



An Overview of Vinyl 2010

Marking ten years of PVC industry voluntary commitment

April 2011

In 2000, the European PVC industry launched Vinyl 2010 – a voluntary commitment to achieve ambitious targets by the end of the decade on collection and recycling of post-consumer PVC waste, the phase out of certain additives, minimising the environmental impact of PVC production, and encouraging social dialogue between all of the industry's stakeholders.

Ten years on, all major targets have been met or exceeded and a new sustainable business model involving the whole value chain has been created.

The voluntary commitment has been credited with revolutionizing the sustainable use of PVC in Europe, while maintaining its status as cost-efficient, multi-purpose material in a range of applications.

Why Vinyl 2010?

PVC is one of the most widely used polymers in the world and is noted for its strong cost-performance qualities. Due to its versatile nature, it has traditionally been used extensively across different sectors and brings important benefits to products and applications in construction, automotive, medical, electrical and electronic and retail sectors. Examples of its applications range from making cars lighter, more resistant against corrosion, making windows that last longer, allowing fresh water savings through durable pipes and storing blood to help save lives.

PVC has many properties that meet key sustainability criteria - amongst other things it is lightweight and highly durable which contributes to an efficient use of natural resources. However, by the late 1990's, these qualities were being eclipsed by concerns over the use of certain additives as well as the lack of recycling options for PVC products once they had reached their "end-of-life" phase.

Aware that these concerns might materialize into damaging regulation, in 2000 the European PVC industry took the pioneering step of developing a set of ambitious and measurable targets to be achieved over the following ten years. Vinyl 2010 was born.

Vinyl 2010 – the targets

The voluntary targets set by industry in 2000 included:

- The recycling by end 2010 of an additional 200,000 tonnes/year of unregulated 'post-consumer' PVC waste beyond what was already covered by European legislation on end-life-vehicles, electric and electronic equipment and packaging and the limited amount of post-consumer waste already recycled in Europe in 1999¹;

¹ From 'Vinyl 2010 – Voluntary Commitment of the PVC industry', October 2001 (p.2): *'The recycling in 2010 of 200,000 tonnes of post-consumer PVC waste. This objective will come in addition to 1999 post-consumer recycling volumes and to any recycling of post-consumer waste as required by the implementation after 1999 of the EU Directives on packaging waste, end-of-life vehicles and waste electronic and electrical equipment'* (www.vinyl2010.org/library/voluntary-commitment.html)

- A plan for full replacement of lead stabilisers by 2015, in addition to the phase out of cadmium stabilisers;
- Ongoing research on the part of the plasticiser industry in order to provide scientific studies and expertise to help policy makers develop well informed decisions
- A Research and Development programme on new recycling and recovery technologies, including feedstock recycling and solvent-based technology;
- The implementation of a social charter signed with the European Mine, Chemical and Energy Worker's Federation (EMCEF) to develop a social dialogue as well as training, health, safety and environmental standards

Meeting these targets, would require not only changing established production processes, but also incorporating a completely new “end-of-life” dimension into the business model of the PVC sector in Europe.

No long-term programme can remain static so, as planned from the beginning, the Voluntary Commitment was subject to a mid-term revision of targets in 2005 to take into account practical experience, technical progress and the enlargement of the European Union. The revised Voluntary Commitment was rolled out across the EU-27 in 2007.

The Players

Vinyl 2010 is a unique global commitment in that has brought together all stages of the PVC value chain, from raw material suppliers, to additive manufacturers and the converters who manufacture and distribute their products. It involves around 21,000 companies (including small and medium sized businesses) employing over 500,000 people.

The different sectors are represented by the Vinyl 2010 partner associations:

- ESPA (European Stabiliser Producers Association)
- ECPI (European Council for Plasticisers and Intermediates)
- ECVI (European Council of Vinyl Manufacturers)
- EuPC (the European Plastics Converters)

The implementation of Vinyl 2010 has been overseen by an Independent Monitoring Committee, consisting of representatives of the European Commission, the European Parliament and various trade unions and consumer associations. Since October 2004, Vinyl 2010 has been a Partnership registered with the Secretariat of the UN Commission of Sustainable Development.

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The achievements

Given the ambitious nature of the targets and the loss of credibility that would have been associated with not meeting them, Vinyl 2010 was always going to be a high stakes exercise for the European PVC industry. Over the past 10 years it has spent more than €57 million on specific project financing and far more again in terms of man hours to ensure the success of Vinyl 2010. This has been accompanied by significant



investments on the part of individual member companies. These efforts have led to concrete results, with all targets set in 2000 either met or far exceeded by 2010.

The achievements of Vinyl 2010 are particularly notable when it comes to collection and recycling. In 1999 there was virtually no infrastructure for recycling of PVC in Europe and it was dismissed by many as an “unrecyclable” material. Today, independently verified statistics show that in the last year alone 260,842 tonnes of unregulated post-consumer PVC waste were recycled in Europe - well beyond the initial goal of recycling an additional 200,000 tonnes on an annual basis by 2010.

A crucial factor in the realisation of this objective was the creation of Recovinyl in 2005. Recovinyl was set up to facilitate the collection, sorting, dispatching of mixed post-consumer PVC waste, in particular from the building and construction sectors. As a result of its efforts, recycling rates began to increase exponentially in the second half of the decade and today, Recovinyl brings together a network of over 150 companies operating across Europe.

Meanwhile, progress on the phasing out of additives is on target and has seen:

- Cadmium stabilisers phased out in the EU-27 by 2007; and
- Lead stabilisers replaced by 75% in 2010 and on track to be fully replaced by 2015;

Over 10 years of commitment in the framework of Vinyl 2010, the European plasticisers industry represented by ECPI has also consistently invested in high quality research, testing and expert evaluations. In line with its mission, ECPI has provided valuable input to legislative and regulatory authorities, non-government organisations and consumer groups and the main phthalate plasticisers have all been subject to comprehensive European Union Risk Assessments.

Finally, investment in research into new recycling technologies has led to exciting breakthroughs for the sector. These include the development of Vinyloop® - a mechanical, solvent-based, recycling technology that produces high quality R-PVC (recycled PVC) compounds. The purpose of Vinyloop® is, among others, to recycle PVC composite waste which cannot be satisfactorily recycled by a grinding process. The technology has already starting to demonstrate its potential to expand significantly the scope and volume of PVC recycling.

Beyond Vinyl 2010

The success of Vinyl 2010 lies in its voluntary nature. To date it is the only industry commitment of this kind to have been successful in achieving concrete outcomes that have arguably been more effective overall than would have been the case through legislation. This was due to the industry’s ability to identify and take preemptive action on challenging issues.

By taking the initiative and driving a sustainability agenda, the PVC industry has been able to remain competitive in Europe, while at the same time enhancing the benefits of its product to society. In doing so it has contributed to the creation of a new recycling industry in Europe.

VinylPlus the successor to Vinyl 2010 will be launched in June 2011. The PVC industry intends to build on the progress made to date and is looking to drive further innovation and broaden industry commitment in order to ensure the ongoing recognition of PVC as a material of choice in sustainable purchasing across a wide range of applications.

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