Position Statement

BRITISH COATINGS FEDERATION

British Coatings Federation Ltd
Spectra House
Westwood Way
Westwood Business Park
Coventry CV4 8HS
E: info@bcf.co.uk
W: www.coatings.org.uk

BCF Document PI 016, August 2019

Recyclability of paper and board packaging – recent UK publications

Background

There were two documents published early in 2019 on the topic of paper and board packaging and recyclability viz. the UK's Confederation of Paper Industries (CPI) publication 'Paper and Board Packaging Recyclability Guidelines' and the WRAP report 'Design Tips for Better Recyclability of Paper and Board Packaging'. Unfortunately, neither organisation consulted with the BCF and our printing ink manufacturing members during the preparation of these documents and, in the opinion of the UK printing ink industry, both documents are inaccurate with regard to UV printing. This position statement has been prepared at the request of our members, who have asked us to comment on these inaccuracies, and thus respond to the issues that the publications have raised.

We will continue our efforts to work with the authors of these publications, so that in future correct information is agreed and established, and then shared appropriately throughout the supply chain on this important topic of recyclability. This statement is intended to inform all companies involved with the printing of paper and board packaging - circulation of this document to any interested parties is permitted without restriction.

Statements of concern

The following statements and information provided in the aforementioned publications are of specific concern to the UK printing ink industry:

i) Recyclability of UV-printed materials

It is incorrect to regard UV-printed matter as 'unrecyclable', and we believe that this technology should not have been singled out within the documents as causing excessive problems to the paper and board recycling sector. The recommendations to designers, retailers and brand-owners to completely avoid the use of UV inks and varnishes (pages 4 & 7 of the WRAP report), or the recommendation to keep the use of UV inks and varnishes to a minimum (page 10 of the CPI guidelines) are in our opinion both inappropriate. UV-printed matter can be, and is currently, recycled and it is unfortunate that the documents contain these statements, especially as they have also omitted to mention the significant technological and environmental benefits to using this technology.

In general, UV-printed materials can be perceived to be more challenging to recycle than other print technologies, however this is primarily due to the nature of the current sorting, deinking and recycling procedures in use. Several studies have clearly shown that UV inks can be removed from paper & board (i.e. are deinkable) when following appropriate procedures, including a FOGRA study[1] from 2011, work by the industry body RadTech[2] and information provided by GreenBlue on the importance of using the correct repulping equipment[3]. In addition, there is a new publicly-funded project underway in Germany (involving the German printing ink manufacturers trade association) to ascertain the extent to which UV inks can be removed from different substrates under different printing conditions. Also, note that our printing ink member companies continue to make advances, launching new improved ranges of inks with better deinkability characteristics.

It is also worth noting that there are references within both documents to 'acceptable contamination levels' when recycling paper and board packaging. The amount of UV-cured ink and varnish on a single printed item of packaging will be well below 5% by weight, so within the acceptable limit when using the contamination level threshold argument ('plastic content', page 5 of the CPI guidelines). The amount of UV-printed material entering the waste stream for recycling is similarly a very small percentage of the total quantity of paper and board fibre entering the current recycling processes, so any overall impact from UV-print may be considered insignificant.

ii) Reference to 'microplastics' relating to UV ink and varnish breakdown products

The use of the word 'microplastics' solely in reference to UV inks and varnishes in the WRAP report (and highlighting this on page 10 of the CPI guidelines) is, in our opinion, not justifiable. This demonising of an extremely important sector of our printing ink industry against other printing formats and categories of packaging mentioned in the documents is of considerable concern. It is important to note that there are still discussions on-going with regard to establishing a legally recognisable definition for the term 'microplastic' (for example, please see ECHA's recent proposals for legislating microplastics under the REACH legislation[4]). If the breakdown products from UV varnishes are classified as microplastics then the breakdown products from plastics, metallised films, adhesives etc., should also be similarly classified, in accordance with the approach currently being pursued by the legislators.

In conclusion

UV-printed materials are recyclable, and our members (UK and global printing ink manufacturers) continue to invest resources to further improve the deinkability performance of UV inks, to minimise their impact on current paper and board recycling procedures. UV inks and varnishes are no different from other materials used in the packaging sector with regard to the potential to breakdown into 'microplastics', for which a legal definition is still under discussion.

We propose that all stakeholders from across the supply chain (from materials to finished printed articles) should be working together at national and EU level, to devise the most cost-effective

[1] Fogra-Forschungsbericht Nr 30.028, December 2011 'Recyclierbarkeit von Druckprodukten auf Basis von UV-härtenden Druckfarben', Stephan Dietzel et al.
[2] RadTech Report May/June 2005 pp47-49. 'Recyclability of UV and EB Printed and Coated Paper', David Korn
[3] http://fpwg.info/wp-content/uploads/2015/08/ctl-design-for-recovery-paper.pdf
[4] https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e18244cd73

approach to optimise and maximise the recyclability of paper and board packaging through future work on packaging design, process control and development, waste segregation and recycling methods, and for this to be communicated through guidelines issued jointly by the supply chain.

Prepared by Trevor Fielding, Regulatory Affairs Manager at the BCF, on behalf of the BCF's Printing Ink Technical Committee.

BCF Printing Ink Technical Committee (PITC)

Note
The BCF's Printing Ink Technical Committee consists of representatives from the following ink manufacturers, who have approved this position statement:

AkzoNobel Packaging Coatings Ltd
Apollo Colours Ltd
Colorcon Ltd
Colorgen Ltd
Domino Printing Sciences PLC
Epson UK Ltd
Flint Group
Frimpeks Ltd
Fujifilm Specialty Ink Systems Ltd
Gardiner Colours Ltd
HP Inc UK Ltd
Huber Group
Inktech Ltd
INX International UK Ltd
Luminescence International Ltd
Lysis Technologies
Maker Industrial Products Ltd
Marabu (UK) Ltd
Mirage Inks Ltd
Paragon Inks Ltd
Pulse Printing Products Ltd
Pulse Roll Label Products Ltd
Purecoat Ltd
Ricoh UK Products
Sensient Colours UK Ltd
Siegwerk UK Ltd
Solar Inks Ltd
Sun Chemical Ltd
Wikoff Colour (UK)
Zeller & Gmelin UK Ltd

If you have any comments or questions on this position statement then please contact Trevor Fielding, Regulatory Affairs Manager, trevor.fielding@bcf.co.uk