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Overview of VinylPlus voluntary commitment on sustainability

June 2011

On 22 June 2011, the European Polyvinyl chloride (PVC) industry launched VinylPlus – a new voluntary commitment to enhance the sustainable production and use of PVC by 2020. The initiative follows the success of the Vinyl 2010 programme which revolutionised the PVC value chain in Europe between 2000-2010 through significant advances in waste management, stakeholder engagement and responsible use of additives.

VinylPlus is even more ambitious than its predecessor in terms of targets and scope. It looks to build on the achievements of Vinyl 2010 by aiming for a quantum leap in recycling rates, technological innovation and stakeholder engagement over the next decade.

In creating the new VinylPlus programme, the industry has chosen to work in an open process of extensive stakeholder dialogue, involving industry, non-governmental organisations (NGOs), regulators, public officials and users of PVC. It has also benefitted from the critical guidance of The Natural Step (TNS), an international NGO at the forefront of research and dialogue on sustainable development.

The new programme is built around addressing five challenges to ensure that PVC contributes to sustainable development in Europe. Each of these challenges is based on the TNS System Conditions for sustainable development.

PVC and sustainable development today

PVC contributes to making life safer, more comfortable and more enjoyable. In addition, few other materials can match its cost performance characteristics. PVC brings important benefits to products and applications in areas as diverse as construction, automobile manufacturing, medical devices, electric and IT cabling, packaging and fashion. With its flexible nature, it helps protect cars from corrosion, enables windows to last longer, allows fresh water savings through durable piping and stores blood to save or improve the quality of people's lives.

PVC has many qualities 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 of these concerns in 2000 the European PVC industry took the pioneering step of launching the Vinyl 2010 voluntary commitment. Vinyl 2010 set a series of ambitious and measurable targets to be achieved by the end of the decade on the collection and recycling of an additional 200,000 tonnes of post-consumer PVC waste, the phase-out of certain additives, and minimising the environmental impact of PVC production.

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A decade later, Vinyl 2010 is widely regarded as a leading example of industry self-regulation working in practice and delivering concrete results. All major targets have been met or exceeded and a new sustainable business model involving the whole PVC value chain has been created.

Among the most significant achievements of Vinyl 2010 has been the establishment of an infrastructure for the collection and recycling of PVC in Europe. Prior to 2000, PVC had been dismissed by many as an "unrecyclable material" destined for landfill and there were virtually no recycling systems in place. Today, thanks to Vinyl 2010, the Recovinyl[1] network supports more than 150 recycling companies across Europe, recycling over 260,000 tonnes of post-consumer waste per year.

Other notable achievements include:

- the phasing-out of cadmium stabilisers from PVC production in the EU-27 by 2007, with lead stabilisers on track to be full replaced by 2015;
- ongoing research, testing and expert evaluations on the part of the plasticiser industry
- the establishment of a Research and Development programme on new recycling and recovery technologies

The voluntary commitment is recognised as having revolutionised the sustainability credentials of PVC and the efforts of the industry in this regard have been acknowledged by external stakeholders. Most recently, the United Kingdom Minister for Business, Innovation and Skills commented on the successful conclusion of Vinyl 2010 by saying that, *"It is gratifying to know that an industry sector is prepared to accept a major challenge and commit the necessary resources to ensuring its achievement… The industry's work has certainly advanced the sustainability of PVC…. Initiatives such as Vinyl 2010 give me great cause for confidence in the industry's future and I wish VinylPlus every success."* [2]

VinylPlus – the next stage of the journey

Despite its achievements to date, the European PVC industry is well aware that the success of Vinyl 2010 will count for little in the long-term unless momentum is maintained and increased.

As a result, VinylPlus sets even more challenging sustainability targets than its predecessor, puts more focus on innovation, and places even greater emphasis on stakeholder dialogue to ensure that the efforts of the industry translate into concrete and far reaching benefits for society as a whole.

The new programme will be built around a voluntary commitment to take action in the following areas:

- **Sustainable management of materials with a substantial increase in recycling volumes,** working towards an efficient use and control of PVC throughout its lifecycle

[1] The Recovinyl recycling network was established under Vinyl2010 in 2005 to facilitate the collection, dispatching and recycling of post-consumer PVC waste, primarily from the construction and demolition sector. Recovinyl was not set up to collect or recycle itself, but rather to encourage and incentivize existing waste management organisations to increase the recycling of PVC. Today, Recovinyl brings together a network of over 150 companies across Europe.

[2] Letter to British Plastics Federation, 4th April 2011

- **Organochlorine emissions:** helping to ensure that persistent organic compounds do not accumulate in nature
- **Responsible use of additives:** moving towards the replacement of lead stabilisers by 2015, review the use of other additives and moving towards the best possible sustainable additive systems
- **Resource and energy efficiency:** helping to minimise climate impacts through the reduction of energy and raw material consumption, potentially switching to renewable energy and raw material sources and promoting innovation in these areas
- **Stakeholder engagement:** building sustainability awareness across the value chain – including both internal and external stakeholders – to accelerate progress towards resolving our sustainability challenges

VinylPlus targets

Targets have been developed with the critical guidance of TNS and are based on The Natural Step System Conditions for Sustainable Development. (See - http://www.thenaturalstep.org/our-approach#quick-overview)

Sustainable Management of Materials

One of the key objectives of VinylPlus is to move towards greater **"controlled-loop management" of PVC**. This includes efficient use and control of all materials throughout their life cycle.

Building on the work already started under Vinyl 2010, VinylPlus aims to achieve a quantum leap in recycling rates and ensure that **800,000 tonnes**[3] of PVC are recycled on an annual basis by 2020.

As innovation is one of the key working principles of the new commitment, VinylPlus will aim to ensure that **"innovative recycling technologies" account for 100,000 tonnes per year** of the overall recycling target for 2020. With the support of the upstream industry, VinylPlus will investigate innovative solutions for difficult-to-recycle PVC waste streams, such as composites and contaminated or difficult to sort waste. VinylPlus will encourage ideas and investments in new technology as well as the further development of emerging recycling solutions.

Organochlorine Emissions

The participating companies in VinylPlus are committed to addressing concerns relating to the undesired release of persistent chlorinated organic compounds from the whole life cycle of PVC to avoid any systematic increase of any concentrations in nature. This will include, among other targets:

- increased stakeholder engagement to understand and assess the scope and nature of concerns being raised;
- ensuring the enforcement of precautions and safety procedures by working towards **full compliance with the PVC Resin Industry Production Charters** by the first quarter of 2012; and
- targeting **a zero accident rate in terms of Vinyl Chloride Monomer (VCM) release** during transportation

[3] The Vinyl 2010 targets did not include PVC waste covered by existing legislation on end-of-life vehicles, electric and electronic equipment and packaging and packaging waste. VinylPlus targets will cover all PVC waste, included regulated waste. An increase in recycling rates to 800,000 tonnes per year by 2020 would entail a total increase of almost half a million tonnes from 2010 levels.

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Responsible use of additives

The VinylPlus task force on additives is committed to continue research on the safety, the sustainability and the environmentally responsible use of additives. A first step will be to establish **robust "sustainability criteria"** for existing additives as well as for potential alternatives, the goal being to ensure that sustainable additives are fit for purpose in their specific applications. The targets for sustainable use of additives include:

- lead replacement by end 2015 in EU 27
- Robust criteria developed for the "sustainable use of additives" by end 2012 and their validation by 2014
- Other PVC additive producers and the downstream value chain will be invited to participate in the "sustainable additives" initiative.

Resource and Energy Efficiency

VinylPlus will establish a dedicated task force to develop an action plan to increasing the use of renewable raw materials along the PVC value chain by the end of 2012. Meanwhile, PVC resin producers are targeting a **reduction of their specific energy consumption by 20% by 2020** (compared to 2010 levels), and the industry is looking to develop a suitable format to assess energy efficiency across the whole PVC value chain, so that all other industries along the value chain can also set targets for energy reduction by the end of 2012.

A visual identity for Partners of VinylPlus and "sustainable" PVC products

The industry will introduce a new **VinylPlus certification for participating companies and a product labelling scheme** designed to help users to identify and prioritise "sustainable" PVC solutions, while also creating value for VinylPlus participants.

An official membership certificate will be available by the end of 2011, and will be used to encourage new participants to adhere openly to VinylPlus, especially among PVC converters, but open also to downstream users such as recyclers, brand holders and retailers.

In addition a VinylPlus label for PVC products will be developed and launched by the end of 2012, with a view to providing market decision-makers with transparent information to enable them to make smarter and more sustainable purchasing decisions.

Translating ambition to action through stakeholder engagement

Transparency and open communication with internal and external stakeholders will be key to ensuring the new commitment delivers on objectives.

For its part, the industry is committed to engaging in intensive and ongoing dialogue with a range of external stakeholders including politicians, end users, specifiers, NGOs and the general public to ensure that the programme remains on course to deliver meaningful results. The first major milestone in this process will be the launch of a comprehensive external stakeholder engagement programme in the first half of 2012. The PVC industry is welcoming this dialogue leading to the amending or updating of VinlyPlus targets along the way.

The European PVC industry is also committed to engaging in efforts to globalise the VinylPlus approach by sharing best practice and encouraging similar voluntary initiatives elsewhere in the world.

Finally, the success of VinylPlus will also depend on external stakeholders taking concrete action to create the conditions necessary to facilitate the sustainable production and use of PVC.

This will include:

- the involvement of the conversion industry and other downstream users in supporting innovative recycling solutions and developing the markets required to absorb recycled PVC
- the recognition and prioritisation of VinylPlus partners and their products containing recycled PVC by market decision-makers; and
- the support of policy makers in stimulating recycling through effective green procurement and waste management policies, including a move towards zero landfill in Europe

Monitoring and Reporting

In addition to maintaining a "critical friendship" with an NGO, VinylPlus will continue to be monitored by an independent monitoring committee made up of representatives of the European Parliament, European Commission, trade unions, retailers and consumer organisations. Members will include, amongst others: Saijad Karim MEP; Godelieve Quisthoudt-Rowohl MEP; Soledad Blanco, Director of Sustainable Resource Management of DG Environment, European Commisssion; Timo Makela, Director of Eco-Innovation, DG Environment, European Commission; Gwenole Cozigou, Director of Raw Materials, DG Enterprise and Industry, European Commission; Carlos Sanchez Reyes de Palacio, President of the Spanish Consumers Organisation (OCU), and; a representative from the European Mine, Chemical and Energy Workers Federation (EMCEF).

As with Vinyl 2010, the industry will publish an independently verified and audited report outlining the progress made against each of the VinylPlus targets. The first of these reports will be published in May 2012.A formal review of all targets is foreseen in 2015.

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