February 2021

ANNUAL REPORT 2020



isopa EUROPEAN DIISOCYANATE & POLYOL PRODUCERS ASSOCIATION

Political Environment

It is impossible to look back at the political context for the diisocyanates industry in 2020 without focusing on the Covid-19 pandemic. The pandemic showed how fragile our societies can be but also the strength and potential of the European Union.

Despite the pandemic, 2020 was a year with many important new initiatives that will make a long-lasting impact the future of our industry.

The Member States came together and agreed on the €750 billon Next Generation EU to finance the economic recovery after the Covid-19 pandemic. This unprecedented step in the history of the EU could support the diisocyanates value-chain by boosting demand for polyurethanes in particular in construction.

That's because the economic recovery will be green. European Commission Executive Vice-President Frans Timmermans made it very clear: "The Green Deal is Europe's new growth strategy". The European Commission started to deliver on this growth strategy in 2020 with the aim of making the EU a climate neutral and circular economy.

The pandemic showed how fragile our societies can be but also the strength and potential of the European Union.

The European Commission presented the "Renovation Wave Strategy" aiming to double the annual energy renovation rate for buildings by 2030. That's a major opportunity for polyurethanes. At the same time, the circular economy action plan and the chemicals strategy for sustainability set out new visions for the regulatory future of our industry.

These developments will continue in 2021 with new opportunities and challenges for the EU diisocyanates value-chain.

2021 outlook

If 2020 was busy, 2021 could be even more eventful.

It is the year our industry will be hard at work to make the new training requirements for diisocyanates workers a success under the REACH Restriction.

2021 will be crucial in ensuring the roll-out of the training and working effectively with our customers to raise awareness and answer their questions.

At the same time, new regulatory requirements are in the pipeline. The EU Occupational Exposure Limit process will continue. We need to ensure we and the wider group of affected stakeholders secure a positive and workable outcome.

From the legislative front, there will also be new initiatives. The work to implement the Chemicals Strategy for Sustainability will continue. The European Commission will prepare to put forward proposals to revise core legislations and introduce new obligations, like REACH registration of certain polymers.

The actions to implement the circular economy will intensify. New sustainability requirements for consumer products and construction materials are in the pipeline.

We look forward to working with you on these and other challenges ahead for our industry in 2021.

REACH Restriction

On February 4th, the REACH Committee of the European Commission adopted the proposed restriction on diisocyanates. The adoption has been the legislative endpoint of almost 7 years of advocacy on industry's claim that mandatory training is the most effective and appropriate risk management measure.

Development of Training Material

Following this decision, ISOPA and ALIPA started to accelerate their work in cooperation with major Downstream User associations to develop the requested training material.

Based on the tremendous efforts by member company experts and experts from Downstream Associations in cooperation with consultant Frank van Elten, the team developed the training material for Level I, II and III. Also 3 videos (Sensitization, Personal Protective Equipment and First Aid) were created. The material includes a trainer guide and so-called quick guides.

An assessment tree was created, which will enable trainees to easily identify the right training path.

As of today, approximately 500 slides are being created for the various sectors and application technologies.

Platform

Furthermore, ISOPA and ALIPA decided to select a third party to develop a platform where employers and their employees potentially could conduct their training. After a selection process the Brussels based digital communication company IDLOOM was chosen. IDLOOM provided evidence with a POC in November that they would be capable of delivering on the technical requirements of the platform.

ISOPA and ALIPA did also publish in August the 3rd edition of the eBook on the REACH restriction on diisocyanates.

In November a webinar with around 250 participants, targeted towards National Trade Associations and companies, was held to inform about the latest developments of industry to conclude on training material.

Cohort Study

The efforts to start a worker cohort study are continuing. The aim of the full study is:

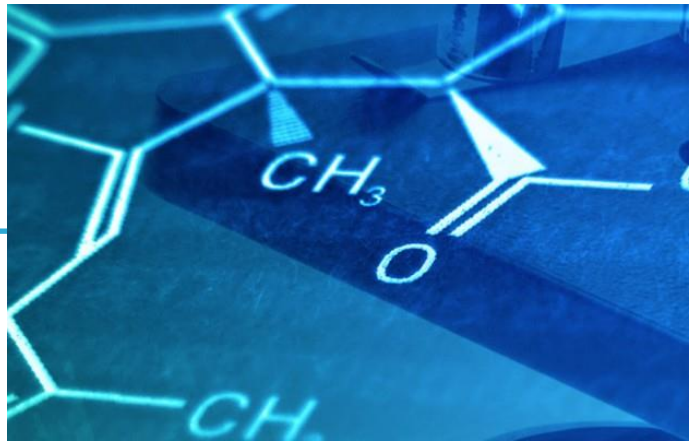
- to record the number of work-related respiratory and lung diseases caused by diisocyanates,
- to determine the amounts of diisocyanates which are taken up by employees, to describe the relationship between exposure and respiratory and lung diseases,
- to systematically check the effectiveness (i.e., reduction of exposure and diseases) of protective measures which are specified in the REACH restriction proposal

The team consisting of Manfred Giersig, Consultant to ISOPA and experts from IPA Bochum and BAuA continued their work to visit companies in Germany, who would be prepared to participate in the study.

In April it was successfully reported that the team has reached the threshold to identify 1,500 participants. In 2021 it will be decided to kick off the full study.

HBM4EU Diisocyanate study

The EU Commission has commissioned a project call HBM4EU which also includes diisocyanates. A meeting was arranged to exchange the views and approaches of the Cohort Study in comparison to the work under the project HBM4EU.



Circular Economy TF

The task force on Circular Economy continued the work, which was started in 2019 on understanding the context of Circular Economy with regard to the diisocyanate and polyurethane industry.

- The team conducted in early January the second workshop with the support of Uetliberg & Partners. The workshop resulted in a three folded strategy with the vision to "set a European framework for safe PU loops by developing existing and new circular value chains". This vision should be achieved by delivering on the 3 pillars of "Connect", "Protect" and "Inspire".
- Connect was intended to bring all stakeholders together in a collaborative mode to demonstrate CE value of PU towards regulators.
- Protect should focus to complement product stewardship for Circular Economy.
- Inspire should initiate a platform for new technologies and new value chains.

The proposals of the workshop did not find a common voice amongst the Board members and therefore the Task Force concentrated on gaining understanding of the Circular Economy, exchanging viewpoints and collecting information. A work program for 2021 was concluded at the General Assembly in December.

The work program includes:

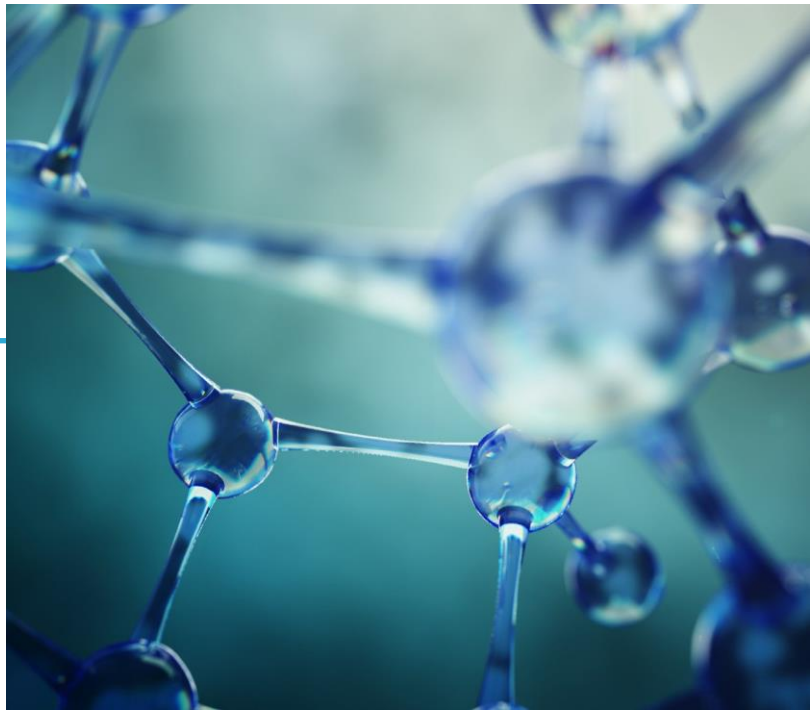
- Develop Guidance Product Stewardship document on handling of EoL wastes and chemical recycling outputs;
- Set-up joint meetings with Europur and PU Europe and CE TF to align on industry position and advocacy initiatives;
- Monitor legislative development especially those linked to Chemical Strategy and prepare advocacy plan where relevant.

Polymers Requiring Registration

ISOPA together with ALIPA decided in August to create a task force dedicated to the work executed by the European Commission on Polymers requiring Registration (PRR). The main objective of the joint task force is to ensure that the specific chemistry of diisocyanates is being considered when defining those polymers which would require registration.

The task force met 3 times in 2020, elected Martin Klatt, BASF and Gitta Egbers, BASF as their Chair and Co-Chair. ISOPA and ALIPA secured a seat for both associations in the Subgroup Committee for Polymers Requiring Registration under CARACAL. Martin Klatt and Gitta Egbers were chosen to represent the associations in those committees.

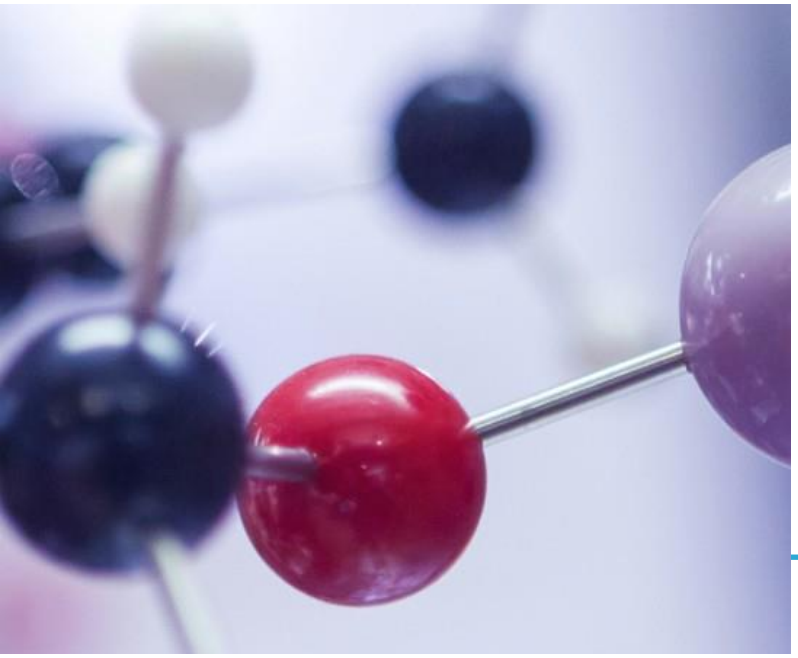
The task force started to develop a position paper, explaining why the majority of our polymers can be identified as polymeric precursors. Polymeric precursors are well controlled in the industrial environment should be excluded from the registration requirements.



Chemical Strategy for Sustainability

The European Commission revealed on October 14th their long-awaited Chemical Strategy for Sustainability (CSS) under the Green Deal.

The strategy describes the new long-term vision for the EU's chemical policy, aiming at the transformation of the industry to attract investments into safe and sustainable products and production methods.The strategy includes an action Plan with 50+ measures to be rolled out between 2021 and 2024.



The measures include topics such as:

- Fast track restriction for professional use
- New SVHC categories
- Reform of authorization and restriction
- Registration subset of polymers (PRR)
- Compliance Check of all dossiers
- Mixture Assessment Factor
- Generic bans chemicals (consumer products and professional uses)
- Phase out all non-essential uses of PFAS in the EU
- Setting essential use criteria
- Implement one substance one assessment.

ISOPA has started the process to understand the full potential impact of the CSS. Therefore, it was decided at the General Assembly in December to have a dedicated meeting including the experts to assess the potential impact of the Chemicals Strategy for Sustainability on the diisocyanate and polyurethane industry.

Occupational Exposure Limit for Diisocyanates

Based on the request by the Commission on 26 March 2019, ECHA started the evaluation of diisocyanates under the EU's Chemicals Agents Directive (98/24/EC) to establish, if appropriate, an occupational exposure limit.

2020 was mainly dominated by the 1st phase of the process, which has been the development by ECHA of a scientific opinion by September 2020. The ISOPA / ALIPA project team focused therefore their work on delivering scientific input into the debate.

The team delivered several scientific documents into the public consultation and held various meetings with authorities to explain the viewpoint of industry. Especially with regard to the importance of peak exposure when exposed to diisocyanates. Furthermore, industry underlined the importance of taking besides epidemiological studies also animal studies into account.

The Risk Assessment Committee of ECHA developed its opinion on the basis of the scientific report submitted by ECHA. ECHA concluded then in June 2020 on their final opinion. Rapporteurs, appointed by RAC were Veda Varnai and Dick Heederik, the opinion was adopted by consensus on 11 June 2020.

The main conclusions of the RAC have been:

- A threshold for bronchial hyper-responsiveness or for the development of asthma, could not be observed.
- However, an OEL defined as an 8-hour time weighted average (TWA) exposure based on the 'NCO group' can be obtained from the exposure - excess risk relationships for hyperresponsiveness or diisocyanate asthma as derived below.

A 15-minutes Short Term Exposure Limit (STEL) value which is maximally a factor 2 higher than a derived OEL based on the exposure - excess risk relation. This STEL value should not exceed 6 µg/m3 NCO.

The scientific opinion was then forwarded to the Working Party of Chemicals (tri-partite committee) managed by the European Commission, DG Employment. ISOPA and ALIPA advocated in various meetings with the European Commission, and the members of the WPC, the position of industry.

Industry clearly stated that the approach taken by ECHA would have severe impact on the entire polyurethane industry in the European Union.

Later in the year, DG Employment selected the consultant Risk Policy Analysts to conduct an impact assessment to evaluate the socio-economic impact when implementing different values including those proposed by ECHA.

Chemical Regulation Cluster

The CR Cluster decided to meet more regularly than the two face-to-face meetings per year, as regulatory topics are increasing. All team members are also heavily involved in supporting the two dominant projects at ISOPA, the restriction on diisocyanates and the OEL on diisocyanates.

Global Alignment Task Force

A major decision was taken by the Chemical Regulation Cluster to kick-off a task force to deal with REACH like regulations in other regions outside the EU.

The main purpose of this task force is to ensure that the approach taken by the ISOPA member companies once registering the substances under REACH in the EU (grouping, read across) is not jeopardized by a controversary approach in the relevant countries. The main countries the task force is focusing on are South-Korea, Taiwan, and Turkey. Other countries where other important topics where discussed included China, Japan and India.

Australia OEL

ISOPA became aware that Safe Work Australia (SWA) has proposed lowering its recommended occupational exposure level for isocyanates. ISOPA and ALIPA, the European Associations of Manufacturers of Aromatic and Aliphatic Diisocyanates and Polyols addressed their opinion on the proposed values by sending an official statement to the Australian Authorities, which was well received.

Acute Inhalation Toxicity - Read-across Justification

The experts continued their work to finalize the document on the read-across approach (category approach), specifically for the acute inhalation toxicity endpoint on a group of polyols with the support of the consultant ERM. The work is foreseen to be finished in 2021.

Public Consultation - Restriction of formaldehyde and formaldehyde releasers in mixtures and articles for consumer uses

ISOPA participated in the public consultation to submit comments following the SEAC draft opinion on formaldehyde and formaldehyde releasers.

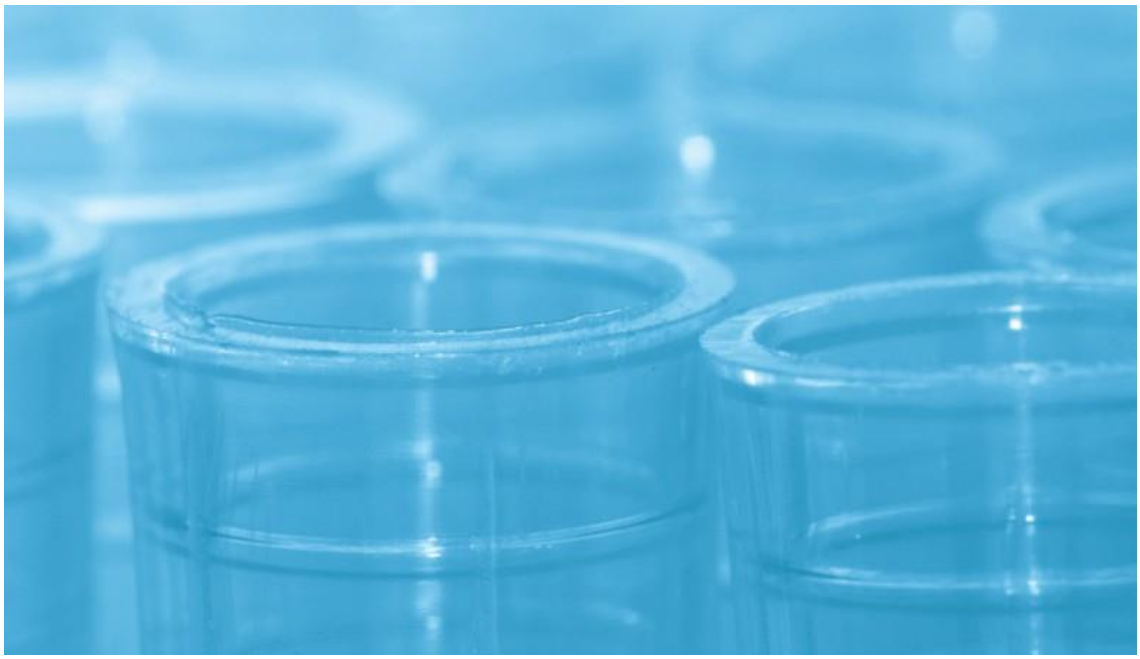
ISOPA and their member companies, especially those producing MDI, referred to several paragraphs containing statements which were not entirely correct, e.g. about limited availability of MDI.

Public Consultation - TODI – Classification and Labelling

ISOPA took initiative to address wrong statements in the Classification and Labelling proposal by Germany and France during the public consultation.

The main reason has been that MDI and TDI was grouped together with TODI using various false statements. For example, it is very unusual to classify a substance especial in the endpoint Carcinogenicity without any data. In assuming that the mechanism is equal as the mechanism of MDI and TDI- without showing further evidence and scientific proof - the dossier submitter only estimated that a carcinogenic potential shall not be neglected.

Regarding TDI and MDI, ISOPA pointed out that these substances have been already evaluated by Poland and Estonia under REACH. The outcome was that no further risk management measures are necessary, so the current classification were confirmed.



Product Stewardship Cluster including Walk the Talk; Logistics; Driver Training; One Step Ahead

Walk the Talk

The team dedicated their work almost entirely to support the development of the training material under the restriction on diisocyanates.

The team addressed inconsistencies amongst ISOPA member companies in MDI and TDI SDS.

Under discussion is the section 11 GHS CLP / MDI Acute Tox regarding Asthma phrases. The objective is to achieve consistency amongst the member companies.

Logistics

The team worked on the translation of the updated Bulk Guidelines. The following versions are now in place: French, German, Spanish, Hungarian and Dutch.

The team also addressed the topic of unloading and the responsibility of the driver during the unloading process. As next steps the team will work on a Flyer and a video to promote and explain the safe practice t the working placeat unloading stations at downstream facilities.

Driver Training

The training slides have been updated in all languages and the logo of 'Safe use of Diisocyanates' was added to the attendance list. Covestro organised 1st tier online training (at the end of October with 16 participants).

Overall, the ISOPA office registered significant increase in demand for driver cards with 80 % retraining and 20 % new applications for drivers. ISOPA office started to accept online trainings due to Covid-19.

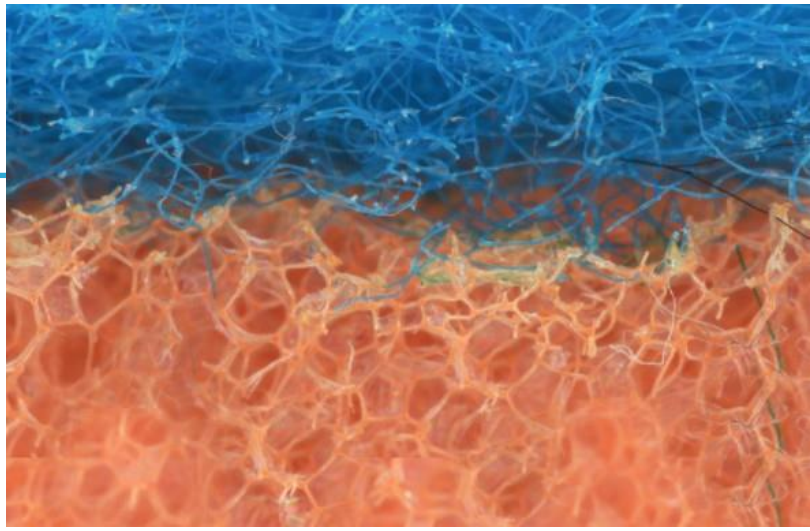
One Step Ahead

The team decided due to the Covid-19 pandemic to refrain from any face-to-face Product Stewardship event in Africa or Middle East in 2020. Instead, a first virtual seminar was hold with almost 60 participants, mainly coming from Nigeria. The seminar has been a success and the team will decide – depending on the development of the pandemic – how to proceed in 2021.

DCB incident in 2017 – Discussion with Europur on Quality of Raw Materials

The discussion continued in 2020 on the request by Europur that ISOPA should provide adequate information on the control of raw materials including impurities and to agree on a set of principles (e.g. alignment on a harmonized certificate of analysis including a list of impurities and level of test methods).

In a high-level meeting between Europur and ISOPA views were exchanged, but no consensus could be achieved.



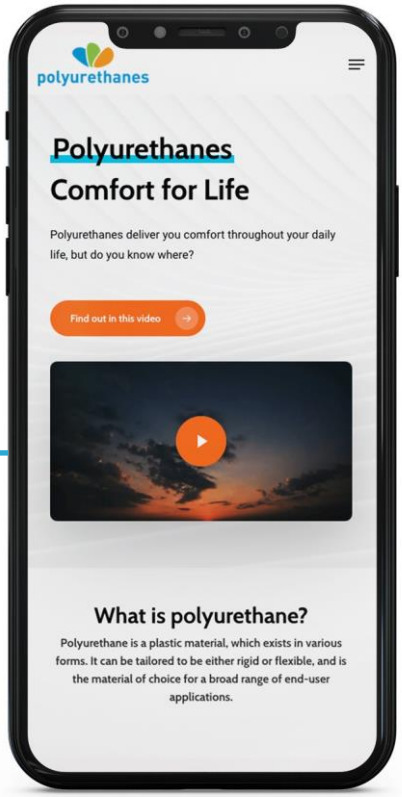
PU Sustainability Cluster

The team worked beside the topic on Circular Economy especially on the finalization of the Eco-Profile.

In cooperation with Sphera, the external consultant the team progressed on the collection of the relevant data and the final report on the Eco-Profile of TDI, MDI and Polyol is expected for spring 2021.

The website www.polyurethanes.org was re-launched in a new and more user-friendly design.

www.polyurethanes.org



1st edition of Polyurethane Recycling Study

Conversio, a German based consultant company, conducted the first polyurethane recycling study on initiative of BASF and Covestro. The study was made available to ISOPA to be shared amongst the member companies. The study was furthermore shared with PU Europe and Europur. The plan is to kick off the 2nd edition in Q4 2021.

Combustibility Cluster

The Combustibility Cluster focused mostly on the development towards a successful revision of the ISO 13571 norm (calculation of time available for escape from fire).

After the ballot was not in support of replacing the existing standard with the new standard developed by Prof Pauluhn on behalf of ISOPA, the working group WG5 under ISO decided to retain both versions, the existing one and the new one, but a review is required by a new to be defined project lead. The work was also supported by Edith Antonatus, former member of the Combustibility Team and today freelancer, working for PU Europe.

Aftermaths of the Grenfell Tower tragedy

The team continued to monitor the developments of investigations into the causes of the Grenfell tower tragedy.

The Modern Building Alliance, in which almost all member companies as well as ISOPA is a member of, continued their successful work. The focus of this alliance is the communication and advocacy towards the European Institutions but also the technical work by the fire experts. Especially the work by the experts in the MBA takes away some workload from the ISOPA Combustibility Cluster.

Communication

Press releases

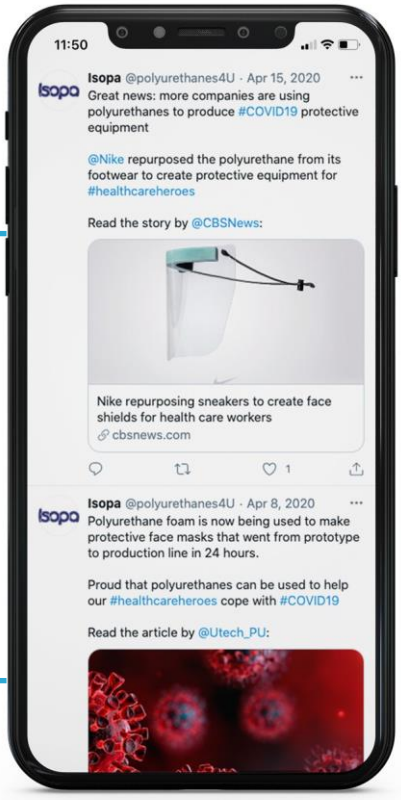
Six press releases were published in 2020:

- REACH Committee decision on restriction
- Publication in the European Journal on restriction
- 3rd eBook launched on restriction
- Re-launch of polyurethane.org website
- New leadership elected at GA ISOPA
- ISOPA hosts 1st virtual One Step Ahead product stewardship seminar

Social Media

ISOPA on Twitter R

ISOPA started - in cooperation with FleishmanHillard - to distribute the "ISOPA Weekly Report", which monitors the regulatory, scientific, media and social media news on polyurethanes. One or two key messages are being chosen every week to be launched via the ISOPA Twitter and LinkedIn accounts.



Newsletters

ISOPA published three newsletters in 2020, mainly addressed to the industry stakeholders but also policy makers.

All communication of ISOPA is based on data, which divides the target audience between ISOPA, industry and policy makers.

ISOPA decided to replace the ISOPA Extranet (www.isopa.org) by the so called ISOPA Wall.

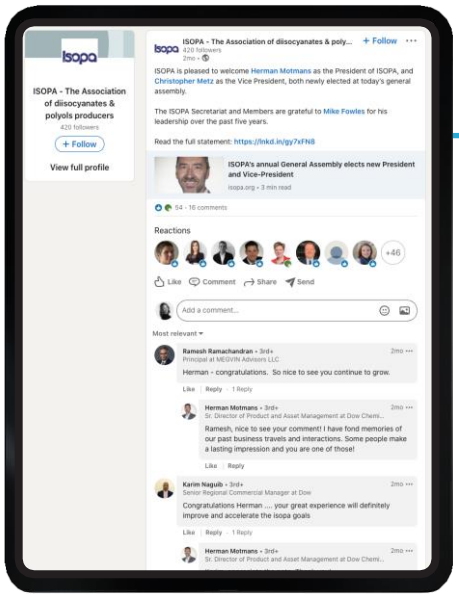
The reason has been that the ISOPA wall – provided by the digital communication company IDLOOM – offers easier handling, dedicated groups for the various working groups, task forces and projects as well as additional features like filing of videos.

ISOPA Leadership Team

In December, the General Assembly of ISOPA elected Herman Motmans, DOW as their new President and Christopher Metz, BASF as their new Vice-President. Mike Fowles, Huntsman, stepped back after 5 successful years of President at ISOPA.

Herman Motmans
PRESIDENT

Christopher Metz
VICE-PRESIDENT



LinkedIn announcement

Final Remark

The 2020 ISOPA annual report is the first of its kind. The report is intended for internal use only. The report shall not be shared outside member companies and therefore also password protected.

The report was created with the support of FH and the achievements made are based on the tremendous efforts by the member company experts:

BASF	Christopher Metz; Gitta Egbers; Thomas Merz; Ulrike Groenhagen; Elif Unterberger; Uwe Blumenstein; Steffen Kahrmann; Susanne Demharter; Klaus Wittstock; An Dupon.
BorsodChem	Tibor Klement; Hella Tothne; Ana Fridelne; Nora Janosik; Andrea Cappella; Gyulane Szabo.
Covestro	Hermann-Josef Dörholt; Gudrun Luecke-Brunk; Ulrike Schmuelling; Hans-Georg Pirkl; Lutz Brassat; Jens Geschke; Tanja Gutsmann; Friederike Paven; Gesa Dern; Joachim Petzoldt; Peter Krüger; Ines Krüger; Monika Leutbecher; Thomas Gross; Lutz Brassat; Yvonne Zielesny; Jose Gavira.
DOW	Herman Motmans; Ronald van den Bosch; Edwin de Souter; Lucie Porcelli; Christine Lucas; Petra Haarlem; Herve Wuilay.
Huntsman	Mike Fowles; Erik Vangronsveld; Shpresa Kotaji; Diane Daems; Bart Bossuyt; Liesbeth Melis; Diane Daems; Ronald van der Kooij.
Shell	Wouter Mineur; Els van Eetvelde; Fred Kerkhof; Tilly Borsboom-Patel; Peter Roest; Udeogu Onwusogh.
ISOPA Office	Kristine Dewaele; Jörg Palmersheim.

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