowned institutes from the professional public were presented and discussed. The presentations, especially from the HTP Institute in Aachen, the Fraunhofer IMW in Halle and the GVM in Wiesbaden, consisted of fundamental studies from the lifetime of plastics – from product design and recycling potential to the reuse of recyclates in new products. Particularly at the present time, BKV's expertise is more important than ever as the principle for fact-based discussion.

Not only for the plastics industry as a whole, but also for our company in particular, the topic of the circular economy in connection with plastics is a key factor for sustainability and competitiveness. Here, it is an inestimable advantage that, within the BKV competence centre, plastics producers, plastics converters and plastics machinery work together with a coordinated approach under one umbrella.

Studies and projects concerned with the topics of circular economy and the environment that are of current importance for the plastics industry are at the core of the BKV competence centre. We compile such studies in our Technical Committee and in the respective project groups with the expertise and the practical experience of the companies and associations among the BKV shareholders.

In order to give you an impression of this work, you can read in this annual report some statements first hand: Dr. Helen Fürst, Fürst Group, President of the German Association of Plastics Converters (GKV) and member of the Advisory Board of BKV, explains the importance of the fact base for political discussion. Dr. Frank Buckel, Covestro Deutschland AG and spokesman of the Technical Committee, reports on the work of the Committee, and Dr. Joachim Christiani, HTP GmbH & Co. KG, gives a brief insight into the latest study on the evaluation of the recyclability of plastic packaging.

Our studies are outstanding not only because of their high quality, but also through their explicit inclusion of market and practice, and their general usefulness for the entire plastic value chain and beyond.

In addition, the BKV carries out important networking in dialogue with customer segments, execution authorities, academia etc. For example, in the

year under report, apart from the BKV Symposium, there was also a BKV workshop as part of the bvse International Conference on Recycling of Plastics, as well as a BKV online event with the focus on pellet losses, which created broad stakeholder interest.

All this can only succeed through close cooperation and the commitment of every individual. I am delighted to be able to continue this commitment with a number of new and fascinating studies and projects.



## DR. INGO SARTORIUS

**BKV GMBH, MANAGING DIRECTOR**



**DR. HELEN FÜRST IS CEO OF FÜRST GMBH AND HAS BEEN A MEMBER OF THE ADVISORY BOARD OF THE BKV SINCE SEPTEMBER 2022. AT THE SAME TIME, SHE IS PRESIDENT OF THE GERMAN ASSOCIATION OF PLASTICS CONVERTERS (GKV).**

# DR. HELEN FÜRST

CEO OF FÜRST GMBH, MEMBER OF THE ADVISORY BOARD OF THE BKV AND PRESIDENT OF THE GKV

*BKV stands for data and facts. What importance do you, as an entrepreneur and representative of a key branch of industry, see for the BKV against the background of the current political and often emotional discussions?*

As a manufacturer of plastic packaging for the food industry with locations in Germany and in France, not only the Fürst Group but also the sector of plastics converting industry, currently see themselves in a difficult economic situation. Several factors such as energy crisis, bureaucracy, tax burdens etc. are all impacting us simultaneously. On the other hand, only hesitant efforts are being made at a recovery – for example, through the policy of an economic-friendly legislation for growth opportunities (Wachstumschancengesetz). In this environment, it is urgently necessary for the politicians to create and support a business-friendly framework so that, in Germany and Europe, competitive and innovative companies can gain a foothold and are able to assert themselves.

Often, however, it has to be said that draft versions or modifications of legal regulations create even more uncertainty instead of giving the industry the planning security it needs. Examples include the new EU regulation on preventing plastic pellet losses and the very intensively and often emotionally debated revision of the EU Directive on Packaging and Packaging Waste. The political discussions carried out here are not always helpful and they should, above all, not be guided by names of individual parties. For this reason, it is urgently necessary to come to a fact-based discussion.

The BKV with its competence centre is the key to the fact base here. The know-how needed for an objective discussion is soundly compiled in studies and projects at BKV together with partners from industry and science. Both on the BKV Advisory Board and in other BKV stakeholder dialogue, consultations are held on major studies that are not only of great benefit to the plastics industry itself, but are also highly appreciated by other stakeholders such as industry, administration and the authorities.

The fundamental study on plastics flow has even become a standard and enjoys a high reputation among law enforcers and the German Environment Agency. BKV's project work is thus essential for the plastics industry. And it is needed more than ever so that, above all, public discussions can become more objective. The BKV studies are more than helpful here and should also be further utilised along the entire plastics value chain and beyond.



**DR. FRANK BUCKEL, WHO IS RESPONSIBLE IN THE ENGINEERING PLASTICS BUSINESS GROUP OF COVESTRO DEUTSCHLAND AG FOR REPRESENTING THE INTERESTS IN THE FIELD OF SUSTAINABILITY. HE HAS BEEN A MEMBER OF THE BKV TECHNICAL COMMITTEE FOR MORE THAN 10 YEARS AND ITS SPOKESMAN SINCE 2016.**

# DR. FRANK BUCKEL

**COVESTRO DEUTSCHLAND AG, ENGINEERING PLASTICS – ADVOCACY SUSTAINABLE SOLUTIONS, AND SPOKESMAN OF THE BKV TECHNICAL COMMITTEE**

## *What is the Technical Committee of the BKV and what role does it play?*

The Technical Committee of BKV represents a corporate body of the company. It has a central and also important function. Therefore, this committee is anchored in the statutes of BKV. Accordingly, the members of the Technical Committee are giving advise to the BKV from a technical point of view on issues such as sustainability, circular economy and plastics in the environment. Apart from advising the company, the tasks of this committee include in particular project definition and project selection, project support and the assessment and evaluation of the project results.

Conversely, the members of the Technical Committee regularly inform themselves on interesting issues, and open the door to the necessary knowledge transfer into the committee, for example through the following activities:

- Specialised lectures during the meetings of the Technical Committee
- Information and exchange on studies and projects, above all relating to science, research and economy
- BKV events, especially the workshop as part of the bvse International Conference on Recycling of Plastics and the BKV Symposium
- Specialist discussions with e.g. plant operators and technology developers

As regards the key topics of circular economy and recycling technologies, technical discussions and visits were held last year to various plant operators:

- Prezero Polymers Austria GmbH, Haimburg, Austria: a large mechanical recycling plant engaged in material processing for production of recyclates in different applications

- KRM Kunststoff Recycling Maschinen GmbH, Kühnsdorf, Austria: SynCycle project on chemical recycling with the aim of plant development and plant sales as a supplement to mechanical recycling
- ARCUS Greencycling Technologies GmbH, Frankfurt-Höchst: Industrial scale pyrolysis plant aimed at chemical recycling for mixed plastic waste that is not mechanically recyclable.

In this way, the Technical Committee gains up-to-date know-how not only with regard to technological developments but also as regards their market practicability and the relevant infrastructures of the value chains. On this basis, the studies and reports compiled by BKV take on a unique technical quality that is of great benefit to the plastics industry and also to other interested parties. This can also be seen from the BKV projects launched in 2024, which are directly in tune with the times, and support the development of our industry on the way to a future-oriented circular economy with plastic.

The Technical Committee is closely connected with BKV's Advisory Board, so that a regular flow of information between the shareholders is ensured. It also means that ideas from the Advisory Board are received by the Technical Committee.



**DR.-ING. JOACHIM CHRISTIANI IS MANAGING PARTNER OF THE INSTITUTE CYCLOS-HTP GMBH (CHI) AND THE ENGINEERING COMPANY HTP GMBH & CO. KG. HE IS ALSO A PUBLICLY APPOINTED AND SWORN EXPERT ON PACKAGING WASTE MANAGEMENT. AMONG OTHER THINGS, HE HAS, IN HIS CONSULTING CAPACITY, BEEN ACCOMPANYING THE EK III (EXPERT COMMITTEE OF THE CENTRAL AGENCY PACKAGING REGISTER, ZSVR) IN ALL MATTERS CONCERNING THE METHODOLOGICAL AND EXPERT DEVELOPMENT AND UPDATING OF THE MINIMUM STANDARD.**

**DR.-ING. JOACHIM CHRISTIANI**  
MANAGING PARTNER OF THE INSTITUTE CYCLOS-HTP GMBH

*What importance should be given to the evaluation of the recyclability of plastic packaging, and what is the current status here?*

Not least through Article 6 of the „Packaging & Packaging Waste Regulation (PPWR)“, with the threat of a market ban on packaging that shows insufficient recyclability, the evaluation of recyclability has become a political issue with all its accompanying positive and negative phenomena. The positive side is that the intrinsic drivers of trade, brand owners and packaging industry are being considerably strengthened by the environmental policy requirements and monetary incentives. The negative side is that a technically sound discussion is moving increasingly into the background, only to be replaced by a political, interest-controlled tug-of-war.

Against the background of the efforts being made at standardisation level to establish the necessary EU-wide standards for the evaluation of recyclability, BKV has commissioned the CHI to carry out a methodical- and content-related comparison of existing standards. From the current flood of standards, which predominantly represent D4R guidelines, the ten most relevant were selected. The comparison was made at two levels: in the first step by comparing the standards methodically and, in the second, by comparing them comprehensively with regard to the classification of the individual plastic packaging types. The two examination levels were combined with comments in concrete examples.

The aim was to carry out a technical analysis and discussion of the methodology and the contents of the standards. An evaluation of the individual standards in the sense of a ranking was not the subject of the task. Instead, recommendations were to be derived from the analysis that serve the constructive development of a harmonised, objective and practicable evaluation standard in the sense of the environmental policy targets of the PPWR.

As a key result of the analysis, it can be said that, from the different methodical approaches, considerable, decisive discrepancies result for the classification of individual plastic packaging types. It also becomes evident that the approach initially taken in the standardisation process of evaluating recyclability via the very rough instrument of an ordinal categorisation in traffic light colours according to a still undefined „recycling compatibility“ must definitely be called into question.

In the appendices, the study provides, through the highly granular comparison of the individual standards, the necessary basis for the detailed work of the BKV members in the CEN committees. In addition, ten concrete recommendations are formulated as to how, at the present status of the standardisation process, the development of a harmonised standard can succeed, which corresponds to the requirements of Article 30 of the PPWR in terms of objectivity, exactness and reproducibility of a recyclability evaluation.

# STUDIES AND PROJECTS

**OVERVIEW** The BKV is the competence centre of the German plastics industry for sustainability of plastic products with a view to resource efficiency and circular economy. Its task is to provide data for a fact-oriented discussion. The demand for data and facts results from the present or foreseeable issues from industry, science, politics and society. This forms the basis for the conception and selection of the projects tackled by BKV. A preselection of the topics to be dealt with is made by BKV's Technical Committee, which is composed of experts from the shareholders of BKV.

The topics covered by BKV in its project work can be subdivided into the following six areas:

## **MARKET DATA:**

Sound data and facts are a key aspect for the BKV. The "plastics flow" is the prime example of a validated database for plastics through its entire life cycle.

## **PLASTICS IN THE ENVIRONMENT:**

Comprehensive studies on plastics in the environment, through both terrestrial and aquatic discharges into the environment, the methodology of the entry pathways and numerous special editions are dealt with here.

## **CIRCULAR ECONOMY:**

The topics of circular economy and resource efficiency cover the contribution of plastics to climate protection as well as issues involving the sustainable availability of raw materials on the market. Here, the circulation of carbon is a key aspect.

## **LEGAL FRAMEWORK:**

Observing and evaluating existing and future legislation forms the basis for plastic markets with constantly more complex requirements on the material and its application.

## **RECYCLING TECHNOLOGIES:**

This section is concerned with the investigation of technology-neutral recycling and recovery paths for plastics-containing material streams. It covers optimisation of mechanical recycling in the context of the collection and treatment as well as techno-economic analysis of complementary chemical recycling processes, in order to use less waste for energy recovery in the future.

## **STANDARDISATION:**

The BKV is engaged in the Plastics Committee of the German Standardisation Body DIN, both as co-chair in the Board of the Plastics Committee as well as chairing the corresponding environmental committee and being member of the recycling working group.

# STUDIES ON CIRCULAR ECONOMY:

STUDY	COSTS
Comparison of different standards for assessing the recyclability of plastic packaging	2023, 57 pages. Price 400,- Euro (plus VAT) Short version: free of charge
Plastics Flow in Germany 2021	2022, 121 pages. Price EUR 600 (plus VAT) Short version: free of charge, (German language only)
Economic assessment of instruments for promoting the recycling of plastics	2022, 76 pages. Price EUR 950 (plus VAT) Short version: free of charge, (German language only)
Plastics Flow in Germany 2019	2020, 114 pages. Price EUR 300 (plus VAT) Short version: free of charge, (German language only)
Plastics-relevant waste flows in Germany 2019	2020, 74 pages. Price EUR 400 (plus VAT) Short version: free of charge, (German language only)
Potential for the use of recycled plastics in packaging	2020, 103 pages. Price EUR 500 (plus VAT) Short version: free of charge, (German language only)
Plastic Parts from ELVs	2020, 117 pages. Price EUR 450 (plus VAT) Short version: free of charge

For more information on the studies go to: [www.bkv-gmbh.de/studies.html](http://www.bkv-gmbh.de/studies.html)

STUDY	COSTS
Global Plastics Flow 2018	2019, 103 pages. No charge Short version: free of charge
Thermal Processes for Feedstock Recycling of Plastics Waste	2019, 170 pages. Price EUR 500 (plus VAT) Short version: free of charge
Titanium Dioxide in Plastics in Germany	2019, 61 pages. Price EUR 400 (plus VAT) Short version: free of charge, (German language only)
Generation and management of EPS and XPS Waste in 2016 in Germany in the packaging and building industries	2017, 42 pages. Price EUR 300 (plus VAT)
Potential for increasing mechanical recycling of plastic packaging – recycling-friendly design, sorting technology	2016, Result report (38 pages) and Management Summary (24 pages). Price EUR 350 (plus VAT) Infolyer: free of charge (German language only)
Methods and tools for the eco-design of plastic packagings	2016, Technical documentation, 85 pages. free of charge, (German language only)

For more information on the studies go to: [www.bkv-gmbh.de/studies.html](http://www.bkv-gmbh.de/studies.html)



# STUDIES ON PLASTICS IN THE ENVIRONMENT:

STUDY	COSTS
Development of the efficiency of plastic packaging – 1991 to 2013	2015. 102 pages. Price EUR 350 (plus VAT) Infolyer: free of charge, (German language only)
Demand and Utilization of Carrier Bags and Vest Carrier Bags for Service Counter Goods in Germany	2014. 78 pages. Price EUR 350 (plus VAT) Short version: free of charge
Analysis of PVC production, conversion, waste and recovery streams in Germany 2013	2014. 48 pages. free of charge (German language only)
Scenarios for the collection, treatment and recovery of plastics-containing waste streams – dry bin concept (Witzenhausen Study II)	2011. 40 pages. Price EUR 330 (plus VAT) (German language only)
Treatment and recovery of plastics-rich waste streams in Germany (Witzenhausen Study I)	2009. 99 pages. Price EUR 250 (plus VAT) (German language only)
Evaluation of thermal/catalytic processes for the decomposition of plastics (TU Clausthal)	2009. 41 pages. Price EUR 250 (plus VAT) Short version: free of charge, (German language only)
SRF utilisation in SRF power plants in Germany with focus on plastics	2009. 106 pages. Price EUR 330 (plus VAT) (German language only)

For more information on the studies go to: [www.bkv-gmbh.de/studies.html](http://www.bkv-gmbh.de/studies.html)

STUDY	COSTS
Plastics in the Environment: Special edition „Pellet Losses“	2022. 75 pages. Can be ordered free of charge
Report: Plastics in the Environment in Germany	2021. 96 pages. Can be ordered free of charge
Marine Litter: Report and Handbook on the Model "From Land to Sea"	2020, 4 <sup>th</sup> revised version. 98 pages. Can be ordered free of charge
Marine Litter: Discussion paper „Tyre abrasion“	2020, 2 <sup>nd</sup> version. 18 pages. Can be ordered free of charge, (German language only)
Marine Litter: Special edition „Littering“	2020, 2 <sup>nd</sup> version. 27 pages. Can be ordered free of charge, (German language only)
Report: Study of Hydropower Plants – MicBin joint project, work package 4.1	2020. 18 pages. Can be downloaded free of charge, (German language only)
Report: Analysis of Direct Discharges – MicBin joint project, work package 3.3	2021. 29 pages. Can be downloaded free of charge, (German language only)
Report: Littering and Line Loading of Waterways – MicBin joint project, work package 3.5	2021. 26 pages. Can be downloaded free of charge, (German language only)
Report: Model expansion and modelling – MicBin joint project, work packages 5.5 & 5.6	2021. 26 pages. Can be downloaded free of charge, (German language only)

For more information on the studies go to: [www.bkv-gmbh.de/studies.html](http://www.bkv-gmbh.de/studies.html)

# NETWORK

## DIALOGUE

The BKV is in regular contact with expert groups, especially on topics concerned with the circular economy and environment. These experts work in the plastics and recycling sector and also in customer industries, hold responsible positions in political execution at the Federal and the Bundesländer level or are employed in scientific institutes, associations and NGOs.

The key tools for BKV communication are, in addition to a lively website, regular newsletters, specialist events, expert publications and the new LinkedIn channel, see [de.linkedin.com/company/bkv-gmbh](https://de.linkedin.com/company/bkv-gmbh).

## NEWSLETTER

The BKV newsletter, which is published on a weekly basis, summarises media reports and news, and thus provides topical information on current news connected with the circular economy, plastics recovery and recycling. Further information and registration at [www.bkv-gmbh.de/bkv-nl-register.html](http://www.bkv-gmbh.de/bkv-nl-register.html).

Around three times a year, the Marine Litter newsletter is published with reports on the latest developments in research, politics and industry on the topic of plastics in the environment. In addition, these newsletters contain interesting interviews with prominent experts. The Marine Litter newsletter is also available in English. Further information and registration at [www.bkv-gmbh.de/ml-nl-register.html](http://www.bkv-gmbh.de/ml-nl-register.html).

## SPECIALIST EVENTS

As part of its information and educational work, the BKV also holds specialist events. These include in particular the BKV Symposium, which took place again in the last financial year for the first time after four years because of the pandemic. This top-level, highly successful event, in which the key results of BKV's studies on current topics from experts of renowned institutes were presented and discussed on the stage, assumed a special setting through the welcoming words given by the State Secretary Michael Hauer from the Rhineland Palatinate Environment Ministry in its representation in Berlin. Apart from that, the BKV held its own workshop on the subject of „plastics recycling in the circular economy“ at the annual international bvse plastics recycling conference, and also staged an additional online event on the topic of „plastics in the environment“ with the focus on pellet losses. A BKV workshop at the bvse International Conference on Recycling of Plastics is again planned for June 2024.

# ORGANISATION

## ADVISORY BOARD OF THE BKV

The advisory board is the statutory controlling body of the company and supervises the management.

## TECHNICAL COMMITTEE (TA)

The TA consists of experts from the shareholder companies and organisations. It assesses project proposals, including the required budget, and monitors the results. It reports to the Advisory Board. The spokesman of the Technical Committee is Dr. Frank Buckel (Covestro Deutschland AG).

## EXCHANGE WITH STAKEHOLDERS

Another BKV committee is made up of representatives of key stakeholders, especially from industry, science and administration. The committee advises the company in fundamental issues of the business purpose, and thus gives the plastics industry the opportunity to discuss relevant issues based on facts and oriented to practice.

## MEMBERS OF THE ADVISORY BOARD



### Chairman:

Matthias Stechhan  
(LyondellBasell)



### Vice chairman:

Bernhard Borgardt  
(Ostedruck)



Marc van den Biggelaar  
(DOW)



Inga Böhlke  
(Bischof + Klein)



Dr. Martin Engelmann  
(IK Industrievereinigung Kunststoffverpackungen)



Michael Freutsmiedl  
(Borealis)

## MANAGEMENT



### Dr. Ingo Sartorius

Managing Director  
ingo.sartorius@bkv-gmbh.de



### Andrea Herbst

Assistant  
andrea.herbst@bkv-gmbh.de



Dr. Helen Fürst  
(Fürst Group)



Dr. Andreas S. Gasse  
(allvac Folien)



Dr. Christian Haessler  
(Covestro)



Dr. Klaus Wittstock  
(BASF)

### Permanent guests:



Ingemar Bühler  
(Plastics Europe Deutschland)



Thorsten Kühmann  
(Fachverband Kunststoff und  
Gummimaschinen im VDMA)



### Stephanie Cieplik

Project manager  
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## SHAREHOLDERS

- A. Schulman GmbH
- Akzo Nobel GmbH
- Amoco Chemical (Europe) S.A.
- Baerlocher GmbH
- Basell Polyolefine GmbH
- BASF Lampertheim GmbH
- BASF Polyurethanes GmbH
- BASF SE
- Bischof + Klein SE & Co. KG
- Borealis Polymere GmbH
- Borealis Polyolefine GmbH
- Covestro Deutschland AG
- Dow Olefinverbund GmbH
- Dürrmann GmbH & Co. KG
- Eastman Chemical B.V.
- ETIMEX Primary Packaging GmbH
- Evonik Operations GmbH
- Gesamtverband kunststoffverarbeitende Industrie e.V. (GKV)
- Greif Packaging Germany GmbH
- Heuchemer Verpackung GmbH & Co. KG
- IK Industrievereinigung Kunststoffverpackungen e.V.
- Industrieverband Kunststoffbahnen Europe e.V. (IVK)
- Ineos Manufacturing Deutschland GmbH
- INOVYN Deutschland GmbH
- INOVYN Schkopau GmbH
- Liveo Research GmbH
- Mauser-Werke GmbH
- MKF-Schimanski-ERGIS GmbH
- Müller AG Plastics
- Nordfolien GmbH
- Petainer Lidköping AB
- PlasticsEurope Deutschland e.V.
- Repsol Chemie Deutschland GmbH
- RPC Neutraubling GmbH
- RPC Packaging Belgium N.V.
- RPC Packaging Holdings (Deutschland) B.V. & Co. KG
- RPC Wiko GmbH
- SABIC Deutschland GmbH
- Schütz GmbH & Co. KGaA
- Seufert Verpackungen GmbH
- SL Packaging GmbH
- STRUBL GmbH & Co. KG Kunststoffverpackungen
- TotalEnergies Petrochemicals & Refining SA/NV
- Verband Deutscher Maschinen- und Anlagenbau e.V. (VDMA)
- Versalis Deutschland GmbH
- Weener Plastik GmbH

# IMPRINT

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