

EuPIA ANNUAL REPORT 2017

EuPIA, the European Printing Ink Association, working under the umbrella of CEPE, represents and protects the common interest of the European printing ink business and promotes the image of the industry to the public. EuPIA provides a forum for discussion and decision-making regarding issues of specific interest to the printing ink industry. EuPIA members also participate in CEPE working groups dealing with issues of general interest to the wider CEPE membership.

Market Statistics 2016

EuPIA publishes market statistics on an annual basis. The data can be accessed via the EuPIA website at eupia.org, section publications - statistics.

The aggregated figures displayed in the charts below summarize

- » Sales value per country total
- » Sales volume and value per category for Europe total

The figures comprise domestic ink data collected for 30 countries or country groupings in Western and Eastern Europe and represent the activity of 29 EuPIA members participating in the statistics.

It is estimated that this represents about 90% of the total European market.

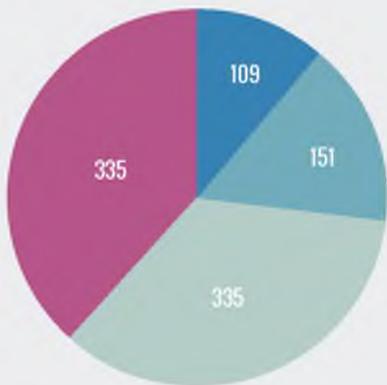
The global ink categories for which the aggregated figures are displayed are defined as follows:

- » **Liquid inks water borne** – this includes flexo and gravure water borne inks, technological varnishes, extenders, primers, and overprint varnishes
- » **Liquid inks solvent borne** – this includes flexo and gravure solvent borne inks, publication gravure inks, technological varnishes, extenders, primers, and overprint varnishes
- » **Oil based inks** - includes coldset and heatset offset as well as conventional sheetfed offset inks
- » **All other inks** – all other inks except screen ink sales which are not included in these statistics

14th EuPIA Annual Conference

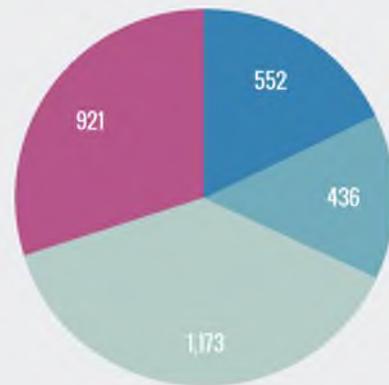


SALES VOLUME FOR 2016 IN 1,000 TONS



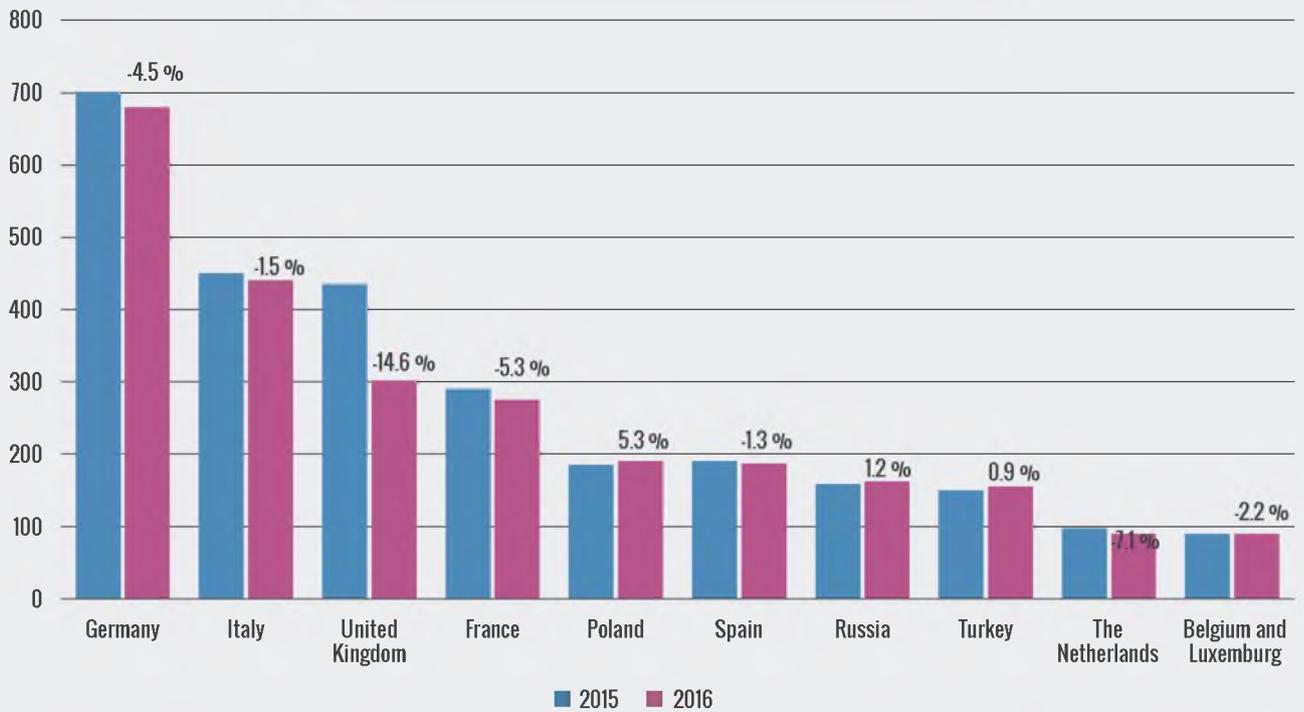
■ All other inks ■ Solvent borne liquid inks
■ Water borne liquid inks ■ Oil based inks

SALES VOLUME FOR 2016 IN EUR MILLION

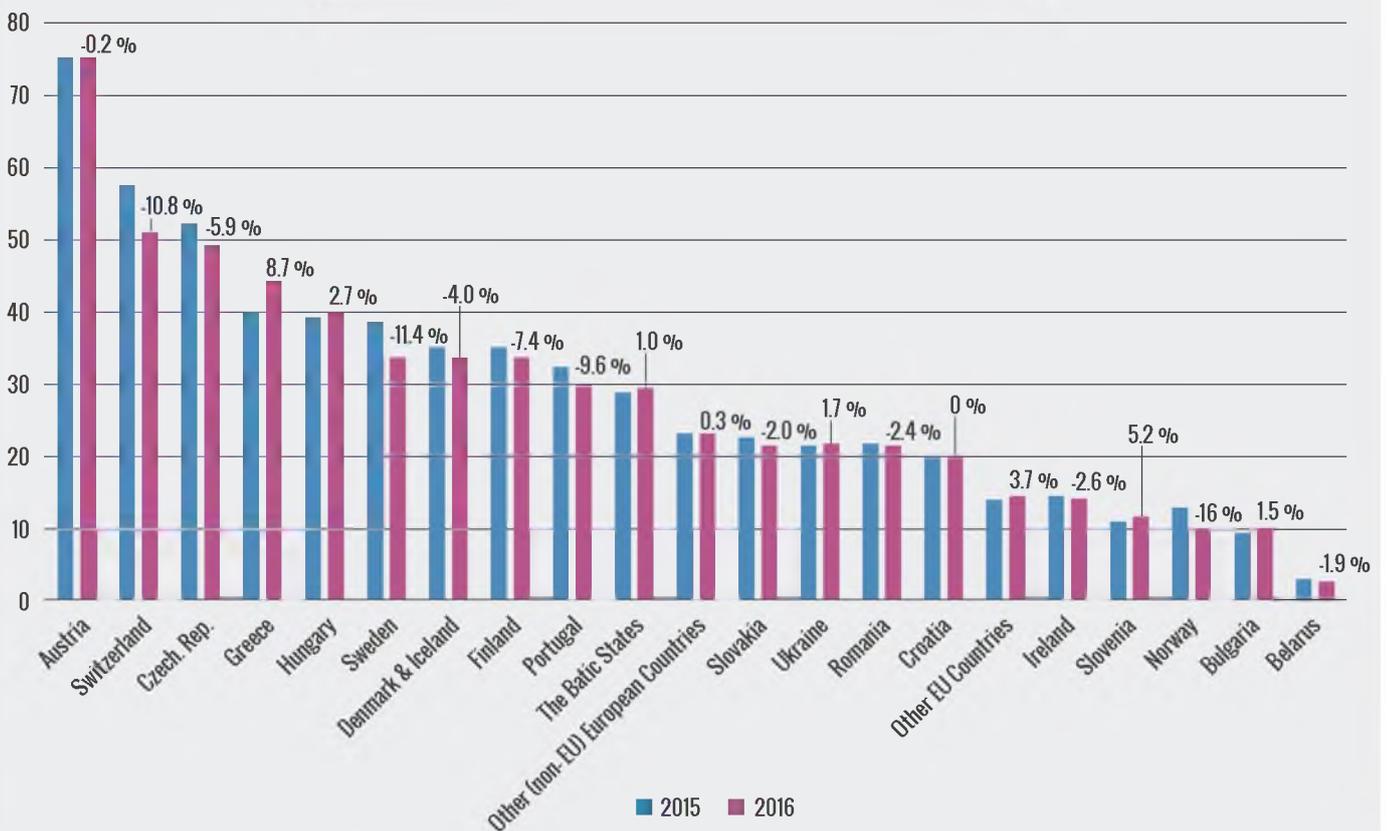


■ All other inks ■ Solvent borne liquid inks
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SALES VALUE BY COUNTRY 2015 TO 2016 IN EUR MILLION



SALES VALUE BY COUNTRY 2015 TO 2016 IN EUR MILLION



READJUSTING FOR SUCCESS



The market for printing inks will show more demand for individual solutions and lower volumes. But there are also opportunities for printing inks producers. By Damir Gagro.

The printing inks industry is still struggling. The publication sector continues its downward trend. So it is no wonder that the EuPIA 14th Annual Conference, which took place in Marbella, Spain, was a focus event on the packaging market. This sector is promising and enables possibilities. But the printing inks business will remain challenging.

With more than 90%, the EuPIA statistics comprise a reliable share of the entire European market. The results can be viewed as trusted and reliable. The sales volume in 2016 reached a total of 962,000 tonnes. Oil-based inks (38%) and solvent-borne liquid inks (35%) account for the largest share in terms of volumes. Water-borne liquid inks had a share of almost 15.7%. The sales value was at EUR 3.05 billion with solvent-borne liquid inks having the largest share (38.5%) followed by oil-based inks (30%). Water-borne liquid inks accounted for some 14% of the entire sales volume in 2016. Compared to last year the printing inks industry posted -0.7% in volumes and -3.8% in value in 2016. However, the decrease slows down and the industry is showing a slow recovery. Publication inks posted a decrease of -3.8% in volumes and -8.6% in value in comparison to the 2015 figures. Packaging inks reached an increase of 2.4% in volume while the value dropped by 0.5%. The situation will remain challenging for the industry, noted Herbert Forker, EuPIA's new Chairman. The issue with tight supply and increasing prices might become a burden for the industry.

PACKAGING SECTOR WITH BRIGHT PROSPECTS

The first day of the conference featured presentations from the packaging industry's view. And it showed why the conference has put the focus on that particular sector. Thomas Reiner, Berndt+Partner, who served as moderator and has an experience of over 20 years in the packaging industry, stated that there are 3.5 billion packaging units in the market. Alvise Cavallari of the food giant Nestlé explained during his presentation that the food giant features more than 2,000 brands in its portfolio. The annual expenditures on packaging materials is worth EUR 7 billion and the volume of packaging materials amounts to 5.3 million tonnes. "All these packages are printed", he said. Cavallari emphasized the importance of printed packages. "Printing is communication, and we are witnessing an increase demand for communicating the messages to different target groups", he continued. As examples he mentioned the evolving middle class in emerging geographies of the world and the aging population in the mature markets. But he also

stressed that packaging will be simplified. This development will affect the printing inks industry as lower volumes might be needed. Belal Habib of Pladis Global also stressed the two fundamental functions of a packaging: "It has to jump of the shelf and deliver an experience for the customer." In regard to packaging he raised the question "what is the industry's Uber or Airbnb?" These two companies have changed the game in transportation and accommodation. Habib noted that companies will have to make use of latent, existing assets by connecting them with smart apps.

DIGITALISATION AND INDIVIDUALISATION ARE BIG TRENDS

Also the press manufacturers demonstrated in their presentations that importance of digitalization is increasing. Digital print for packaging is becoming mainstream, said Jan Van Daele of HP Graphics Solution Business. This is also in-line with a survey conducted by business consulting firm Berndt+Partner. The online survey comprised answers of 52 EuPIA members and 358 responses from EuPIA customers. Both groups of respondents identified the increasing cost pressure and digitalisation as the biggest business trends having impact on the packaging industry. According to the survey results, the packaging types with the highest growth rates is flexible packaging. This was also mentioned by Nikolaus Wolfram of Constantia. He estimates the global demand for this type of packaging has reached EUR 70 billion in 2016. The emerging markets account for more than 60% of that amount. Forecast are predicting that flexible packaging will double by 2025.

Another huge trend in the packaging industry is individualisation. Many brands have started printing personal names on their goods, such as "Coca Cola" on bottles or "Nutella" on jars. Julian Villa-nueva of IESE Business School said as commercial brands are becoming less important to consumers than their "own" brand. Individually designed goods and packages will therefore gain importance. However, this will also mean more jobs with lower volumes for press manufacturers and hence lower volumes of printing inks will be needed for these types of jobs. This will make forecasting even harder and require a higher flexibility of printing inks producers. They will have to manage high and low volume businesses and adapt faster to changes as well as trends to remain competitive. But the potential is out there to capitalise opportunities.

(was published in ECJ 05/2017)

Announcement of the 15th EuPIA Annual Conference in 2018

The next Annual Conference will be held on 26th / 27th April 2018 in Hamburg (Germany).

PRINTING INKS AND VARNISHES APPLIED ON FOOD CONTACT MATERIALS

EU Commission and European Parliament activities regarding food contact materials for which no harmonised rules exist ("non-plastic food contact materials")

Food Contact Materials must be manufactured such that they do not transfer their constituents to foodstuffs in quantities which could endanger human health, cause an unacceptable change in the composition of the food or inadvertently affect foodstuffs in terms of odour and taste. These general requirements are laid down in the European Framework Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food.

At present, on European level specific legal provisions exist for plastics, regenerated cellulose film, ceramics, active and intelligent materials and recycled plastics.

In the absence of specific EU measures, Member States may maintain or adopt their own national provisions on food contact materials, which are likely to differ from one Member State to the other. Such differences introduce inconsistencies in the approach to regulating food contact materials and have the potential of hindering the free movement of those materials in the internal market.

Therefore, in 2012, the European Commission had started an initiative to check the necessity and options to regulate non-plastic food contact materials, and summarized its views in a so-called "roadmap". Subsequently, the Commission consulted Member States and industry for their opinions. EuPIA and many other trade associations took part in the consultation process and identified "printing inks" and "paper & board" as materials for which EU provisions should be established with priority.

In the latter part of 2014, the European Commission's Joint Research Centre (JRC) started to carry out a study aimed at providing a comprehensive overview of the current situation concerning non-plastic food contact materials. The study entitled "Non-harmonised food contact materials in the EU: Regulatory and market situation" was published in January 2017, and is available at goo.gl/Snrzi3

It maps the industry supply chain and collects existing legal provisions on Member State level as well as industry self-regulations for these materials. EuPIA's contribution to the study is well reflected. The study reveals a number of deficiencies in ensuring consumer safety arising from the lack of harmonized rules in the European Union, thus suggesting setting harmonized rules for those food contact materials for which such rules currently do not exist.

In October 2016, the European Parliament adopted a Resolution on the implementation of the Food Contact Materials Regulation (EC) No 1935/2004 (<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2016-0384+0+DOC+PDF+V0//EN>). The Resolution calls for harmonised rules for all food contact materials, and points out that in doing so, priority should be given to paper and board, varnishes and coatings, metals and alloys, printing inks and adhesives.

EU Commission announces its intention to regulate printed food contact materials – Germany suspends the adoption of its draft "printing ink ordinance" until further notice

On 5th July 2016, Germany notified to the European Commission the draft of the 21st ordinance amending the German Consumer Goods Ordinance (the so called "printing ink ordinance") pursuant to Directive (EU) 2015/1535. During the standstill period, which expired on 6th Oc-

tober 2016, eight EU Member States had expressed their concerns by "detailed opinions". Two EU Member States and the European Commission had provided comments.

As a result, and obviously in line with the analysis of the JRC Report and the European Parliament Resolution, the European Commission took ownership of the dossier, and announced its intention to adopt new Union legislation on printed food contact materials, including printing inks ("pFCM measure"). As this harmonized legislation is planned to be adopted in 2018, work on drafting the legislation is high on the agenda of the working programme for 2017 of the competent Directorate General for Health and Food Safety (DG SANTE). Meanwhile, Germany declared that it will suspend the adoption of the draft "printing ink ordinance" until further notice. Germany will closely observe the EU Commission's activities. If it turned out that there is a considerable delay in the planned legislative process on EU level, then Germany announced to continue with its national initiative. The German Federal Institute of Risk Assessment (BfR) anyhow continues with the evaluation of substances used in the manufacturer of printing inks for food contact materials, and invites the raw material suppliers to the ink industry to continue submitting related substance dossiers. EuPIA is supportive of the BfR's invitation.

The EU Commission has already started making themselves familiar with the complex processes involved in the manufacture of compliant printed food contact materials. In February 2017, they launched a survey with a particular focus on how information in the supply chain is managed. In March 2017, they invited stakeholders to participate in a consultation on rules concerning printed food contact materials, by which they seek to obtain an overview of the rules used by members of the food packaging supply chain to ensure the safety of their products under the Framework Regulation. EuPIA contributed to both these activities.

As the Commission expressively invited industry to cooperate in the development of the pFCM measure, EuPIA began to develop its ideas how a future EU measure could look like. These ideas were put together in a "thought starter" which received the full support of the members of the Packaging Ink Joint Industry Task Force (PIJITF), and will be discussed with the Commission and Member States.

Swiss Consumer Goods Ordinance: provisions for food packaging inks

Switzerland issued a revised version of its Ordinance on Materials and Articles (SR 817.023.21), which came into force on 1st May 2017. Section 12 sets out the provisions specific to food contact material inks. Substances which only may be used in the manufacture of printing inks in scope of the Ordinance are now listed in Annex 10. A transition period of four years applies to the new section 12, as laid down in Art 95 (2) of the superordinate Lebensmittel- und Gebrauchsgegenständerverordnung (LGV) SR 817.2. The Swiss authorities provide an English translation of the new Annex at <https://www.blv.admin.ch/blv/en/home/gebrauchsgegenstaende/materialien-in-kontakt-mit-lebensmitteln/verpackungen.html>.

The Swiss Authorities had approached EuPIA requesting clarification of the toxicological status of some of the listed substances. For the majority of the substances consensus could be reached in joint meetings between the Swiss authorities, EuPIA and the relevant associations of the raw material supply industry: These substances are retained in the Annex 10. As this piece of legislation is still quite complex and can be prone to misinterpretation, EuPIA provides an updated guidance addressing the most frequently asked questions. The document can be found on the EuPIA website, at http://www.eupia.org/uploads/tx_edm/2017-06-07_Swiss_FCM_Ordinance_-_EuPIA_Q_A_regarding_non-DFC_FCM_Inks.pdf.



Non-Intentionally added substances (NIAS)

Printing inks and coatings for food contact materials may contain substances that are not used intentionally. These substances may be impurities in the raw materials used or reaction intermediates formed during the production process of ink raw materials, or decomposition or reaction products formed during the ink manufacturing, the printing and the packaging/filling or storage. Such substances are commonly referred to as Non-Intentionally Added Substances (NIAS).

There is an increased focus of legislators, control authorities and customers on the appropriate risk management of NIAS. To this end, EuPIA has established a NIAS Risk Management Task Force, which in January 2017 finalised the “EuPIA Guidance for Risk Assessment of Non Intentionally Added Substances (NIAS) and Non Listed Substances (NLS) in printing inks for food contact materials”. The document defines a harmonised approach how to assess NIAS in the printing ink industry and provides guidance on this difficult topic to EuPIA members. In order to provide members with practical experience, EuPIA offered members a training course on 26th/27th April 2017. The training course was very well attended by over 20 participants on each day.

EUPIA TECHNICAL COMMITTEE

Technical issues and non-food applications of printing inks fall under the remit of the EuPIA Technical Committee (ETC) and its subsidiary working groups, Operational Safety & Risk Assessment (OSRA), Labelling & Safety Data Sheets (LSDS) and the Task Force Paper Recycling.

Substance management

In autumn 2016 ETC published the third edition of the EuPIA Exclusion Policy for Printing Inks and Related Products, along with an updated internal Explanatory Note for members on the Policy. The new edition of the Policy contains clarifications on the intentional use of substances subject to the Policy, as well as information on the transitional arrangements applying to new members of EuPIA (who are expected to commit to the Policy in due time). The Explanatory Note, meanwhile, provides guidance to members on the requirements for substitution of excluded substances and for application for an exemption under the Policy.

To date there remains just one ‘Group A’ exemption listed in Annex 2 of the Policy, for formaldehyde in encapsulated scent varnishes; in March 2017 ETC agreed an extension of this exemption for a minimum of one year. In addition to this, one exemption has been reported under ‘Group B’ using the self-assessment procedure. The Policy is

perceived to be functioning well and continuing to preserve and enhance the image of EuPIA as a responsible industry.

An important substance has recently fallen within the scope of the Exclusion Policy, thanks to a harmonised classification opinion from ECHA’s Risk Assessment Committee. 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (BDMBP), a photoinitiator widely used in UV-curing printing inks, has been classified as toxic for reproduction Category 1B and will be included in an amendment to the CLP Regulation in 2018. EuPIA co-funded a review of the toxicological evidence by an independent expert, who concluded that the classification is justified. Given the importance and ubiquity of this photoinitiator, substitution is unlikely to be possible in the short term without causing major disruption to energy-curing printing technologies, therefore EuPIA is conducting a robust risk assessment on sector level to establish the conditions of safe use throughout the value chain. This will support members in applying the exemption procedure and communicating to customers until it is technically feasible to replace the substance.

ETC closely monitors a number of other ‘substances of interest’, and EuPIA representatives participate in CEPE task forces related to titanium dioxide, diisocyanates and biocides (see articles elsewhere in this report) to ensure that the interests of the ink industry are properly addressed. The efforts of EuPIA were also decisive in achieving the successful outcome for HDDA, which was not identified as a Substance of Very High Concern under REACH on the basis of its skin sensitising properties. As an important non-food application for printing inks, ETC also monitors developments in the Toy Safety Directive 2009/48/EC. The impact of a proposed reduction in migration limits for aluminium is being assessed; many pigments have high Al content.

Safe packaging for cosmetics

Since 2014 EuPIA has participated in the development of cross-sector industry guidance on information in the supply chain on packaging for cosmetic products. The approach makes use of available information on food contact suitability, combined with a guidance list of ‘disclosable substances’ (such as skin sensitisers), to communicate adequate information about the packaging to cosmetic safety assessors.

Following the results of a limited pilot in 2016, the draft guideline has been improved and will undergo a much wider trial (involving all Cosmetics Europe members) commencing in 2017. Meanwhile EuPIA maintains its recommendation to members to supply FCM inks also for cosmetic packaging (in the absence of specific product develop-



ment). EuPIA will also continue to update its list of disclosable substances in light of developments in relevant legislative lists.

Sustainability of printing inks

Questions are increasingly asked by customers about the environmental footprint of inks and printing techniques. Instead of generating eco-footprints for individual inks, which could lead to inappropriate comparison between different ink technologies, ETC established a 'generic reference ink' representative of the total market and conducted a Life Cycle study applying the CEPE tool and methodology (see Sustainability article for more information). In February 2017 ETC published a communication leaflet, available on the EuPIA website, to support converters in making their own Life Cycle Analyses and assessing the contribution of the ink to the overall environmental footprint. A more detailed internal document was also published to help EuPIA members in answering queries from downstream users.

EuPIA supports the European Paper Recycling Council (EPRC)

The European Paper Recycling Council (EPRC), formerly European Recovered Paper Council (ERPC), was set up as an industry self-initiative in November 2000 to monitor progress towards meeting the paper recycling targets set out in the 2000 European Declaration on Paper Recycling. Since then the commitments in the Declaration are renewed every 5 years. In 2017 the ERPC committed itself to meeting and maintaining a voluntary recycling rate target of 74% in the EU27 plus Switzerland and Norway by 2020 as well as qualitative targets in areas such as waste prevention, ecodesign, and research and development. In 2017, Members of the ERPC are ACE, CEPI, CITPA, EMFA, ERPA, ETS, FEPE, INGEDE and INTERGRAF. Supporters are Afera, EuPIA, FINAT and RadTECH Europe. The European Commission, DG Environment and DG Grow, are permanent observers to the ERPC. A more user-friendly website has been created and includes additional information on the EPRC's activities and more on its plan to meet its new paper recycling rate target of 74% by 2020: <http://www.paperforrecycling.eu>.

In January 2017, the EPRC issued a revised deinkability scorecard which now includes an annex listing exemptions to the deinkability test. With this annex, the widely-used deinkability scorecard takes account of those printing technologies and material combinations that are sure

to deliver good deinkability results, based on past experiences. Testing remains a requirement for processes and material combinations for which there is not enough experience on their deinkability behaviour. The annex will be subject to future revisions based on new data.

Commitment to safe workplaces

The OSRA working group continues its mission to support member companies and customers in operating at the highest possible level of plant and occupational safety, by producing guidelines, alerts and best practices. Publications in the past year include a guidance note/poster on fork lift truck safety distances and information on stability tests for industrial nitrocellulose. Work is ongoing on new or updated guidelines including such varied topics as machinery hazards, storage racking, flammable liquids and more.

OSRA also continues to publish its popular Safety Alerts/Flashes to spread learnings and avoid similar incidents; fires have been a recurring theme over the past year. One highly topical Safety Flash was on the subject of travelling with lithium batteries, such as are used in smartphones and laptops.

In addition to the above outputs, OSRA also provides expert input to other EuPIA/CEPE groups such as the Isocyanates TF, which is developing content for the training modules that will be required for professional users of these materials under the proposed restriction.

Ink-specific hazard communication

EuPIA's LSDS group continues its more focused remit on ink-specific labelling and safety data sheet issues. In 2017 it has a key role in identifying appropriate worker exposure descriptions and Safe Use of Mixture Information documents for energy-curing products, which do not fit readily into the default EuPIA SUMIs due to the nature of their hazards. (See REACH article for more information.)

Printing Inks and Circular Economy

Last but by no means least, EuPIA monitors discussions on the Circular Economy in Europe, triggered by the Commission Communication "Closing the loop - An EU action plan for the Circular Economy", published in December 2015. As the recycling targets for paper based products may affect the technologies for the recycling of paper, the scope of the EuPIA Task Force "Mineral Oils in Publication Inks" has been expanded to now also include general aspects of paper recycling vis-à-vis requirements which may result from the new circular economy policy. To align with its new task the Task Force "Mineral Oils in Publication Inks" has been renamed the "Paper Recycling" Task Force. 📍